Playing with Journalism: Gaming Technology in Investigative Journalism education

By
Wajeehah Aayeshah

A thesis submitted in fulfilment of the requirement for the Degree of Doctor of Philosophy (PhD)

School of Arts, Social Sciences and Humanities
Swinburne University of Technology, Australia.
I, Wajeehah Aayeshah, declare that this examinable outcome:

Contains no material which has been accepted for the award to the candidate of any other degree or diploma, except where due reference is made in the text of the examinable outcome;

To the best of my knowledge contains no material previously published or written by another person except where due reference is made in the text of the examinable outcome;

And where the work is based on joint research or publications, discloses the relative contributions of the respective workers or authors.

Signed:

Wajeehah

11/06/2015

Date:
Abstract

This study explores the niche of Alternate Reality Games (ARGs) as an educational tool for teaching an investigative journalism class. It offers a detailed overview of the key literature pertaining to investigative journalism, journalism education and educational gaming, and uses this to develop and test an ARG called The Seed for an investigative journalism unit.

Investigative journalism is an important element of journalism education. Over the years, academics have used different sorts of innovative measures to teach and train journalism to students. Digital games have also been incorporated in a few attempts. However these have not been widely popular among academics due to their high cost and time-intensive production as well as narrow focus and lack of real-time practice skills. Considering this gap in the field, this project utilises a strategically designed ARG. An ARG has all the required attributes to work as an effective educational tool. It is engaging, interactive, provokes analytical thinking and can teach concepts by activity in a realistic environment. Since it does not entail complex technological tools, academics may find it easier to administer than a more complex digital game or highly advanced technological educational resource, and in a more cost-effective manner. Furthermore, it allows for the incorporation of a real-life context in the curriculum design, thus increasing the practicality of the exercise. This realistic context is well suited to the training of investigative journalism students.

In this study, The Seed ARG was developed for an investigative journalism unit (journalism practice IV), at Swinburne University of Technology, Melbourne, Australia. After the ARG was tested, feedback was collected from students and academics who participated in the game. Survey and focus groups were conducted for student feedback. In-depth interviews were conducted for academic feedback. The Seed assisted students with a successful submission of an investigative news story. It provided the academics with an organised plan to allow students to work within a realistic context, and monitor their individual, as well as, group progress, and provide timely feedback. The thesis provides a thorough assessment of the strengths and
weaknesses of the ARG, with a view toward informing future work in journalism education.
Acknowledgements

First and foremost, I would like to express my sincere gratitude to Dr Mark Finn, without whom my PhD journey would not have been even half the fun it was. He has been an encouraging academic advisor, a great career mentor, and a kind friend who was available whenever I needed his help.

I would also like to thank Dr Andrew Dodd, who was a great associate supervisor. His experienced advice, critical feedback and support at every stage of my research, from designing the narrative of the game to its testing and evaluation, is deeply appreciated. Similar sentiments of gratefulness for Dr John Banks who offered his valuable insight and feedback for my project.

Special thanks to Dr Saba Bebawi, whose generosity for letting me test my game in her class shall always be valued. I am grateful to Dr Denis Muller for his enthusiastic attitude towards my project and willingness to participate in my game testing.

I would also like to acknowledge the efforts of Dr Anna Cutler, who thoroughly proof read and edited my thesis. Her input has greatly enhanced the value of my work.

I would also like to thank Dr Emma Beddows for thoughtfully sharing her PhD thesis experiences and materials with me; Claudia Lo and Katherine Scarcebrook for their continuous support and last-minute proof reading; Laura Crawford for sending me an earlier version of her literature review chapter; Dr Bonita Mason for trusting me, a complete stranger, with her final chapter of theoretical framework before its publication; Dr Margaret Simons for her assistance with my project; Dr Karen Farquharson, for her very useful and timely feedback on my game design; Bill Birnbauer, Dr James Hollings and Dr Wendy Bacon for sharing their valuable journalistic and academics experiences with me; the IT team at Swinburne: Chris Hoare, Jemison Escalona and John Alfaro. I am especially grateful to all the investigative journalists and journalism academics I interviewed for my thesis, and the students who participated in my game.
I have deep affection and gratitude for my loyal companions, Hamza Ajmal, Jibran Wali and Mansoor Ali, for motivation, counselling, criticism and proof reading. PhD life without them would have been insane. Many thanks to Sepideh Minagar for her love and patience during our long post-work walks; Fatemeh and Reza Ali, for their friendship throughout these PhD years; and Jane Felstead for her gracious hospitality and kindness. Thank you Javeria Saad, Amna Leghari, Wara Karim, Sameera Durrani, Waqar Qureshi, Sana Butt and Ameer Hassan for being an important part of my life; and Dr Urusa Fahim for always being a source of inspiration.

I would also like to acknowledge all of the teachers who have trained me, shaped me and taught me throughout my life. Especially Sir Nazar-ul-Islam, who has always been an ideal ‘usaha’ figure, and Dr Mughees-uddin Sheikh, without whose guidance, mentoring and attention, I would not have been an academic.

My Amma jani, Dur-e-Sabeeh, and Abu, Sabahat Rasool, for their unconditional love and support. My brother, Himayat Rasool, for being my pillar of strength and partner in crime.

If I could, I would include the names of every individual who has assisted me or inspired me in any capacity during different stages of my life. I am grateful to each and every one for being there when I needed them. Swinburne University, for offering me a scholarship and allowing me to embark on my PhD journey, I thank you greatly.

Lastly, I thank Allah almighty for every single blessing and for making all of these people a part of my life. Shukriya, danke schön, merci, supas, gracias and arigatou gozaimashita.
Table of contents

Student declaration..............................................................................................i
Abstract..................................................................................................................ii
Acknowledgements................................................................................................iv
Table of contents...................................................................................................vi
List of figures..........................................................................................................ix
List of tables...........................................................................................................xii
List of appendices..................................................................................................xiii
Introduction.............................................................................................................1
  Journalism today: issues and challenges..............................................................2
  Rationale for investigative journalism.................................................................4
  Use of digital games in education.......................................................................6
  Gaming technology.............................................................................................9
  Rationale for the study........................................................................................10
  Theoretical framework.........................................................................................13
  Methodology.........................................................................................................13
  Research questions..............................................................................................15
  Original contribution to knowledge.....................................................................15
  Limitations of this study.......................................................................................15
  Thesis structure...................................................................................................17
Chapter 1: Journalism and investigative journalism.............................................20
  Defining journalism.............................................................................................21
  Investigative journalism scanning the literature...............................................25
  Challenges faced by journalism........................................................................29
  Economic crisis....................................................................................................36
  Summary...............................................................................................................40
Chapter 2: Issues in journalism education.........................................................42
  Journalism education.........................................................................................43
The skills versus theory debate........................................................................46
Investigative journalism education.................................................................54
Dynamics between journalism academics and academia..............................65
Summary........................................................................................................69
Chapter 3: Digital games and journalism education.......................................71
Digital games in education............................................................................72
Serious games...............................................................................................74
Newsgames...................................................................................................74
Journalism games..........................................................................................81
Serious games as a training resource..............................................................86
Summary........................................................................................................94
Chapter 4: Alternate reality games and education..........................................96
Alternate reality games (ARGs)......................................................................97
Educational benefits of ARGs........................................................................114
Alternate reality games and journalism pedagogy..........................................117
Summary.......................................................................................................128
Chapter 5: Building an ARG: educational framework....................................130
Core theories of learning................................................................................131
Theoretical positioning of ARG......................................................................143
Summary.......................................................................................................144
Chapter 6: Methodology..................................................................................146
Qualitative research.......................................................................................147
Action research..............................................................................................150
Action research in an educational context.....................................................153
Methodological framework of the present study.............................................156
Summary.......................................................................................................181
Chapter 7: ARG analysis..................................................................................183
Feedback........................................................................................................184
Summary.......................................................................................................211
Chapter 8: Learning through practice in *The Seed* ARG

Facebook usage

Use of digital technology

Critical thinking

Interview technique

Source management

First draft submission

Summary

Chapter 9: Developing an ARG for a journalism subject: lessons learnt

Reflection

Development phase

Running phase

Evaluation phase

Future iterations

Summary

Conclusions

Summary

List of References

Appendices
List of figures

Fig. 1.1: Difference between conventional journalism and investigative journalism (Hunter 2009, p. 8).

Fig. 1.2: Tweets by a citizen journalist.

Fig. 1.3 Global revenues split by advertising and circulation (US$ million) 2008–2017 estimated by PricewaterhouseCoopers (2013).

Fig. 3.1: Newsgame: Dean Howard for Iowa.

Fig. 3.2: Newsgames: top left, September 12; top right, Kabul Kaboom; bottom, Osama Vs Obama.

Fig. 3.3: Newsgame: Pedopriest.

Fig. 3.4: Newsgame: Darfur is Dying.

Fig. 3.5: Journalism game: City Council.

Fig. 3.6: Journalism game: News Reporting Simulation: A Fire Scenario.

Fig. 3.7: Journalism game: Global Conflict: Palestine.

Fig. 3.8: Journalism games: left: Dead Rising; right: WARCO.

Fig. 3.9: Newsgame: Eddy’s Run: The Prism Prison.

Fig. 3.10: Development of a digital game.

Fig. 4.1: I Love Bees (2004).

Fig. 4.2: Why So Serious?

Fig. 4.3: World Without Oil.

Fig. 4.4: Half The Sky Movement: The Game.

Fig. 4.5: The Tower of Babel.

Fig. 4.6: Frequency 1550.

Fig. 4.7: Swine River website.

Fig. 5.1: Kolb’s experiential learning cycle.

Fig. 5.2: Jarvis’s experiential learning model.

Fig. 6.1: The Seed alternate reality game (ARG) design.

Fig. 6.2: First text message received by students in The Seed alternate reality game.

Fig. 6.3: Press release from the website of the Office of the Gene Technology Regulator, Department of Health and Ageing, Australian Government.
Fig. 7.1: Feedback on group work.
Fig. 7.2: Feedback on text messages.
Fig. 7.3: Feedback on Facebook.
Fig. 7.4: Snapshot from a Facebook group thread.
Fig. 7.5: Feedback on reward system.
Fig. 7.6: Snapshot from a Facebook group thread.
Fig. 8.1: Facebook post of an article on genetically modified (GM) foods.
Fig. 8.2: Facebook post on questions for discussion in the editorial meeting.
Fig. 8.3: Facebook post on a potential investigative angle.
Fig. 8.4: Facebook discussion regarding investigative angle.
Fig. 8.5: Facebook post on task allocation within a group.
Fig. 8.6: Facebook post on genetically modified (GM) food organisation.
Fig. 8.7: Discussion on Facebook that reflects critical thinking.
Fig. 8.8: Facebook post showing turnaround of students’ views after industry interviews.
Fig. 8.9: Facebook post referring back to tutorial discussion, press release and student research on the topic.
Fig. 8.10: Facebook post on challenges with nonresponsive interview sources.
Fig. 8.11: Facebook post on overcoming an interview challenge.
Fig. 8.12: Discussion on Facebook about interview questions.
Fig. 8.13: A group utilising a relationship with one of their contacts.
Fig. 8.14: Facebook post illustrating information-gathering and maintaining source confidentiality.
Fig. 8.15: Facebook post on a clue integrated into the alternate reality game.
Fig. 8.16: Facebook post on collecting information from a source.
Fig. 8.17: Facebook post on lead paragraph.
Fig. 9.1: Action research cycle.
Fig. 9.2: O’Leary’s cycle of action research.
Fig. 9.3: The initial map of learning objectives for the investigative journalism unit to be addressed by The Seed alternate reality game.
Fig. 9.4: Initial flowchart for game design.
Fig. 9.5: The first text message – a ‘tip-off’ apparently sent by a farmer.

Fig. 9.6: The second text message – a ‘tip-off’ apparently sent by an anonymous employee of a company that sells genetically modified (GM) seed.

Fig. 9.7: Students engaged in group work in the classroom.

Fig. 9.8: Students engaged in a classroom editorial meeting.

Fig. 9.9: Student interaction on Facebook and bonus point awarded (reward system).

Fig. 9.10: Student reaction on Facebook about the reward system.

Fig. 9.11: Student feedback on news feature draft.
List of tables

Table 0.1: Similarities between journalists and digital game players.

Table 2.1: Attributes of investigative journalists considered important by working journalists and journalism academics.

Table 2.2: Skill set for investigative journalists.

Table 4.1: Comparison of different categories of alternate reality game.

Table 4.2: Differences between an alternate reality game and a scenario-based exercise.

Table 5.1: Comparison between characteristics of problem-based learning (PBL) and an alternate reality game (ARG).

Table 6.1: Timeline of the alternate reality game, The Seed, for HAJM 301: investigative journalism.

Table 6.2: Point allocation for Facebook discussion.

Table 6.3: Moseley’s (2008) features integrated into The Seed.

Table 6.4: Data collection for evaluation of The Seed.

Table 6.5: Comparison between open-ended and closed-ended questions.

Table 9.1: First draft of work schedule.

Table 9.2: Alignment of alternate reality game design with learning objectives.
List of appendices

i. Declaration of statement
ii. Consent information statement
iii. Consent form
iv. Line of questioning: journalism academics
v. Line of questioning: investigative journalists
vi. First ethics clearance
vii. First ethics clearance (extension 1)
viii. First ethics clearance (extension 2)
ix. Consent information statement for students
x. Consent form for students
xi. Consent information statement for academics
xii. Consent form for academics
xiii. Survey: feedback on the ARG
xiv. Questionnaire for focus group on feedback of the ARG
xv. Tentative questionnaire for post-ARG interview (academics)
xvi. Second ethics clearance
xvii. List of interviewees
xviii. Unit outline
Implicit in the research literature is the notion that if one pairs instructional content with certain game features, one can harness the power of games to engage users and achieve desired instructional goals (Annetta 2008, p. 237).
The aim of this study was to explore the niche of alternate reality games, a sub-genre of digital games, for investigative journalism education. This has been achieved by exploring current challenges in the field of journalism and: (a) their impact on investigative journalism; (b) the manner in which contemporary journalism academics are responding to the requirements of the industry; and (c) identifying the existing gaming technology used to teach journalism. The data collected from these three steps have been incorporated in the development of an alternate reality game (ARG) for a subject on investigative journalism. The following discussion will shed light on the background and rationale for this study; identify the methods used and theoretical framework adopted; as well as provide a summary of the thesis structure.

**Journalism today: issues and challenges**

The traditional reporter is fast being marginalized and with that, could be the end of news as we know it. The news is being diluted ever so subtly through infotainment, punditry, and pontification that the public is less aware of this shift. Soft news is in and hard new is out, even on subjects such as politics, medicine, and war (Musa & Price 2006, p. 7).

The above statement provides a concise overview of some of the key issues surrounding contemporary journalism. New media technology has pushed journalism into a transformational phase – an amalgamation of information with entertainment, civic duties with commercial interests, journalist with citizen journalist, and traditional media with digital media. The 21st century continues to witness major developments in information and communication technology. The use of satellite communication, the bloom of news channels and the Internet revolution have all resulted in a completely different journalism scene. The twenty-four hours, seven days a week news coverage has resulted in an overlap between hard news and soft news (Deuze 2005; Harrington 2008). The rapid growth of public journalism and online blogging has affected journalistic autonomy and credibility, providing every citizen (with access to the required devices) with access to an audience. Live reporting has diminished the role of editor as a gatekeeper, but has provided a more powerful role for the reporter (Musa & Price 2006, p. 7).
Even the definition of journalism is becoming more complicated. The difference between hard news and soft news is no longer of importance, since the definition of ‘good news’ has been modified to meet the challenges of increasingly thinning lines between credible professional journalism and public journalism (Bainbridge, Goc & Tynan 2008; Lehman-Wilzig & Seletzky 2010; Patterson 2000). Hess and Waller (2009, p. 76) suggest that “newsrooms increasingly move away from the inverted pyramid form of objective, fact-based news, expressed as ‘the public interest’, and further into the realm of soft news, which is oriented to popular and commercial values”. There are debates among journalists and scholars about the effectiveness of print versus online news (Speakman 2011), objectivity and impartiality versus national interests (Baum & Groeling 2008), the role of media in the war against terrorism (Chomsky 2012; Norris, Kern & Just 2013; Powell 2011). Advertising, entertainment, propaganda and pressure from government and business providers has modified the shape of journalism.

Debates about the dominant ideology of a country, its national interests and the objectivity of news have always been present among both academics and working media practitioners (Althaus & Tewksbury 2002; Crawford et al. 2013). A terrorist for one country or group may be a freedom fighter for another. Nossek & Berkowitz (2006, p. 691) suggests that when a society sees its values under ideological threat, news usually seems to be associated with its dominant ideology. Josephi (2007a, p. 9) argues that,

This leaves journalism mostly within its own country or region, and the religious, cultural and political dimensions of that place. These forces have to be taken into account when researching journalism and journalistic practice, and should temper any claim for objectivity and neutrality.

Through thinly veiled subjectivity, journalists have an intellectual responsibility to portray a ‘real’ picture of an incident (Said 1997). It is a task that requires a journalist to cover an event in an efficient manner, while keeping in mind the policies followed by their organisation. A journalist has to consider libel laws, and be wary of not acting against the interests of different pressure groups, that is, advertisers, political parties, corporate owners and shareholders, unless directed otherwise (Bacon 2012, personal communication). Therefore, a journalist is not the only person producing a news story or
analysing an event: “The individual journalist is always embedded in organizational patterns that, as pre-arranged structures, influence journalists’ work and behaviour in every newsroom” (Altmeppen 2010, p. 571).

**Rationale for investigative journalism**

Both journalists and academic scholars have debated the role of a traditional journalist in contemporary times (Allan 2005, 2006; Kopper Kolthoff & Czepke 2000; Singer 2003a; Sousa 2006). “Scholars disagree on how best to characterize the broader societal consequences of these challenges to the occupational jurisdiction of journalists” (Mitchelstein & Boczkowski 2010, p. 572). Niyomukiza (2013) suggests that public journalism and blogging offer immediate information, though it lacks reliability and professional journalistic ethics. Traditional news organisations can build on their credibility to provide clear and concise news amidst this information flow (Thomas 2010). It has been also implied that with so much information available, future journalists will be geared more towards making sense of facts and issues rather than being gatekeepers of information (Simons 2011, personal communication; Ricketson 2012, personal communication).

Journalists require expertise in their fields to summarise information and make it available to the public in comprehensible language: “The craft of journalism requires more than gathering and disseminating information; journalists also cultivate sources, identify interesting story ideas, and present information clearly, accurately, and in a manner that serves the public interest” (Brennen 2009, p. 300). Therefore, field specialists will be required for news commentary to maintain the credibility and reliability of news organisations. This implies that there is a need for deeper understanding of issues. Investigative journalism can fulfil this role. The difference between a news journalist and an investigative journalist can be considered thus:

> While news journalists are finding their summit meetings, skateboarding ducks, or their stories of hardship overcome and joyous resolution, investigative journalists are going after the truth where it has been obscured, uncovering wrongs and persuading the rest of us to take them seriously, to be affected by their moral reading (de Burgh 2000, p. 17).
Many journalists suggest that the pressure to differentiate from more ‘public’ journalism will call for a greater need for investigative journalism (Baker 2011, personal communication; Birnbauer 2011, personal communication). This increased importance for investigative work within the changing environment of journalism enhances the significance of education and training for investigative journalists.

Investigative journalism educators around the world are working to cope with the rapidly changing field of journalism (Hunter 2012). Most contemporary journalism academics have field experience and understand the requisites of a digital journalistic world (Ricketson 2012, personal communication). New media courses, and development of digital skills have been added to core requisites of most educational programs (Simons 2011, personal communication). Universities such as Carnegie University, Columbia University and others have developed courses in such a way that incorporates working alongside journalists to produce quality stories, which are then published. Details of these courses are discussed in Chapter 2. Overall, it seems that journalism education is evolving quickly. As Richards and Josephi (2013, p. 202) point out, “In recent years, Australian and New Zealand journalism academics have intensified their efforts to give investigative journalism greater prominence in their teaching and research”. However, investigative journalism, despite its importance, is difficult to teach as it requires more time and effort.

Literature on investigative journalism education is very limited, as Hollings (2014) states: “Even within the investigative journalism canon, much of the literature is memoir, or case studies of investigative journalists. The number of actual texts that attempt to theorise the craft is probably less than 30, and certainly less than 100”. This limited availability of material on teaching the craft of investigative journalism has left a gap that needs to be filled by investigative journalism academics.

Australian investigative journalist and academic Bill Birnbauer (2011, pp. 26-27) argues that “schools in Australia-New Zealand and the Pacific region have operated in silos despite the availability of online technologies (websites, Twitter, Facebook, YouTube) that could facilitate collaborations between the schools and students”. Furthermore, New Zealand investigative journalist and academic Jim Tucker (2011, personal communication) suggests that it is difficult to teach hard news coverage to student journalists without getting in the
way of working journalists: “We can’t cover them properly other than with simulation”. Tucker also worries that in a one-year program there is insufficient time to teach detailed investigative journalism.

Suppose hard news, accident, and fire are at one end of the continuum and investigative reporting is at that the other end; then academics are covering the middle nicely. However, we are not covering the hard news because you can’t do police round or fire round in a journalism school without tripping on the toes of people covering for them, for the real publications or outlets. Similarly, we are not covering investigative journalism because in a one-year program you don’t really get to that, other than feature writing as a sort of a mild form of it. (Tucker 2011, personal communication).

The present study further explores current challenges in investigative journalism and academia, and how journalists and academics are responding to these challenges. This thesis proposes that one way to overcome some of the problems Tucker identifies may be by utilising purpose-built digital games in the curriculum. The usability of games for education will be explored in the next section.

**Use of digital games in education**

There is increasing interest in using technology to enhance education. The incorporation of information and communication technologies in education ranges from the use of a computer in class, to Internet-based content like wikis, blogs, interactive websites and a variety of Web 2.0 tools (Browne et al. 2008; Robertson 2007; Selwyn 2007a; Shurville, Browne & Whitaker 2008). To further promote an engaging learning environment, Smart Board, liquid crystal display (LCD) projectors, wireless microphones, interactive multimedia, voice recording tools like Lectopia, and digital, as well as video cameras, mobile devices such as smart phones, clickers and tablets are being incorporated into teaching both in the classroom and in distance learning (Chen, Meyers & Yaron 2000; Eshet & Chajut 2007; Finn 2005; Finn & Vandenham 2004).

Innovative growth in technology has led to an attitude change towards digital games by players and non-players. With cross-continental gaming competitions, diverse genres of
games, and continuous growth of the online gaming community, digital games today are taken more seriously than ever before. The digital gaming industry was worth $80 billion in 2012, worldwide (The Economist 2013). In the past few years, many game development companies have formed, some gaining massive financial growth. According to the Interactive Games & Entertainment Association (iGEA 2013), the Australian game industry reached $1.161 billion of traditional retail sales in 2012.

Worldwide, there are cumulatively more than 3 billion hours a week spent on digital games (Trost 2010). So why is digital gaming so addictive? There are a number of potential reasons for this astonishing level of interest. The games involve concentration and focus, and hence are mentally stimulating (Mayo 2007; McGonigal 2003a; Squire 2008). They provide immediate feedback, which aids a player’s enthusiastic involvement (Mayo 2009; Moreno-Ger et al. 2009). Although unsuccessful efforts lead to failure, players can constantly improve their game skills. Unlike most real life incidents, where actions cannot be undone, digital games allow players to rectify their gaming strategy until they win the challenge, and are consequently rewarded. Interestingly, digital games do not provide any major rewards except for the self-satisfaction of completion. Unless the player is participating in a gaming competition or an online community, the successful completion of a game is driven purely by inner motivation, also termed ‘intrinsic motivation’ (Dondlinger 2007; Kickmeier-Rust et al. 2007; Squire 2005; Wong et al. 2007). Malone (1980, p. 162) suggests that ‘challenge’ and ‘curiosity’ are two of the primary factors that make computer games so motivating.

In addition to being highly engaging, games can improve mental skills. The process of trial and error makes video game players persistent and patient. Digital games allow players to make decisions based on contextual situations with certain consequences; hence, they support improvisation and analytical thought processes (Annetta et al. 2010; Barab et al. 2009; Quiroga et al. 2009). Most digital games are task-oriented; players have to cross a number of hurdles to reach their goal. Evidently, this contributes to goal-oriented thinking. Indeed, digital game play has been found to enhance problem-solving abilities (Annetta et al. 2009; Sanchez, Mendoza, & Salinas 2009; Squire 2006; Susi, Johannesson & Backlund 2007).
The levels of dedication towards games and motivation to finishing them, in addition to their ability to enhance some brain functions, have led scholars to explore the potential use of games in education (Annetta et al. 2010; Connolly, Stansfield & Hainey 2011; Gee 2003). Squire (2008, p. 169) suggests that games “employ several gameplay mechanisms to support learning”. There are several ways games have been proposed to contribute to education, including: that time spent gaming could be partially utilised for learning; the intrinsic engagement and immersion of computer games could make learning more pleasant; to support problem-oriented learning; via storytelling, perhaps the most natural teaching method, used in current adventure games; and to present new and unusual perspectives within meaningful contexts (Kickmeier-Rust et al. 2006, p. 20).

Apart from these attributes, there is a critical reason for utilising digital games as a supporting resource in the 21st century education curriculum. The new generation is growing up with a different tool set. The students of today have grown up playing digital/video games, it is part of their culture and, like it or not, “games have changed the way current students learn” (Green & McNesse 2007, p. 5). Accordingly, it makes sense to teach students in a language (that is, digital games) they understand. Especially since digital games have proven to be quite successful and useful for education (Annetta et al. 2010; Barab et al. 2009; Quiroga et al. 2009). Whether it involves the Internet, mobile phone apps or television, media has become more interactive than ever before (Salen 2008; Squire 2008), and the education system needs to adapt to keep up with the new technological pace.

*With the growing popularity of online journaling, social network services, game modding [modification of programme code or software relevant to games], and remix cultures, we are in the midst of a much broader cultural shift that positions digital authoring and publication more centrally in the peer cultures of young people (Itō cited in Salen 2008, p. 115).*

Digital games and simulations have already been used for a range of medical purposes. The US National Aeronautics and Space Administration (NASA) uses digital games to physically train pilots (Reckart 2013). Attention deficit hyperactivity disorder (ADHD) has been treated through digital games and bio-feedback training (Butnik 2005). Furthermore,
games are used in medical and psychiatric treatment. Digital games have been shown to improve vision (Caplovitz & Kastner 2009; Li et al. 2009). There have been reports of utilising games for treatment of brain injury and regaining lost function (Paavola, Oliver & Ustinova 2013). The treatment of autism through digital games is widely recognised (Hiniker, Daniels & Williamson 2013). Games have even been used for cognitive distraction in cancer patients for managing pain, such as Re-mission, which supports young people dealing with cancer (Griffith 2004, 2002; Wang & Singhal 2009). The literature contains several research-based publications on the use of digital games in training and rehabilitation (Burke, Morrow & McNeil 2008; Saposnik & Levin 2011; Saposnik et al. 2010; Shah, Basteris & Amirabdollahian 2014; Yavuzer et al. 2008); however, as this is not the focus of this study, it will not be covered in more detail.

Video games have also been used to teach students about real-world issues (Bogost 2008). For instance ICED! (I Can End Deportation) gives an insight into immigration law violations of human rights. Even the United Nations (UN) has developed a game for its food program, Food Force, which teaches children about distribution of food during a humanitarian crisis (World Food Programme 2011).

**Gaming technology**

The word ‘game’ is generally used for volunteer leisure activities (Huizinga 1949; Kelly 1981). Caillois (1961) called games a free, make-believe activity governed by rules. However, the definition provided by Suits (1978, p. 7) is more suitable for educational games:

> To play a game is to engage in activity directed towards bringing about a specific state of affairs, using only means permitted by rules, where the rules prohibit more efficient in favour of less efficient means, and where such rules are accepted just because they make possible such activity.

In social sciences the word ‘technology’ refers both to the material construction and the social and intellectual context (Luppicini 2005). Technology is the application of knowledge in a systematic manner (Solomon 2000), a human activity which is value-laden and
influenced by social, cultural and environmental factors (McGinn 1978). The phrase ‘gaming technology’ is used in the title of this thesis to refer to technology used for game development as well as the elements and techniques incorporated in games. The field of educational gaming technology is yet to be mapped out, but draws elements from social science, education, psychology, game studies, media studies, communication studies, computer sciences and software engineering.

Rationale for the study

This study looks into the current and potential uses of games in journalism education. Furthermore, it identifies and tests a particular gaming genre, alternate reality games (ARGs), for an investigative journalism subject. While there are obviously vast differences between journalism and digital game play, there are actually enough similarities to make for a useful comparison (Table 0.1).

### Table 0.1: Similarities between journalists and digital game players.

<table>
<thead>
<tr>
<th>Category</th>
<th>Journalists</th>
<th>Digital game players</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pace</strong></td>
<td>Dynamic, quick-paced job</td>
<td>Dynamic, action-oriented gameplay</td>
</tr>
<tr>
<td><strong>Assessments</strong></td>
<td>Task-based; e.g. report PM’s speech</td>
<td>Task-based; e.g. kill the dragon and save the princess</td>
</tr>
<tr>
<td><strong>Tasks</strong></td>
<td>Deadline oriented; e.g. cover bush fire for upcoming news bulletin</td>
<td>Time-based; e.g. cross the burning bridge within 20 seconds</td>
</tr>
<tr>
<td><strong>Planning</strong></td>
<td>Strategic; e.g. film locations, who to talk to, or deciding on time or space allocation</td>
<td>Strategic; e.g. assessing the ratio of health recovery items to ammunition, sending forth player X instead of player Y, or choosing battle techniques</td>
</tr>
<tr>
<td><strong>Topics</strong></td>
<td>Wide variety of issues: sports, culture, politics, environment, health etc.</td>
<td>Wide variety of games: role-playing, one person shooter, narrative, sports-based etc.</td>
</tr>
<tr>
<td>Mode</td>
<td>Real-time, adrenaline rushing situations: war reporting, emergencies, accidents, murders etc.</td>
<td>Virtual-time, adrenaline rushing situations: fighting enemies, crossing hurdles</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Orientation</td>
<td>Research-oriented tasks that require an analytical mind; e.g. creating a report on global warming</td>
<td>Research-oriented tasks that require an analytical mind; e.g. puzzle-solving tasks, mystery-based contexts</td>
</tr>
<tr>
<td>Social networking</td>
<td>Face-to-face and online with colleagues, people involved, competitors</td>
<td>Face-to-face and online with players involved, competitors</td>
</tr>
<tr>
<td>Feedback</td>
<td>Frequent feedback: editorial comment, letters, by-lines, etc.</td>
<td>Immediate feedback: scores, fatal blows, rewards, loss of powers/points, etc.</td>
</tr>
</tbody>
</table>

Considering these similarities between journalism and digital games (Table 0.1) it is perhaps surprising that digital games have not been used more often as a significant tool for teaching journalism. Particularly as journalism students in developed countries generally have access to sophisticated technological tools, for instance creative digital software such as Photoshop, Adobe editing, movie cameras and digital recorders.

Skinner, Gasher and Compton (2001, p. 345) state that “students are taught a way of seeing and presenting the world without fully understanding the reasons why they are employing a particular method”, and are usually left on their own to create a bridge between this ‘theory and practice gap’. This thesis will argue that digital games can be used as a platform to bridge this gap. For instance, the incorporation of digital games in journalism education could provide experiences of real-time happenings in a convenient and safe virtual world. These games have the flexibility of offering different perspectives to students, providing them with a bigger picture and required skill sets. Hence, this can assist students in acquiring required analytical reasoning and technical training skills. This methodology could drastically cut travel costs and overcomes time limitations, some of the challenges involved in teaching field reporting. These sorts of games could train students
in interview techniques and styles, how to compile news stories and how to edit them. Students can experience situations that are life-threatening without facing real danger.

For the present study, a particular kind of digital game was chosen to test in a journalism subject. The practicality of incorporating digital games into a journalism course can be seen in the genre of journalism-based games. However, digital games can be expensive and slow to develop (Maniaty 2012). A sub-genre of digital games, ARGs, was explored in the present study as a potentially suitable model. An ARG is defined as:

* A game that takes place in both the real and online worlds using both new and traditional media. The game play consists of a series of scenarios that lead players to collaboratively solve puzzles and accomplish activities. As players complete each task, the game presents new scenarios and eventually takes players through an entire storyline (Fujimoto 2010).

The realistic context and flexible nature of ARGs is quite apt for journalism units. Indeed, one ARG has already been used for journalism education, *Birds of Paradise* (Tanner 2005) (for more details see Chapter 4). *Birds of Paradise* was considered to be quite a successful tool for teaching investigative journalism in a hypothetical context, albeit close to reality. However, perhaps a more practical way to use ARGs to provide real-world experience in journalism would be to play them in a realistic setting.

This study explores the potential of ARGs as a supplementary tool for journalism education and aims to serve as a foundation study for transition of digital games into the journalism curriculum. A key part of the present study was the creation of a working ARG, which was designed to cater to three main requirements: education, entertainment and training. Hence, the aim was to ‘edutain’ (educate-entertain) the journalism students. This thesis hypothesises that digital games can: make journalism education more effective, interesting, motivating and engaging; develop cognitive and analytical skills; strengthen decision-making powers; encourage persistence; and formulate a goal-oriented, merit-based teaching method.

Journalist and journalism academic Eric Newton (2012) suggests four actions that universities should undertake in order to successfully provide valuable journalism graduates: (1) “expand their role as community content providers”; (2) “innovate”; (3)”
teach open, collaborative methods”; and (4) “connect to the whole university”. The ARG developed for this study, *The Seed*, encapsulated the first three of these recommendations. The communal, innovative, collaborative and networking-oriented nature of an ARG has been discussed throughout this study. The ARG itself was innovative, that is, it was a hybrid of fieldwork, online work, class work, research, interviews, collaboration and team effort. This will be discussed later in chapters 7, 8 and 9.

**Theoretical framework**

The main theoretical foundation for this study lies in two main approaches: ‘constructivism’ and ‘transformative learning’ theory. Piaget’s (1978) theory of constructivist learning has a huge impact on the paradigm of learning theories (Palmer 2005). The theory suggests that knowledge is constructed on the basis of prior knowledge. Indeed, modern education has constructivism as an underlying premise. Similarly most of the learning theories, including active learning, experiential learning, situated learning, collaborative learning and incidental learning, are grounded in constructivism (Jonassen 1999; Kerka 2000; Strommen & Lincoln 1992). These theories are further discussed in Chapter 5.

The second important theoretical framework incorporated in this study is that of the transformative learning theory, which is an adult learning theory (Taylor 1997). This theory is directly relevant to this study because the project is exploring a game tested on and played by university students. Feedback was collected from the students about their feelings and experiences of the game, which significantly determine the success or failure of this study.

**Methodology**

As research in the field of social science, this study was initiated within the paradigm of action research. Action research is initiated to solve a problem, or alternatively is an introspective process of iterative problem-solving often conducted by researchers to find better methods for prevailing practices (Dick 2002). Schön’s (1993) ‘reflective practitioner theory’ is closely associated with action research and focuses on the study of practice to
improve both practice and understanding (Kemmis & McTaggart 2000, p. 570). It is difficult to establish a proper theoretical paradigm for action research – two impediments being the established power of existing paradigms, and the failure of academics to convert their practice into proper research (Schön 1995, p. 34). However, increasingly, academics are getting involved with action research as it allows them to improve their teaching and research as well as to publish in the wider research community. Educational action research is the main working basis for the present study.

It is important to note that the researcher has worked as an academic, delivering lectures and facilitating tutorials, in the field of media and communications. A unit on investigative journalism was being designed at Swinburne University of Technology, and this was considered to be a good opportunity to develop a game for a particular course and test it. The unit convener, Dr Saba Bebawi, agreed to test the ARG in her subject. The game narrative continued to evolve through continuous feedback received by students in the class. Qualitative analysis was deemed appropriate for this study to gain a deeper understanding of the issues, so in-depth interviews, focus groups and survey methods were used for data collection from both students and academics.

The literature on journalism education was extensively reviewed and it informed the construction of the ARG for this study. This review of the literature revealed that most of the published work on investigative journalism originates from the United States (US). Furthermore, recent funding models for investigative journalism have also emerged from the US. Both of these aspects will be covered in more detail in Chapter 1. Examination of the literature was supplemented with interviews from a number of journalists and journalism academics, primarily focused on the Australasian context. This was done partially because of easy access to interview subjects, but primarily because Australia and New Zealand represent the main journalism markets in which students partaking in this study would find employment. Regional educational approaches may affect or be affected by the practice and expectations in field journalism. The interviews were used to formulate the ARG.
Research questions

The present study explores the following three research questions:

Q1: What are the current challenges that investigative journalism academics face in preparing students for the field?

Q2: How have digital games been used for teaching investigative journalism?

Q3: How can an alternate reality game be used for teaching investigative journalism?

Original contribution to knowledge

This study aims to make an original contribution in these three ways:

1) Highlight the problematic nature of journalism education and research within the higher education sector, with special focus on investigative journalism.

2) Provide a detailed comparative analysis of two existing forms of digital games relevant to the field of journalism, that is, newsgames and journalism games.

3) Develop and test an ARG for an undergraduate unit in investigative journalism.

Alternate reality games have been used for educational purposes but there is no evidence of the use of an ARG for a reality-based investigative journalism project.

Limitations of this study

There were a number of limitations that framed the way this study was developed and compiled. It must be noted that this project was designed to be an initial proof-of-concept exercise, and as such was not designed to provide conclusive evidence about the usability of ARGs in journalism education. Rather, the present study aimed to identify some of the key strengths and weaknesses of this approach as contextualised within current thinking on journalism education. It is hoped that this then could serve as a platform for future exploration. Following are the main limitations of this study:
Firstly, it must be noted that this was a comparatively small study carried out in Australia, for one semester, and the results may not be generalisable to the rest of the world. However, the aim here was not to find a universal tool for journalism education, but to test the utility of one particular tool in one particular context. Secondly, there was a lack of guidelines or tutorials about the development of an ARG. Some commercial ARGs have been discussed by their developers (McGonigal 2011); however, these were not sufficient to be used for creating an educational ARG. It took considerable effort to decipher which elements would be suitable for an educational ARG. A number of project design documents were worked on before the actual design was finalised. A detailed reflection on planning, developing and testing of the ARG is part of the discussion and analysis in Chapter 9. It must be noted that due to their transient nature, ARGs leave very little behind once they are completed. Whereas other forms of digital games may have code that persists once the game is completed, ARGs are designed to only exist when they are being played. This study has attempted to record game design elements, through snapshots of messages and discussions on Facebook.

Thirdly, the researcher was involved in developing the ARG and was instrumental in designing the curriculum for the unit the game was tested in. These multiple roles allowed insight into the development process of the ARG as well as development of the investigative journalism unit. However, it also resulted in the absence of objective distance from the case study. This is not uncommon in action research but it is important to point out. Further details about how action research formed this project are provided in Chapter 6. Fourthly, this study does not undermine the steps taken by investigative journalism academics to train students in a rapidly changing industry. It is not being suggested that the use of an ARG is the best method of training investigative journalists. It should be viewed as an experiment in journalism education, and is not meant to be the answer to all problems.

Fifthly, this is not a comparative analysis of two styles of teaching an investigative journalism unit. Hence, all feedback received from the students is on the basis of their single experience with this mode only. Sixthly, the ethical requisites, as approved by Swinburne Human Research Ethics Committee (SUHREC), of conducting this research included maintenance of confidentiality of students’ backgrounds as well as their results.
The ethical limitations prevented me from incorporating the students’ finished stories in the thesis. This study and its results are based on data collected over a particular amount of time, that is, six weeks and one mid-semester break. A longer research period and flexibility about the confidentiality of students and their grades would have resulted in a more extensive study. Sixthly, English is not this researcher’s native language, which may have represented a minor hindrance. This is especially important to note in the context of action research, because as a participant the linguistic background has to be taken into account.

Lastly, as an action research inter-disciplinary thesis this study was challenging to conduct, as it involved three disciplines, that is, journalism studies, game studies and educational technology to link together within the paradigm of action research. McMahon and Jefford (2009, p. 359) argue that,

> Presenting action-research reports in part or whole fulfilment of the assessment requirements of a recognised academic qualification is inherently more risky than presenting more traditional projects. There are, at least, three reasons for this. Firstly, the boundaries of action research – the technical rules – have never been, and probably can never be, clearly defined. Secondly, what constitutes quality in action research remains a matter of some considerable debate. Thirdly, action research, by its nature, is much less predictable and predictive than other forms of research. Consequently, it is all too possible that the research project will diverge, in form or content, from the formal requirements of the assessment system.

I have endeavoured to weave the process of action research throughout this thesis; however, it has been tough and complicated and must be recognised as a limitation.

**Thesis structure**

This thesis follows the following structure:

Chapter 1 discusses current trends and challenges in the field of journalism. These include the rise of digital media and economical restrictions. Two attributes of digital media, convergence and interactivity, are explored. A definition of investigative journalism is provided, in addition to an account of how investigative journalists are keeping up with
the demands of the industry. This chapter incorporates data from interviews carried out with investigative journalists and journalism academics from Australia and New Zealand. The data from interviews was used in the establishment of the ARG and the interpretation of results.

Chapter 2 provides insight into the field of journalism and, in particular, investigative journalism. It is based on a literature review on journalism education and investigative journalism education, and also on interviews with investigative journalists and journalism academics. The chapter covers the challenges faced by journalism academics due to the transitory nature of journalism, and describes the attributes of an investigative journalist. It also summarises the background of how journalism has been taught, highlights the current practices of journalism courses in Australia, and provides an overview of the investigative journalism courses offered by different universities in Australia and New Zealand. This information was used in establishing the ARG.

Chapter 3 examines the existing literature on digital games and their usability for education. It also provides examples of games used for journalism education and distinguishes two genres: newsgames and journalism games. It also considers the lack of popularity of digital games in journalism, despite their potential benefits. A significant portion of Chapter 3 has been published as a research article in the Asia Pacific Media Educator (APME) journal, volume 22, issue 1, 2012, pp.29-41

Chapter 4 reviews the existing genres of digital games used for serious purposes. These include serious games, pervasive games and ARGs. It provides an overview of some ARGs used for educational purposes. Furthermore, it discusses how ARGs are suitable for teaching journalism and discusses several examples, providing a rationale for using ARGs in investigative journalism education. Excerpts from Chapter 4 have been published in a research article for APME, volume 22, issue 1, 2012, pp.29-41

Chapter 5 provides an overview of the main theoretical framework adopted for this study. It also presents different educational theories and discusses their relevance with this study.

Chapter 6 describes the methodology adhered to in this study. It details action research and methods such as in-depth interviews, focus groups and surveys and their relevance to this
study. Furthermore, it presents the design of the game prototype developed, tested and analysed in this study.

Chapter 7 provides an analysis of the feedback regarding the ARG tested for this study. It discusses the themes identified in the data collected from the participants. It also investigates the strengths and weaknesses of the game. The discussion about the use of Facebook in investigative journalism education has been published as part of a book chapter ‘The use of Facebook as a Pedagogical Platform for developing investigative Journalism Skills’ in *The Social Classroom* (Aayeshah & Bebawi 2013).

Chapter 8 explores the patterns and trends of student investigative work and technique. It analyses student discussion on Facebook groups and links them with data collected through in-depth interviews with journalists and journalism academics. It reviews if and how the students’ investigative skills evolved over the six weeks of participating in the investigative ARG.

Chapter 9 reviews the planning, development and running of *The Seed* ARG as an investigative journalism educational tool. It reflects on each phase of the ARG and analyses what decisions were made and the rationale for these. It weaves discussions from chapters 1, 2, 4, 5 and 6 together and offers a reflection on the efficiency of ARGs for teaching an investigative journalism unit, as a part of action research.

Conclusions brings an end to the discussion by providing a summary of the key elements discussed throughout this thesis and the insights to gain from it. It also offers suggestions for making better iterations of this game as well as suggestions for further research in the field.
Chapter 1

Journalism and investigative journalism
Chapter 1 aims to offer a sense of the breadth of the issues in the field of journalism and its important branch of investigative journalism, and outlines strategies developed by journalists to cope with changing trends. It will start by offering definitions of journalism and investigative journalism. Then, it will analyse existing literature on investigative journalism to identify the place for this study within the existing scholarship. Furthermore, it will determine challenges faced by the journalism industry due to the rise of digital technology that led to a major economic crisis. It will also explore how the industry is struggling against the changes brought on by digital technology and changing economies. These dynamics will establish the background of the field of journalism and investigative journalism, which is essential to demonstrate the need for innovative responses to the industry.

In addition to the literature review, 21 investigative journalists and journalism academics from Australia and New Zealand were interviewed to gain an insight into academia and the industry. These interviews were conducted in two ways, face-to-face and through Skype. (For consent information statements, consent forms and lines of questioning, see appendices ii, iii, iv and v.) Six interviewees were initially selected on the basis of prior knowledge about the industry and academia through purposive sampling. Further leads for participants were requested from these six, as they had knowledge about both investigative journalism industry and academia (for a list of all the interviewees, see Appendix xvii). Ethics clearance for these interviews was given by Swinburne University of Technology’s Higher Education Research Ethics Committee (appendices vi, vii and viii). More detail about the interview methods is provided in Chapter 6.

### 1.1 Defining journalism

Traditionally, there has been a strict definition of journalism: “the central purpose of journalism is to tell the truth so that people will have the information that they need to be sovereign” (Fuller 1997, cited in Gans 2003, p. 1). Conboy (2013, p. 2) states that there are two features of journalism: “its aim is to provide a truthful account of the contemporary world, and it is committed to reporting information that is new about that world, whether in terms of fact or opinion based in fact”. Bogart (2004, p. 40) names a number of indicators
of excellence in journalism, including “integrity, fairness, balance, accuracy, comprehensiveness, diligence in discovery, authority, breadth of coverage, variety of content, reflection of the entire home community, vivid writing, attractive makeup, packaging or appearance, and easy navigability”. According to Bordoel and Deuze (2001, p. 92), the purpose of journalism is “reinforcing the ideal of participatory citizenship through effective dissemination of public information”. Deuze (2005, p. 447) outlines the major attributes of an ideal journalist:

- provides public service (as watchdogs or ‘newshounds’, active collectors and disseminators of information);
- objective, impartial, neutral, fair and, thus, credible;
- autonomous, free and independent in their work;
- immediacy, actuality and speed (inherent in the concept of ‘news’);
- ethics, validity and legitimacy.

These definitions offer similar attributes of journalism: it is for the good of the public; it is objective, fair and impartial; it is immediate and recent; it is diligent; and it is according to standard ethical values. Following these points, the role of a journalist has always been very specific, that is, a person who provides the facts without any interpretation or bias. According to Bossio (2008, p. 2), “in traditional journalism textbooks, the central role of the journalist has been described through the ability to discover and publish information that extinguishes rumour and speculation”.

In discussing journalism across different eras, Josephi relays Hallin’s (2007a, p. 4) representation of the late 1970s as ideal with regards to journalistic practices:

*The high modernism of American journalism, an era when the historically troubled role of the journalist seemed fully rationalized, when it seemed possible for the journalist to be powerful and prosperous and at the same time independent, disinterested, public-spirited, and trusted and beloved by everyone, from the corridors of power around the world to the ordinary citizen and consumer.*

In contrast, Tunstall (Josephi 2007a) considers the 1950s to have been an ideal decade for the US media. While many journalists still strive for these ideals, journalism currently faces
many challenges. Two major challenges are economic crisis and the rise of digital media. These will be discussed in detail later in the chapter. The next sections will explore the trends and issues of investigative journalism in a contemporary context.

**Investigative journalism**

Investigative journalism is an important subset of journalism, and has always been considered a vital element for a functioning democracy (Cooper 2009). Investigative journalist Laura Frank (2009) explains that “investigative journalism takes more time and more experienced journalists to produce, and it often involves legal battles. It is generally the most expensive work the news media undertakes”. Traditional news organisations have been forced to cut back on news gathering sources and journalists have been made redundant. This has resulted in an alarming decline in in-depth investigation in both domestic and foreign reporting. As Walton argues “assigned to cover multiple beats, multitasking backpacking reporters no longer have time to sniff out hidden stories, much less write them. In Washington, bureaus that once did probes have shrunk, closed and consolidated” (Walton 2010).

Investigative journalism may be considered extremely important, but mainstream journalism can provide information to people without in-depth investigation. However, superficial reporting can have negative consequences. For instance, during the Iraq invasion in 2003, the media lacked in-depth investigative reports. Consequently, it did not sufficiently challenge claims of weapons of mass destruction in Iraq. The post-war Iraq has suffered a higher rate of cancer, infertility and birth defects among the population along with lack of security, greater risk of terrorism and a country destroyed (Mulhearn 2013). If there had been pre-war investigative journalism, perhaps this could have been avoided.

Investigative journalism is one of the most ideal forms of journalism. According to Parry (2005), “investigative reporting is to journalism what theoretical research is to science, having the potential to present new realities and shatter old paradigms – how people see and understand the world around them – which, in turn, can transform politics”. It is considered by some to be the “essence of journalism” (Birnbauer 2011, personal
communication). Investigative work carried out by journalists all around the world uncovers important stories and its significance should not be ignored.

*Investigative journalism has helped bring down governments, imprison politicians, trigger legislation, reveal miscarriages of justice and shame corporations. Even today, when much of the media colludes with power and when viciousness and sensationalism are staples of formerly high-minded media, investigative journalists can stand up for the powerless, the exploited, the truth*” (de Burgh 2008, p. ii).

However, due to its idealistic nature, investigative journalism can be complicated to define. American investigative journalism historian James Aucoin (2005) interprets it as informing the public about something that is of importance to them and which they do not know. The Dutch Association of Investigative Journalism defines it as “critical and in-depth journalism” (VVOJ 2011). A comprehensive definition is proposed by Green:

*It is the reporting, [primarily] through one’s own work product and initiative, matters of importance which some persons or organisations wish to keep secret. The three basic elements are that the investigation be the work of the reporter, not a report of an investigation made by someone else; that the subject of the story involves something of reasonable importance to the reader or viewer; and that others are attempting to hide these matters from the public* (cited in Ullmann 1995, p. 2).

According to Ansell, Djokotoe, and Mwaba (2002, pp. 4-5), investigative journalism has the following main aspects: digging deeply into an issue or topic that is of public interest; a process, not an event; original and proactive; should produce new information or put together previously available information in a new way to reveal its significance; should use multiple sources; calls for greater resources, teamwork and time than a routine news report.

Furthermore, investigative journalism is also important for keeping journalism itself in line. As investigative journalist and academic Matthew Ricketson (2001) emphasises, “if the fourth estate [the press] is vital to the checks and balances of a healthy democracy, then the fourth estate itself needs a watchdog”. Investigative journalism can effectively watch the watchdogs (journalists) of society.
1.2 Investigative journalism: scanning the literature

Several authors have their own interpretation and understanding of Investigative Journalism and this has been discussed in their work (de Burgh 2008; Ettema & Glasser 1998; Hunter 2012; McKnight 1999). Similar to that of journalism, publication about investigative journalism has four threads: craft-based guidelines (Anderson & Benjaminson 1976; Benjaminson & Anderson 1990; Bolch & Miller 1978; Cuillier 2011; Forbes 2005; Gaines 1998; Mollenhoff 1981; MacDonald 2006; Ricketson 2004; Weinberg 1996), biographies/memoirs (Franklin et al. 2005; Masters 2002, 2006; Ricketson 2000; Ridley 2001), non-fiction narratives (Behrens 1977; Bernstein & Woodward 1974; Hager 2002, 2011; Loewenstein & Moor 2013; McKenzie 2012; Miraldi 2000; Palast 2002; Pilger 2005; Serrin & Serrin 2002; Shapiro 2003; Tichi 2004) and academic work (Birnbauer 2011, personal communication; Bossio 2009, 2010; Chubb & Bacon 2010; Hollings 2010a, 2010b; Houston 2010; Richards & Josephi 2013; Zelizer 2004).

Ettema and Glasser’s (1998) Custodians of Conscience looks into the sociology of investigative journalism and explores the meaning and context of its practice, drawing on Schön’s theory of the reflective practitioner (1983), which will be discussed later (see Chapter 6). They also argue that investigative journalists do not have sets of rules that they apply, rather they use “intuitive methods” and existing knowledge and learn to “creatively sustain the conversation with a situation” in their reporting (Ettema & Glasser 1998, p. 22). Another approach towards investigative journalism is that of Aucoin (2005), who connects it with MacIntyre’s (1984) social practice theory. Aucoin (2005, p. 204) highlights the importance of ethics, ‘internal good’ and ‘social good’ in investigative journalism.

Philip Knightley’s A Hack’s Progress (1997) is a combination of his memoir and practical insights about investigative journalism. Similarly David Spark’s (2012) Investigative Reporting: A Study in Technique offers practical tips and advice about persuading informants and verifying information with practical examples from the field. Telling the Untold Stories: How Investigative Reporters are Changing the Craft of Biography by Steve Weinberg (1992) is based on interviews from journalists and examines the issues that arise when journalists write autobiographies, such as bias or conflict of interest.
It is important to mention Nick Davies’ *Flat Earth News* (2008), in which he describes the phenomenon of “churnalism” in the journalism industry – the process of recycling stories without fact-checking. Churnalism is at least partially a response to time and budget pressures placed on journalists, and often involves profit-chasing, which affects the news values of modern journalism to a great extent. It should be pointed out that although Davies (2008) discussed it more extensively, Waseem Zakir, a BBC journalist, is accredited with coining the term (BBCwatch.org 2013).

Another name for investigative journalism sometimes used is ‘enterprise reporting’. According to Sullivan (2011), “enterprise reporting is journalism that matters”. Kurpius (2002, p. 855) states that enterprising reporting is “a process through which journalists tend to use more diverse sources and fewer official sources than traditional news coverage”. Enterprise stories are not found in newspapers or on the web (Cardenas 2009). Maguire (2014, p. 176) argues that since an enterprise story is “optional”, and is not essential to write, the journalist pursuing the story needs to be personally driven to investigate it. “An enterprise story can also require a degree of personal resilience, depending on a reporter’s tolerance for uncertainty and, ultimately, criticism. Part of the recipe for success in enterprise reporting is a willingness to be viewed as an outsider, a nonconformist” (Maguire 2014, p. 176). However, as it is a less used term, it will not be used in the context of this study.

The literature in this field also includes books that provide guidelines and cover the basic techniques of investigative journalism. *Investigative Reporting: From Premise to Publication* by Marcy Burstiner (2009) provides a detailed understanding of how to go about an investigative journalism assignment. Ullmann’s *Investigative Reporting: Advanced Methods and Techniques* (1995) offers some practical tips and techniques for covering an investigation. Although the investigative techniques offered in the book have not changed, the technology has, which makes it outdated when it comes to application of modern technology for investigative journalism. To fill this gap, *Heat and Light: Advice for the Next Generation of Journalists* by Wallace and Knobel (2010) discusses the current industry in a time of multiple platforms. David Cuilliers’ (2011) book *The Art of Access: Strategies for Acquiring Public Records* describes different ways of accessing public records in the digital environment. Furthermore, in edited book *The Social Media (R)evolution? Asian Perspectives*
on New Media, Syed Nazakat (2012) provides an overview of investigative journalism within the context of social media.

Most of the participants interviewed for this study agreed that the main difference between investigative journalism and any other style of journalism is the depth of the investigation (Hollings 2011, personal communication; Moore 2011, personal communication; Robie 2011, personal communication; Simons 2011, personal communication; Tully 2011, personal communication). However, a few other differences can be unearthed for the sake of arguing the significance of investigative journalism. Unlike regular news stories, which are routinely published, an investigative news feature requires complete and comprehensive information before it is published. Therefore, it is very difficult to publish an investigative news feature on a daily basis.

Verified documentation is required as much investigative journalism deals with controversial information. Confidentiality of the source is usually an important element in investigative news reporting. Rothschild and Miethe (1999) discuss risks whistle-blowers face – people who reveal confidential reports about corruption or wrongdoing in their organisations can find their lives are disrupted and even threatened (Guelke 2013). Thus, ability to build trust is a substantial requisite for any investigative journalist. Mark Lee Hunter’s (2009) *Story-Based Inquiry: A Manual for Investigative Journalists* offers a clear difference between conventional journalism and investigative journalism (Fig. 1.1).
<table>
<thead>
<tr>
<th>CONVENTIONAL JOURNALISM</th>
<th>INVESTIGATIVE JOURNALISM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research</strong></td>
<td><strong>Research</strong></td>
</tr>
<tr>
<td>Information is gathered and reported at a fixed rhythm (daily, weekly, monthly).</td>
<td>Information cannot be published until its coherence and completeness are assured.</td>
</tr>
<tr>
<td>Research is completed seriatim. No further research is done once a story is completed.</td>
<td>Research continues until the story is confirmed, and may continue after it is published.</td>
</tr>
<tr>
<td>The story is based on a necessary minimum of information and can be very short.</td>
<td>The story is based on the obtainable maximum of information, and can be very long.</td>
</tr>
<tr>
<td>The declarations of sources can substitute for documentation.</td>
<td>The reportage requires documentation to support or deny the declarations of sources.</td>
</tr>
<tr>
<td><strong>Source relations</strong></td>
<td><strong>Source relations</strong></td>
</tr>
<tr>
<td>The good faith of sources is presumed, often without verification.</td>
<td>The good faith of sources cannot be presumed; any source may provide false information; no information may be used without verification.</td>
</tr>
<tr>
<td>Official sources offer information to the reporter freely, to promote themselves and their goals.</td>
<td>Official information is hidden from the reporter, because its revelation may compromise the interests of authorities or institutions.</td>
</tr>
<tr>
<td>The reporter must accept the official version of a story, though he or she may contrast it to commentaries and statements from other sources.</td>
<td>The reporter may explicitly challenge or deny the official version of a story based on information from independent sources.</td>
</tr>
<tr>
<td>The reporter disposes of less information than most or all of his sources.</td>
<td>The reporter disposes of more information than any one of his sources taken individually, and of more information than most of them taken together.</td>
</tr>
<tr>
<td>Sources are nearly always identified.</td>
<td>Sources often cannot be identified for the sake of their security.</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td><strong>Outcomes</strong></td>
</tr>
<tr>
<td>Reportage is seen as a reflection of the world, which is accepted as it is. The reporter does not hope for results beyond informing the public.</td>
<td>The reporter refuses to accept the world as it is. The story is aimed at penetrating or exposing a given situation, in order to reform it, denounce it or, in certain cases, promote an example of a better way.</td>
</tr>
<tr>
<td>The reportage does not require a personal engagement from the reporter.</td>
<td>Without a personal engagement from the reporter, the story will never be completed.</td>
</tr>
<tr>
<td>The reporter seeks to be objective, without bias or judgement toward any of the parties in the story.</td>
<td>The reporter seeks to be fair and scrupulous toward the facts of the story, and on that basis may designate its victims, heroes and wrongdoers. The reporter may also offer a judgment or verdict on the story.</td>
</tr>
<tr>
<td>The dramatic structure of the reportage is not of great importance. The story does not have an end, because the news is continuous.</td>
<td>The dramatic structure of the story is essential to its impact, and leads to a conclusion that is offered by the reporter or a source.</td>
</tr>
<tr>
<td>Errors may be committed by the reporter, but they are inevitable and usually without importance.</td>
<td>Errors may be committed by the reporter, but they are inevitable and usually without importance.</td>
</tr>
</tbody>
</table>

Fig. 1.1: Difference between conventional journalism and investigative journalism (Hunter 2009, p. 8).

The United Nations Educational, Scientific and Cultural Organization (UNESCO), in the light of its commitment to global education, has developed a manual for investigative journalism reportage (Hunter 2009). It offers a basic overview about what constitutes investigative reporting and the techniques and methods of conducting an investigation and compiling a report. Another recent UNESCO publication about investigative journalism is *Global Investigative Journalism Casebook* (2012), which illustrates how investigative journalists
from different parts of the world investigate and narrate stories by showcasing investigative research done by journalists. Another such book is *Troublemakers: The Best of South Africa’s Investigative Journalism* (Harber & Renn 2009). Several books offer regional perspectives of investigative journalism, such as *A Watchdog’s Guide to Investigative Reporting* penned by Derek Forbes (2005), which discusses the grassroots reality of the South African journalism industry, and *Digging Deeper* by Sheila Coronel (2009), which portrays investigative journalism in the Balkans. A recent and much required addition to the literature on investigative journalism is *Journalism Research and Investigation in a Digital World* by Stephen Tanner and Nick Richardson (2013). The book discusses the essentials of developing journalism research skills with the help of case studies, and provides a background about investigative journalism research.

In the existing literature, relative little attention is paid to investigative journalism within the broader field of journalism (Hollings 2010b). This holds true especially for the practice-based guidelines and narratives, which were given more importance here due to their relevance with this study. The journalism industry is rapidly changing with the rise of digital technology, which has also affected teaching of the topic. This will be discussed further in Chapter 2.

### 1.3 Challenges faced by journalism

**Digital journalism**

“The digital age has brought sweeping changes to the news media” (Cohen et al. 2011, p. 148). The term ‘digital journalism’ refers to journalism practice existing in an era of modern digital technology and the Internet. Digital journalism started in 1971 after computers emerged; although Microsoft’s launch of Internet Explorer in 1994 helped to establish a more substantial online presence of journalism (Carlson 2003). However, it is important to note that all journalism is digital journalism today. All stages, from basic research to final typing of the story, are carried out with the help of digital technology.

An important aspect of digital journalism is ‘data journalism’. Data journalism is a relatively new term and usually refers to the collection and analysis of extensive
information available digitally (Gray, Chambers & Bounegru 2012). According to Egawhary and O’Murchu (2012, p. 1), “Data journalism is the ability to analyse and examine numbers and to know how to manage large datasets and read them correctly”. Franklin (2013, p. 2) suggests that data journalism offers “new forms of presentation of news via data visualisation”, and the emergence of convenient-to-use databases that makes possible “innovative ways to conduct substantive quantitative content analyses by interrogating previously unimaginably large data sets”. The amount of data available requires a good sense of news as well as the ability to decipher it and narrate it in simple words. This makes data journalism a significant part of any investigative news story (Mitchell 2011, personal communication).

Furthermore, data journalism can increase transparency and potentially add to the credibility of journalistic process (Aitamurto, Sirkkunen & Lehtonen 2011, p. 9). It should be noted that the term data journalism is a recent one; however, this process of digging deeper into data to find out trends and stories is not new. According to Bradshaw and Rohumaa (2012, p. 49), “the difference is that the internet and computing powers are giving us new tools to help at every stage of the journalistic process”. In other words, data journalism can be considered as a new and important dimension to investigative journalism. As Andrea Carson (2012a) suggests, “Online media is fast and efficient at promoting stories and reaching new audiences. Mastheads lend credibility and institutional support. Combined, investigative journalism’s future is cause for optimism”.

There are two sides of digital journalism. The first is online data collection; the second is dissemination of information. “The growth in the online news organizations has been mostly in the role of aggregators, who read other blogs and news reports, and select, aggregate, edit and comment on their findings” (Cohen et al. 2011). Online journalism is interactive and broadly distributed compared with print and broadcast (radio and TV) media. Indeed, most print journalism is reproduced online and broadcast channels can be accessed online as well, both live and archived.

The above discussion has shown that journalism as a profession is undergoing massive change. Both journalists and the people who study journalism are struggling to adapt. Due to these sweeping changes to the industry there has been some concern about the future of
investigative journalism and a number of journalists have expressed fears about the potential death of investigative journalism (Halliday 2010; Mora 2009). Two major issues faced by investigative journalists around the world are convergence and economic crisis. These are closely knitted to the challenges faced by the journalism industry itself.

**Convergence**

The rise of digital media has converged the platforms for news delivery (Grant 2004; Wilkinson & Beach 2009). Three decades ago, Pool (1983, pp. 27-28) stated:

> The explanation of current convergence between historically separated modes of communication lies in the hability of digital electronics … electronic technology is bringing all modes of communication into one grand system.

The modern journalist is required to cover a story using the same basic techniques as the traditional journalist; however, the devices used to gather information, as well as the production platforms, have evolved. Traditionally the newspaper industry worked to a strict timeline, and journalists were required to submit a copy of their story before the deadline every day (Moore 2011, personal communication). The second updated version of the copy would be published the next day (Simons 2011, personal communication). In contrast, the modern journalist is required to submit a version for the print copy, and may also be required to submit an updated version for an online edition, in addition to audio and/or video clips. Platforms like podcasts and live blogs have mixed the work practices of print and electronic journalists and added to their workload and time pressure (Mitchell 2011, personal communication).

Grant and Wilkinson (2009) describe convergence as a dominant trend in the contemporary journalism practice. Convergence is unavoidable and occurs at different stages of media production, from development to delivery and feedback. Jenkins (2001, p. 93) notes that “media convergence is an ongoing process, occurring at various intersections of media technologies, industries, content, and audiences”. It is an effective means of providing information to the audience in the most suitable way possible. The word ‘convergence’ has been used to define merging of conglomerates, to sharing of resources for news gathering and sharing of story narration (Gordon 2003).
While there is concern about these challenges, most of the journalists interviewed in the present study did not feel threatened by them. Baker (2011, personal communication) considers the rise of digital media a ‘double-edged sword’.

*It’s a great opportunity, as it allows people to get more involved, more interaction with the public, which is all healthy and a good thing but it also means declining revenues. It is a threat to good journalism as well, so if someone can get a happy balance and still make some money and increase the platforms, I think it would be a good thing* (Baker 2011, personal communication).

The rise of digital media is seen as a way of engaging people and interacting with them in more accessible ways. Senior journalists such as Keith Moore (2011, personal communication) believe that, regardless of the changes in platform, investigative journalism will continue to be significant:

*I actually see that as an incredibly bright future for journalism. OK one platform gradually might not be as important, which is the physical hard copy newspapers but really it is the words that we write and the opinions that we share in the news that we bring that is important and I certainly think that there is a thirst in the community to know what’s going on and as long as there is that thirst in the community, people will want to know why did that happen.*

Some investigative journalists have adapted well and are increasingly incorporating digital technology and social media platforms to expand their scope of storytelling. One such example is Nicholas Kristof, a *New York Times* journalist who regularly uploads his opinions about stories he is covering around the world on Facebook (Dell’Aquila & Johns 2009). He also posts links for his blogs and articles, which possibly increases traffic to these websites. Similarly, journalists use Twitter to comment about issues and continue updating their blogs (Bacon 2013; Lowenstein 2012). Hence, journalists are learning to use alternate media to build rapport with their readers while also directing traffic to mainstream media.
Interactivity – public journalism

Digital technologies have given birth to a new form of journalism that involves audience input and participation, otherwise known as ‘citizen journalism’, ‘user-generated journalism’ or ‘participatory journalism’ (Singer et al. 2011). For this study the term ‘public journalism’ will be used. Journalism professor Jay Rosen (2005) thinks, “professional journalism is no longer sovereign over territory it once easily controlled”. Gaber (2010) argues that in some cases the lines between bloggers and journalists have been blurred in the UK. This blurring is not just with respect to content but also dissemination through online platforms.

Public journalism has been proposed to be different from traditional journalism in three ways: firstly, the agenda is set by the public instead of businessmen, bureaucrats or politicians; secondly, the public is engaged in the discussion; and thirdly, it allows the public to make decisions about community issues and “conveys those decisions to policymakers, the captains of industry and commerce, and society at large” (Romano & Hippocrates 2001, p. 170). Interestingly, the foundations of public journalism are usually grounded in the aftermath of 9/11 (i.e. the attack on the World Trade Centre in New York, US), when stories and images from the attack were posted on the Internet by eyewitnesses (Chua, Razikin & Goh 2011). Good (2006) suggests that after the 2005 London bombings, public journalism was thrust into mainstream media, with public blogging about the event and uploading of pictures on Flickr.

This user-generated content has affected the mainstream news media in an extraordinary manner. The whole definition of news as we know it has changed and will continue to evolve with the growth in technology. The participants of public journalism can report an event promptly before the professional journalists, especially in the immediate moments after (or even during) an event. They can use their mobile phones, laptops and iPads to report the event to the entire world, along with providing diverse views, opinions and perspective on a single news event (Glasser 2013; Tilley & Cokley 2008). A recent example of public journalism is that of immediate (and often live) commentary from events happening in Gaza. Several Palestinians have been tweeting (posting comments) on Twitter and posting comments on Facebook (Fig. 1.2). Live videos of missiles attacks and
affected victims have been uploaded by citizen journalists. As mentioned by Chua, Razikin and Goh (2011, p. 5), “the corpora of content created by citizen journalists could potentially be used to mine for the occurrences of major events”. History is being recorded by common people in Gaza. Citizen journalists are involved in recording and transcribing events all around the world.

Fig. 1.2: Tweets by a citizen journalist.

To capitalise on this platform of information, several news organisations have created sections for citizen blogs, including The Washington Post (www.washingtonpost.com), BBC (www.bbc.com) and MSNBC (www.msnbc.com) (Good 2006). A quick look at these websites provides evidence of the strength and popularity of public journalism. OhmyNews.com, a South Korean online newspaper with the motto “every citizen is a reporter” has more than 37,000 registered contributors; Britain’s second most popular news website, Guardian.co.uk, hosts a ‘news’ message board to which readers contributed over 600,000 messages between 1999 and 2005 (Chua, Razikin & Goh 2011, p. 5).

The tremendous increase in public journalism has forced mainstream journalists to be concerned about the future of journalism. A review of literature about digital journalism mostly highlights the sceptical nature of journalists, which has limited them from being able to utilise the power of the Internet to its fullest. However, there is an increase in studies about the emerging new traditions in the field. The Guardian’s online editor and
journalist Kevin Anderson used Seemic (an online social network with the facility to share videos) to gather material for his story about conditions in Iraq, effectively circumventing traditional barriers in order to “get frank, of-the-minute reports about the situation in Iraq from his office in London” (Bossio 2010, p. 7). According to Mitchelstein and Boczkowski (2009, p. 563), online journalism is “at the intersection of tradition and change”.

Public journalism has revived questions about the authenticity of journalism as a profession and journalists around the world are concerned about the alterations to traditional journalistic practices. As Altepmann (2012, p. 138) suggests, “in the current crisis situation, journalism complains about the changed rules and altered resources of news reporting”. He states that most news organisations were uncomfortable about public journalism and its consequences from a very early stage. One of the major complaints has its roots in the financial hit taken by the news media organisations all over the world due to the increasing role of the general public in distribution of news and information (Thurman 2008).

In addition to the rise of public journalism, the journalism industry took an economic hit during the 2007 crisis, also known as the global financial crisis. Due to increasingly limited budgets, it became necessary to share information, even between news organisations. News agencies play an important role in providing most of the international news (Bacon 2012, personal communication); however, the number of international correspondents has decreased significantly. News organisations rely on local journalists and international news agencies to provide audio and video data as well as information. Convergence between local and international news provision can be seen in journalists like Abdul Ghani Kakar, a chief investigative reporter for the Urdu language newspaper Daily Awam who works as a correspondent for German channel Deutsche Welle and Central Asia Online, a Washington-based news service (McEntire 2013).

Convergence, simply put, is the only possible solution for fulfilling the demands of the rapidly changing media scenario and audience requirements. Through convergence, news can be provided to anyone, anywhere through any platform (Kolodzy 2006). The emergence of the Internet gave birth to 24/7 news production. Continual updating of websites and round the clock news channels have increased the already fast-paced work
environment of journalism. “Hence, there is a need to be constantly skilled, and manage tight timeframes rather than working towards one single deadline every day” (Simons 2011, personal communication).

**Economic crisis**

“Convergence in journalism defies a one-size-fits-all set of practices” (Kolodzy 2006, p. viii). One of the shortcoming of convergence is downsizing, and journalists who have failed to keep up with modern technology have lost their jobs. Similarly, some jobs have been lost because they have become redundant due to technological evolution. Recently, *Chicago Sun-Times* made photographers redundant (BBC.com 2013), making digital photography training compulsory for their reporters. According to PricewaterhouseCoopers (PwC), newspaper revenues went down from US$187 billion to US$164 billion in 2008. However, they project that these figures will remain similar until 2017 due to growing support for newspapers in Asia Pacific markets (PwC 2013a) (Fig. 1.3).

![Global newspaper revenues split by circulation and advertising (US$ mn) 2008-2017](image)

**Fig. 1.3:** Global revenues split by advertising and circulation (US$ million) 2008–17 estimated by PricewaterhouseCoopers (2013).
However, not everyone considers the economic slump to be a threat for journalism. There is some optimism about journalism’s survival chances. Roussel (2008, p. 5) states that “the probable elimination of a raft of second tier newspapers during this economic downturn will provide a fertile environment for a new generation of digital media business to flourish”. Mark Briggs (2010, p. 4) argues that the rise of ‘journalism 2.0’ will lead to smaller, more innovative news organisations with a local focus and fewer big monopolistic news organisations. Despite this optimism, the workings of the journalism industry have changed and will continue to transform rapidly.

As discussed earlier, the 2007 economic crisis substantially damaged the journalism industry, resulting in budget cuts and downsizing of human resources. These job losses affected many mainstream journalists, and increased the pressure and workload on the remaining staff, often without making much profit (Simons 2011, personal communication). The collapse of the existing business model created a need for new models, and some have already been implemented; however, their real impact is yet to be felt. Investigative journalist Ray Moynihan observes that there is no clear model for stable funding of investigative journalism in the current environment (Moynihan 2011, personal communication). Despite the use of various online platforms, there is still concern about a sustainable strategy to make the web pay. However, several organisations are beginning to experiment with this.

Social media, such as Facebook, tend to generate revenue through advertising. However, newspapers and online news websites have been comparatively slow in generating stable revenue through advertisements alone. Advertisers who would pay large sums of money for a print advertisement are less likely to pay the same amount for a web advertisement as they do not consider it to be as effective, understanding that online users tend to ignore flashing banners and popups (Moore 2011, personal communication; State of the Media 2010). Investigative journalist Keith Moore offers a rationale for this “In the newspaper, because most people read it like a book, it is pretty hard to avoid the advertising, again, you can just flick the page, but that is the problem that the advertisers haven’t been prepared to pay for the Internet” (Moore 2011, personal communication). There are some exceptions to this rule, such as Norwegian media group Shibsted, which is seeing a 36 per cent mark-up on its
online classified ads compared with 7 per cent in print ads (Fontaine & Leiba 2008, p. 204). Yet, this model has yet to be improvised for a more widespread productive use.

News organisations are also using new technological avenues to spread and diversify their business models. Smart phone and tablet computer applications (apps) are being developed by news and media organisations, which enable people to download and use them. Similarly, applications are being developed for smart gadgets like iPads and Kindles. For example, the app PressReader offers more than 2300 newspapers from more than 100 countries in 56 languages (Google play 2013). Most of these apps, especially those offered by individual media organisations are in free-trial stages so the benefits are yet to be realised (Mitchell 2011, personal communication). Like other new business models, these platforms of circulation are viewed not only as challenges but also as opportunities to expand circulation.

Another major dilemma facing news organisations is that the public does not want to pay for their online content (Julian 2010). With the increase in public journalism, news is easily available for free. The Internet has increased the speed, reach and comprehensiveness of journalism available to the public and lowered the cost of entry to anyone seeking to participate (Reese et al. 2007, p. 237). Subscriber and advertising support provided traditional media with the means to widely distribute their product (Reese et al. 2007, p. 238). When newspapers initiated online news it was considered to be a supplement to print news, so they charged less for online advertisements. With the increase in traffic to online news sites, many advertisers took their advertisements online, so news organisations generated reduced revenue from advertisements (Chyi 2005; Garrison 2005; Herbert & Thurman 2007; Mitchelstein & Boczkowski 2009; Singer 2003b).

David Estok (2011), former editor-in-chief of the Canadian newspaper Hamilton Spectator, suggests, “unless newspapers can find a sustainable way to charge for online content, or discover methods to produce revenue from digitized content, they will have no other choice but to continue cutting staff, newspaper size, and other expenses to reduce costs”. Estok is mainly referring to the paywall (whereby access to a website is restricted to users who have paid a subscription) put up by a few media organisations on their websites. There are five different styles of paywall: hard (no free content), soft (some free content),
metered (restricted number of free articles), freremium (some free content) and premium (charged for premium content) (Myllylahti 2013).

The paywall model has already proven successful for some newspapers, such as the New York Times (Doctor 2013). Unfortunately, most newspapers do not have the flow of traffic required to make this model work (Mitchell 2011, personal communication). It may take several years to ascertain whether or not this paywall business model will be broadly effective (Estok 2011). Many of the journalists and journalism educators interviewed for the present study suggested that as long as there is good investigative journalism, people will be willing to pay for it. In fact, most of the research suggests that newspaper audiences are not willing to pay for general news (Chyi 2005). Although, PricewaterhouseCoopers (PwC 2013b), in a report about ‘Global entertainment media and outlook 2012–2017’, estimate that a fall in newspaper circulation would require revenue generation through paywalls. Hence, this path will be indispensable.

There are a few independent organisations working to produce quality journalism. The concept of investigative journalism operating externally to the traditional media and funded by a mix of sources including donations has been given the title ‘the fifth estate model’ (Lashmar 2009). A philanthropic approach towards journalism has already emerged in the US, which has a history of people donating to independent investigative bodies and organisations. Independent investigative journalism bodies include The Centre for Investigative Reporting, The Centre for Public Integrity, ProPublica, The Fund for Investigative Journalism, Investigative Reporters and Editors, and J-Lab. An interesting case is of Keith Ng, a New Zealand blogger and investigative journalist working through his blog, who has managed to establish a revenue generation system for investigative journalism where his audience pays him for his work, which than goes on to be published in mainstream media (OnPoint 2012).

Investigative journalist Lowell Bergman is a strong supporter of journalism through non-profit organisations. He suggests that a non-profit organisation does “what a very good newspaper newsroom does: report stories without fear or favour, and without considering the resources needed to do that. It is at its root a non-profit activity” (cited in Thompson 2008). Conversely, investigative journalist Bill Birnbauer is uncomfortable about the
relationship between non-profit investigative journalism organisations and their donors, and has not found this to be a sustainable way to generate revenue (Birnbauer 2011, personal communication).

There are very few independent investigative journalism bodies in the Australasia–Pacific region. One of them is the Australian Centre of Independent Journalism at the University of Technology, Sydney. Another is the Public Interest Journalism Foundation, formerly based at Swinburne University of Technology, which runs a website called YouCommNews (2010) (modelled on a US website, Spot.us (2010), that allows public funding of journalism) that allowed journalists to present story ideas for the public to contribute to.

Additionally, new websites of investigative journalism have been developed; for instance, in Australia, Crikey, New Matilda, Global Mail and new Saturday Paper. With lower costs associated with digitisation, some of these ventures have been very successful. These online ventures also started being recognised by the Walkley foundation (an Australian group for recognition of journalism excellence) for their investigative efforts and quality journalism (Carson 2012b). The work these new platforms have enabled include with university students to produce quality investigative work at very low cost. More of these examples will be discussed later.

1.4 Summary

The journalism industry is clearly in a transitory phase, largely due to the evolution of digital media and subsequent economic restrictions. According to Baker (2011, personal communication), “*investigative journalists consider these challenges both a threat and an opportunity*”. Job redundancies and an increase in workload has left little time for in-depth investigation (Baker 2011, personal communication). Convergence has also influenced the way journalists work in a 24/7 news cycle and with online news that includes text, audio and video. Public journalism has also emerged as a consequence of online news, allowing the audience to be more interactive and engaged with news content.
In addition to this, there is a concern among journalists that online news is a crude form compared with paper-based news. Due to pressure for high-speed news provision (Pavlik 2000, p. 232), reliance on news agencies has increased, yet the quality of the news content has reduced (Cassidy 2007; Klinenberg 2005; Quandt 2008). Hence, there is a need for high-quality online content.

Investigative journalists are dealing with these challenges by incorporating new technologies to gather information and to reach out to their audience. New business models have arisen to cover the problem of funding for investigative journalism and providing good news reports of value to the community. These include independent investigative journalism organisations, freelance investigative journalism, paywalls for in-depth stories, as well as online advertising. These are still largely experimental, although slowly a few success stories are emerging.

In journalism literature less attention has been paid to investigative journalism education (Hollings 2010b). As there has been limited work published on guidelines for teaching investigative journalism (Flourney 2007; Hollings 2011, personal communication; Ricketson 2012, personal communication), academics are continuously experimenting with their teaching style. This has resulted in three important questions. Firstly, has the volatility in journalism resulted in new challenges for journalism education? Secondly, have the current industry trends and changes affected the teaching patterns in academia? And thirdly, are academics sufficiently incorporating modern technologies in their curriculum to prepare students for such a rapidly changing, highly competitive field? The next chapter will explore these questions. It will look into the challenges and practices within the education of journalism and investigative journalism and review if journalism educators are responding to the rapidly changing industry.
Chapter 2

Issues in journalism education
This chapter aims to discuss the challenges and opportunities that investigative journalism academics face due to the rise in digital media and technological progress. It will begin by providing an overview of existing discourse in the field of journalism education. It will offer a brief snapshot of current teaching practices and will review some journalism courses in Australia. Next, it will provide an in-depth analysis of the pre-requisite attributes and essential skills required for investigative journalism. Subsequently, it will present an exploration of how investigative journalism academics are responding to the demands of the transforming industry. As investigative journalism teaching methods are being developed on an individual basis, particular case studies about these diverse educational activities will be explored in this chapter. It will then conclude by discussing the challenges faced by journalism academics within academia and their struggle in maintaining the validity of journalism as a higher education course. This chapter heavily draws from the literature but also from interviews conducted with journalists and journalism academics to understand the existing trends in journalism education and the industry itself. It is necessary to understand these issues to identify the basic foundations required to develop an efficient investigative journalism unit. This analysis has been vital in constructing the alternate style of teaching investigative journalism explored in this thesis, that is, use of an ARG.

2.1 Journalism education

In addition to the technological and economic changes described in Chapter 1, one of the reasons why teachers of journalism continuously face challenges from the industry is the transformation of the objectives of journalism. The field of journalism has been a subject of intense debate. Indeed, the debate about whether journalism is actually a profession or merely a culture is an old one (Josephi 2009; Schudson & Anderson 2009; Tumber & Prentoulis 2005; Zelizer 2004, p. 57). Even the actual existence of journalism has been debated (Kunkel 2003; Romano 2003; Deuze 2006).

During the early 1990s Snoddy (1992) argued against the concept of journalism as a profession. A strong supporter of freedom of speech, he could not give journalists more credibility than a layman:
There is no central body of agreed factual knowledge to be examined on, and freedom of speech dictates that people should not be excluded from expressing themselves in print to a wider audience just because they are not members of a particular professional body (Snoddy 1992, p. 202).

Indeed, with the rise in information technology, the distinction between journalistic news and a common person’s information has been further obscured. Hirst (2010, p. 92) states that “the cultural boundaries around the profession of journalism are porous and journalism in the age of YouTube is rapidly changing”. Jospehi (2009, p. 47) argues that, “if journalism demands to be a profession, then it would need at least a defined pathway to underpin this claim”.

Scholars such as Reese (1999, p. 71) argue that the “criticism of journalism education is tied to the crisis of legitimacy within journalism itself”. These debates indicate that journalistic practice does affect the way journalism educational systems are defined for students. Similar to journalism itself, journalism education is yet to be defined properly; however, modern-day journalism education can be explained in the words of Deuze (2006, p. 21):

> Pragmatically speaking, journalism within the context of professional education and industry training means the preparation of students for a career working in news media organisations and studying the work of those people editorially responsible for different types of storytelling in a wide range of news media.

**Placement of journalism education**

From the very beginning, the placement of journalism education has been a critical question. Due the multiplicity in the range of fields and styles of journalism, journalism education could be taught in many ways. The debate over where to situate journalism education makes it hard to design curriculum. Therefore, there has been great diversity in the implementation of journalism education (Josephi 2009, p. 42).

Journalism education has been seen to serve ‘two masters’, that is, journalism educators who seek to satisfy the demands of news organisations by preparing students for the field, and university administrators who believe tertiary education is more than vocational
training (Skinner, Gasher & Compton 2001, p. 344). As Deuze (2006, p. 22) points out, journalism education “must negotiate rather essentialist self-perceptions of both industry and academy, while at the same time finding ways to navigate inconsistencies of its own field”. While journalism is taught at many types of institutions, the present study focuses on tertiary level courses.

The study of journalism lies somewhere between the social sciences and humanities, and is generally considered to be a hybrid of these (Reese 1999) as it includes touches of political theory, philosophy, literature, art and history; however, “humanities have had little interest in journalism” (Carey 2000, p. 22). Carey purports that science has had a similar impact on journalism as it had on literature, reducing it to “the routine, the predictable, the ordinary, and the uninspired” (Carey 2000, p. 23). This has created “a natural hostility between journalism and the arts of social control”, condescending its academic significance (Carey 2000, p. 23). With the addition of new media resources, a thorough journalism curriculum also requires units from the discipline of computer science. Hence, journalism education has evolved into a rather fragmented field, with its theoretical foundations in the humanities and social sciences and its technical skills within computer science, social science and the arts (Schram cited in Rogers 1994, p. 29).

Interestingly, the person credited with implementing the idea of university education for journalists is an army officer. In 1869 US Civil War General Robert Lee started offering scholarships for journalism studies (Medsger 2005, p. 205). Although it was not until Joseph Pulitzer’s initiative to start the Columbia School of Journalism in 1912 that journalism education seriously began (Carey cited in Adam 2001; Boylan 2003; Johansen, Weaver & Dorman 2001). Furlan quotes Pulitzer: “a formal education is as necessary for the preparation of an editor as the study of military battles is for a soldier studying for command” (Pulitzer 1904 cited in Furlan 2007, p. 123).

Journalism education is practiced differently all over the world. One of the reasons for this variation may lie in the historical roots of journalism education. Originating in the US were two schools of thought. On one hand, there was William Bleyer’s approach that merged journalism within the liberal arts (such as literature and history), a model which was followed by the University of Wisconsin (1908) (Josephi 2009). On the other hand, Walter
Williams established a program in 1908 at The University of Missouri following his approach that supported hands-on training and professional experience for students to prepare them for practical journalism (Josephi 2009; University of Missouri 2013).

In Britain, the discussion about journalism education in university started in 1908, the same year journalism courses started in the US (Herbert 2000). However, the first proper course, a diploma in journalism, became available in 1919 at London University. In 1935 Tom Clarke remapped a similar course at King’s College and made it more liberal arts based while adding skills required for journalistic work (Hunter 1982). After these early examples in the UK, no new courses were offered until 1970. A diploma in print journalism was offered at the University of Cardiff, Wales, after which journalism education slowly gained is footing in UK academia. Although Britain worked as a vanguard for introducing journalism to its colonies and the US, this was not the case in the teaching of journalism (Herbert 2000). This is why most of the world, and especially Asia-Pacific countries, except Australia, has been more influenced by the American mode of teaching journalism, that is, transition into the field through educational courses in universities or institutes (Burns 2003).

2.2 The skills versus theory debate

Practical training

Australian journalism education resonated more with the British model, originally being taught through apprenticeships or cadetships in organisations (Blaikie 1976; Burns 2003; Lloyd 1985). Formal education was a secondary requirement (Lloyd 1985). A few attempts were made to streamline the selection of journalists, initially by the Australian Institute of Journalists (formed in 1892), on the basis of an entrance exam on shorthand, proficient English writing skills, arithmetic, decimal fractions and algebra. Other subjects that were suggested to be examined were “English language and literature, British constitutional and political history, political and physical geography, general history and either French or German … law of libel, public and legal reporting and general knowledge … [with] optional exams in verbatim reporting, condensation, descriptive writing and the conduct of
public and legal business” (Burns 2003, p. 60). This proposal was rejected by the industry and cadetship continued.

In 1969 the Gordon Institute in Geelong was the first tertiary institute in Australia to offer a journalism course, a diploma, which was later upgraded to a bachelor’s degree in 1974. The College of Advanced Education (CAE) in Canberra started journalism courses in 1970 and Deakin University started a journalism program in 1977 (Burns 2003, p. 64). Burns (2003) argues that since the 1970s, university graduates of journalism course have been mocked in the workforce for being intellectually superior, and this attitude has followed into the 21st century.

Although industry-based training was important, there were more students than positions available for cadetship (Tucker 2011, personal communication). Therefore, the vocational training institutes have been considered important learning centres. There is strong support for journalism to be taught as a technical skill (Herbert 2000; Richardson 2012, personal communication; Zelizer 2004). Those in favour of vocational training disapprove of the way educators focus on the image of journalism within the academy instead of focusing on how it is practised out in the field (Zelizer 2004, 2009).

From a practical point of view, journalists require technical skills to work in the field as editors, reporters and producers. Hence, most journalists support this vocational training approach as it seems more ‘practical’. New Zealand based senior journalist Karl du Fresne, after reviewing the latest edition of the journalism text Intro considered it to be ‘overly theoretical’, criticising the presence of Chomsky’s propaganda theory and discourse analysis as abstruse (Hirst 2010, p. 87). Scholars such as Herbert (2000, p. 175) suggest that journalism educators should inculcate industrial knowledge to their courses not only to strengthen their academic standing, but also because it would be beneficial for “future professionalization of the industry”. He argues that since this vocational knowledge is the future of the journalism industry, it should decide about its perimeters. Therefore, according to Herbert (2000), the educational emphasis of journalism should be on vocational training.

Although Australia and New Zealand have similar democratic political systems, Australia supports an educational framework in which vocational journalism is positioned within a
theoretical framework (Hirst 2010, p. 86). In contrast, New Zealand journalism education focuses more on vocation and less on theoretical framework (Hirst 2010, p. 86). There are tensions among Australian journalism educators about the positioning of journalism studies; however, these debates are common around the world.

**Emphasis on theoretical education**

The hostile attitude towards theoretical perspectives of journalism education could be considered a misunderstanding on the behalf of the journalism practitioners. It could be argued that the theory versus practice gap is mainly an idea generated by the professionals in the field. “Educators do not want to dispense with the essential of news practice” (Hirst 2010, p. 88). It would be unlikely to find an academic who proposes that journalism education should solely be based on the theoretical foundations and concepts without any practical skills or training. Although Bleyer believes that,

> The most essential training which the university can give to a student thinking of journalism is to equip him broadly with the knowledge of the ages and give him such intellectual power that he will be continually fertile in applying that knowledge to present conditions (cited in Bronstein & Vaughan 1998, pp. 16-17).

Along the same lines, Skinner, Gasher and Compton (2001, p. 345) provide argument for not handling journalism education as merely skill-based training:

> What is missing from this craft based approach is a clear understanding that news production is, in fact, the convergence of theory and practice, and that any attempt to provide fair, balanced and accurate depictions of events involves much more than a simple presentation of ‘the facts’. This is tantamount to having a method that denies any relation to epistemology.

Contact between professionals in the field and the faculty has been touted as a means to couple professional training with a sense of social responsibility and critical intellect “for a greater goal” (Bleyer cited in Bronstein & Vaughan 1998, p. 17). It is important that students understand the complicated network behind production of meanings, and the political economy of their field (for examples of political economy of journalism, see
Compton & Benedetti 2010; Herman & Chomsky 1988; McChesney 2004). Mensing (2010) argues that the main challenge is to step back from the existing journalistic practice and analyse the ways to effectively utilise this profit-centred, industry-driven field for its community, both global and local.

An important aspect of this debate is about accreditation of journalism programs. Accreditation is a systematic process of evaluating programs and formally endorsing them if they are of high quality (Seamon 2010). Green and Sykes (2004) define accreditation as “a trait of a profession, by which the profession exercises some control over entry and promotes its autonomy”. More often than not, accrediting bodies are directly associated with or controlled by working journalists and the industry. According to Reese and Cohen (2000), these bodies are inclined to prefer vocational training over scholarly approaches from journalists. Australian journalism education is not accredited, so every program has its own objectives and methods of achieving them; although, this absence of accreditation body is not due to lack of effort. Green (2003) has strongly supported the development of an accreditation body, as it would end the discrimination between media graduates and vocationally trained journalism students. However, both Hirst (2010) and Dunn (2004) argue that journalism educators should enable graduates to think and act beyond the existing journalistic norms. Hirst (2010, p. 88) states that “journalism educators and scholars should be at the leading edge of innovation and change, not merely reproducing the current and normative requirements of industry”.

On the other hand, New Zealand’s Journalism Training Organization (JTO) develops and suggests course outlines to universities and polytechnics (vocational institutes). However, universities like Canterbury University, Massey University and Auckland University of Technology are less inclined to follow these outlines (Tully 2012, personal communication).

In the US, the main accreditation body is the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC), which was established in 1995 and currently has 117 fully accredited programs. However, Seamon (2010) found that there isn’t much difference between accredited university programs and non-accredited ones, rather there are more similarities. Similarly, Masse and Papovich (2007) found that accredited
university graduates have similar professional experience; however, non-accredited universities have heavier workloads for teachers and gave priority to research.

Ideally, journalism education should produce skilful students with a broad social knowledge (Skinner, Gasher & Compton 2001), including “how journalism participates in the production and circulation of meaning in our society” (Skinner, Gasher & Compton 2001, p. 342). Media and journalism scholars have been discussing the role of cultural studies in journalism education for over a decade now (Turner 2000; Windschuttle 2000; Skinner, Gasher & Compton 2001). Indeed, journalism is based on the context of cultural norms and values. Both journalism and journalism education are practised and taught within those parameters. In the book *Making the Newsmakers*, Gaunt (1992) highlights the differences in the training, requirements and structure of journalism education between developing countries and the industrialised world. Gaunt (1992) suggests that governmental control and the availability of resources affects the way the press functions, which, in turn, affects its journalism education. However, some scholars believe that journalism is changing trends and transforming social contexts. With new technological resources, cities have become much closer and the concept of a ‘global village’ (McLuhan 1964) is now a reality with digital media and the Internet.

It is also significant to note that not all students end up with a journalistic career. Thus, analytical journalism training provides a broader education for a variety of graduate careers. Indeed, journalism schools have diversified and a large proportion of students never become reporters, although journalism education still centres on “the reporter and the basic functions of information gathering, evaluation, production and distribution” (Mensing 2010, p. 511). O’Donnell (2006) argues that journalism education not only caters to the undergraduate students but also assists mid-level career journalists and career switching post-graduate students. She insists that mainstream journalists also study to revise their understanding of the field; therefore, the industry–academy dichotomy does not exist.

Today, most media and journalism schools have adopted a middle path that includes a variety of subjects catering to both vocational and theoretical approaches. A journalism research institute is being designed at the University of Missouri by Esther Thorson and
her colleagues, based on the foundations of earlier successful seminars taught by research scholars and field journalists. This institute is trying to open a dialogue between scholars and practitioners of the news profession (Thorson 2005, p. 21). “Journalism academics are tightrope-walking in order to achieve a workable balance between theory and practice in their courses, trying to negotiate pressure from industry as well as from their academic institutions” (Furlan 2007, p. 122). Interestingly, this has led to a further round of debates about the quality of the content taught and its effectiveness in the practical field. It seems likely that this debate will continue for years to come.

Scholars such as Reese and Cohen (2000) are sceptical about whether schools have managed to bridge the gap between academia and field journalism. Carey argues that journalism is surrounded by “many more well-conceived and well-taught courses in history, law, ethics, and similar subjects”, while the central subject matter, journalism, has merely been displaced to the margin (Carey 2000, p. 14).

Mensing (2010) takes a different approach for reviving journalism education practice. In her paper ‘Rethinking [again] the future of journalism education’ she suggests that journalism educators should step back from the transmission-driven, industry-conceived model of journalism and try to focus on reconnecting journalism with its democratic roots, for instance, through a community-centred approach. Although there is logic behind Mensing’s work, her idea that journalism is no longer community driven seems to be based on an idea that it was only ever a community driven career.

Compton and Benedetti (2010, p. 492) argue against “critical scholars who suggest that the work routines of reporters did not in any way mirror reality in an objective sense”. According to them, news is constructed in such a way that it “reproduces dominant social interests” (Compton & Benedetti 2010, p. 492). This stands correct if we review history. Whether it was in the shape of Peter Zenger’s article against the British government (Putnam 1997) or Zafar Ali Khan’s Zaminder Ikhbar (Hijazi 1990), which was published in order to protect the rights of poor farmers and the Muslim community, the purpose of journalism was to protect certain communities from each other. Today, due to the modern media conglomerates, it mainly serves to protect the interests of its corporate owners and
their governments. Initially a mission-driven, community-oriented job for the lower or middle classes of society, it has gradually evolved into a business.

**Current teaching practices**

Considering the above discussion, it is safe to state that journalism education is now in a transitory phase like the journalism industry itself. It has moved away from the old models of training and education “towards an uncertain territory; a change that is uncomfortable to many” (Hirst 2010, p. 93). However, with the growth in information technology this move is inevitable for a dynamic field such as journalism, so its academic education cannot function in old ways.

Today journalism is usually placed under the media and communication studies banner, although there are some autonomous journalism schools as well. Despite social and contextual differences in media cultures, journalism education is facing similar challenges all around the world (Deuze 2006, p. 20). Hence, journalism education could benefit from a global approach, in this context meaning identification across (real and perceived) national and cultural boundaries.

Many scholars support the idea of cross-national and cross-cultural journalism. The basic idea is that journalism has similar objectives, that is, to provide people with the truth. Several regional and global projects have attempted to globalise journalism education. In 2007 The United Nations Educational Scientific Cultural Organization, (UNESCO), gathered journalism instructors with rich and diverse field experience from Africa, Asia, Europe, the Middle East, and North and South America to develop a ‘Model Curricula for Journalism Education’ (UNESCO 2007). The documents offers curricula at three levels: 3- or 4-year university bachelor’s degree; a 2-year master’s degree (for students with or without a journalism background); and a 2-year diploma program (taken as basic preparation for journalism or as a bridge from secondary school to a university program in journalism) (UNESCO 2007).

Early results from the World Journalism Education Census show that universities are struggling to keep up with changes in journalism (Kaplan 2012, p. 7), that is, with both technological changes and changes with professional practice. This is reflected in the
number and variety of strategies being attempted. In particular, many journalism institutions are working on strategies that blend theory and practice as a way of dealing with the rapidly changing field.

Australian universities tend to offer journalism in 3-year bachelor’s degrees with an additional year for an honours program, and another year for master’s degrees. Some universities offer double degrees as well. For instance, Charles Stuart University has a Bachelor of Communication (Journalism) program for its undergraduates. Additionally, it offers a double degree Bachelor of Sport Studies and Communication (Journalism). The 4-year long degree provides an extensive course outline that includes a combination of journalism, communication and sport studies subjects. Moreover, it has a separate program for Bachelor of Communication (Commercial Radio), which has courses related to sales, marketing and advertising.

Similarly, the University of Western Sydney offers a double Bachelor of Communication Studies and Law. The Bachelor of Communication Program at The University of Sunshine Coast has a course outline that includes two mandatory research courses: Research into Journalism, which address the historical, sociological, political, economic and cultural approaches to journalism; and Industry Research Project (Journalism), which is linked with an internship. Both these courses can provide a deeper understanding of the industry and research. Such an approach may also help address the industry–academy dichotomy. Although for Master of Communications (Journalism), either a research thesis or an industry project is required. Furthermore, not all universities that offer bachelor’s degree in journalism offer a postgraduate as well, for instance, the University of Western Sydney.

Some universities also offer transitory courses for students. These usually include courses for undergraduates with an assessment level for postgraduates. These graduate certificates range from six months to one year. These courses also serve as an upgrade to existing qualifications.

As discussed earlier in this chapter, many working journalists prefer vocational training over academic theory and research courses. Therefore, institutes with training skills in their curriculum are widely appreciated in the field, for example, the Jschool of Journalism in Brisbane has gained popularity in recent years. Additionally, there has been an effort by
academics to integrate journalists into the academic setting, with many working journalists now teaching in universities and leading journalism departments (for example, the University of Missouri School of Journalism, US; The University of Melbourne, Australia; Massey University, New Zealand etc.). Hence, the bond between academia and industry is strengthening.

One of the major examples of this bond is new media courses, which have been introduced as a mandatory part of most of the journalism institutes around the world. These courses include use of digital media, and social networking for publication and distribution of digital content. Many of these courses have theoretical and practical components and cater to the challenges of digital journalism (highlighted in Chapter 1). Future journalists are being trained to provide quality online news content. From an overview of journalistic institutions, it seems that the journalism educators have foreseen this hurdle and are now preparing the students to face it.

2.3 Investigative journalism education

Given that the practice of investigative journalism, a vital subsection of journalism, is changing due to technical and economic challenges, the teaching patterns of this subject must also change. To address this issue, journalists and journalism academics were asked specifically about trends in investigative journalism.

Journalistic attributes

Journalism academics and investigative journalists have similar ideas about the attributes required for investigative journalists. These include: curiosity and inquisitiveness about a topic, determination to pursue it, perseverance, ability to analyse a situation and think critically, tenacity, intelligence, hunger for storytelling, willingness to hold people accountable for their actions, and an ability to think outside the box (Table 2.1). This commonality is important because it demonstrates that investigative journalism educators clearly understand the requisites and attributes of actual work in the field.
<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Personal attributes of investigative journalist</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Robie</td>
<td>Auckland University of Technology</td>
<td>Insatiable curiosity, responsibility to answer questions, ability to initiate investigation</td>
</tr>
<tr>
<td>James Hollings</td>
<td>Massey University</td>
<td>Passionate about field, curiosity about issues, commitment to the field of investigation, commitment to public</td>
</tr>
<tr>
<td>Jim Tully</td>
<td>University of Canterbury, NZ</td>
<td>Intelligence, tenacity, resourcefulness, critical thinking, inherent curiosity, perseverance, strong sense of judgement</td>
</tr>
<tr>
<td>Keith Moore</td>
<td>Herald Sun</td>
<td>Inquisitiveness, hunger for storytelling, persistence, determination</td>
</tr>
<tr>
<td>Margaret Simons</td>
<td>The University of Melbourne</td>
<td>Curiosity, willingness to question, willingness to hold public figures accountable, ability to go beyond authorised disclosure, ability to go beyond the limit to find hidden material</td>
</tr>
<tr>
<td>Michael Bachelard</td>
<td>The Age</td>
<td>Persistence and perseverance, not accepting denial or refusal, curiosity, precision, enthusiasm, keen about job</td>
</tr>
<tr>
<td>Ray Moynihan</td>
<td>Freelance journalist and academic</td>
<td>Tenacity, temerity, never taking no for an answer</td>
</tr>
<tr>
<td>Richard Baker</td>
<td>The Age</td>
<td>Think outside the box, curiosity, determination, time toughness, willingness to do everything required to get a good news story, not intimidated by pressure or threats, willingness to get out and talk to people</td>
</tr>
<tr>
<td>Wendy Bacon</td>
<td>Freelance journalist and academic</td>
<td>Persistence, ability to find out the facts, ability to get over fear of going beyond comfort zone, passion to dig the truth, passion to reveal uncomfortable truths, ability to see a bigger picture, tenacity, ability to work hard, and courage</td>
</tr>
</tbody>
</table>
Like attributes required for investigative journalism, the academics and journalists interviewed agreed about many of the required skills, such as: interview techniques, researching and writing skills (Table 2.2). However, there was some variety in the emphasis given to different skill subsets. These skills can be categorised into three categories: technical skills, analytical skills and interpersonal skills.

Table 2.2: Skill set for investigative journalists.

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Skill set required for investigative journalists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill Birnbauer</td>
<td>Monash University</td>
<td>Interview techniques, telephone interview techniques, understanding of ethics, online searches with database and access to documents, ability to work in groups</td>
</tr>
<tr>
<td>Diana Bossio</td>
<td>Swinburne University of Technology</td>
<td>Writing skills, critical thinking, knowledge about the use of social media, computer assisted technology, getting sources, and creating a network with them, understanding of the context of work, understanding of the institutions and structures, both locally and globally</td>
</tr>
<tr>
<td>Greg Treadwell</td>
<td>Auckland University of Technology</td>
<td>Learn about the concept of resistance</td>
</tr>
<tr>
<td>James Hollings</td>
<td>Massey University</td>
<td>Online search, knowledge of media laws, topic development, communication skills, planning, management of sources, persuasion, document attainment, writing, storytelling that is fascinating but also truthful</td>
</tr>
<tr>
<td>Keith Moore</td>
<td>Herald Sun</td>
<td>Reading and writing (e.g. grammar and spelling), proficiency in the use of new technology, ability to collaborate with others</td>
</tr>
<tr>
<td>Margaret Simons</td>
<td>The University of Melbourne</td>
<td>Research, writing and production, interview, interrogation and communication skills</td>
</tr>
<tr>
<td>Matt Mitchell</td>
<td>Monash University</td>
<td>Writing skills, video and multimedia production, communication of concepts, interrogation</td>
</tr>
</tbody>
</table>
Technical skills

An investigative journalist must have a good command of technical aspects of the field. These skills generally include basic reading and writing, including reading in detail but also skimming lengthy texts. Along with having good writing skills that combine accuracy and information, journalists need to have a good sense of storytelling in order to keep the focus and depth of a story. Moore (2011, personal communication), Simons (2011, personal communication) and Mitchell (2011, personal communication) stressed not only the importance of basic writing and reading skills but also knowledge of new technology and production processes.

Indeed, perhaps the most accentuated technical skill was research (Bacon 2012, personal communication; Simons 2011, personal communication). As Bachelard (2011, personal communication) suggested, "it is important for them to know how to write but they should more importantly be really good at investigating". Similarly, Simons (2011, personal communication) stated that,
the key thing with investigative journalism is the research skills, which are under-recognised and are undertaught in my view in journalism courses. We do tend to spend a lot of time on writing skills and production skills of different kinds, but the core of journalism is actually finding things out. The whole point of having an investigative journalist is somebody who wants to go beyond the authorised disclosure and find the unauthorised or hidden material.

James Hollings (2011, personal communication) from Massey University strongly recommended that an investigative journalist must familiarise themself with the context of the topic, stay focussed and avoid straying during the research process. Bossio (2011, personal communication) also stressed the importance of an “understanding of the context of work and understanding of the institutions and structures both locally and globally”. Baker (2011, personal communication), Moynihan (2011, personal communication) and Mitchell (2011, personal communication) stated the importance of familiarising oneself with the background, relevant terminology and the possible ‘players’ in a story.

The interviewees underlined the ability to use technology productively as a beneficial skill. Michael Bachelard (2011, personal communication) from The Age stated that an investigative journalist must also know the procedure to acquire and use documents that are otherwise not available. Bacon (2012, personal communication) suggested that information about tenders, background searches on companies, court decisions and other sources of information are easier to access in the digital world. Similarly, Treadwell (2011, personal communication) suggested that “traditional media has to incorporate the modern digital technology and it must be seen as an opportunity”. Birnbauer (2011, personal communication), Hollings (2011, personal communication), Bachelard (2011, personal communication) and Bossio (2011, personal communication) stated that use of search engines for research expedites arduous investigations.

Another important element of research is interview technique and the use and management of sources. Moore (2011, personal communication), Bacon (2012, personal communication) and Bossio (2011, personal communication) emphasised the skills needed to prepare for and conduct good interviews. These skills can be acquired by training, experience or a combination of both. Birnbauer (2011, personal communication) suggested that,
A good investigative journalism course should be able to teach students about interview techniques, particularly telephone interview techniques, especially when people are unwilling to just talk.

Also, Mitchell (2011, personal communication) considered that data analysis is a crucial element of investigative journalism in certain subjects. The ability to review spreadsheets and find out trends, as well as an understanding of maths and economics is important to find out information about profits and expenditures. Tully (2011, personal communication) also considered understanding of financial reports to be extremely important.

**Analytical skills**

In addition to technical skills, investigative journalists need to possess strong analytical skills, including critical thinking, judgement, observation, evaluation of sources and documents, discovery of clues and loopholes, and an ability to extract the truth. Investigative reporting can be time-consuming due to the need to verify information to avoid legal risks. Participants of the interviews collectively stressed that self-discipline, organisation and logical thinking are critical to investigative journalists.

Moynihan (2011, personal communication) summarised these analytical skills, stating that investigative journalists require attributes such as,

*Tenacity, temerity, never taking no for an answer, tirelessly digging and digging and digging and telling your boss that you want more time, you need more resources and talking to as many people as you can, digging into areas where people don’t want you to dig, challenging conventional wisdom, making the familiar look strange, you know these are the skills, and in some ways, again they are not so much practical skills, characteristics of an approach, a mindset.*

Moore (2011, personal communication) considered inquisitiveness and a hunger for research and storytelling as important attributes for investigative journalists,

*Whatever information you have, you should analyse it, follow up with the relevant people, try to understand the context and find out what the real story is. Just ask questions, just be*
inquisitive. To me, the best skill is a wanting to tell stories, hunger of wanting to tell the stories and to finding what the story is behind the story.

These sorts of skills may be more difficult to teach than others, as they may include inherent traits, as Baker (2011, personal communication) stated:

Either you have it or you don’t. You cannot necessarily teach it. It comes down to your experience on the job but there have got to be certain personal qualities that you already have. For instance, you have got to be persistent and hungry and not accept what you are told all the time.

Similar to the above statement, it must be noted that most of these quotes corroborate the traditional cadetship approach when it comes to learning of analytical skills. Likewise, Bacon (2012, personal communication) emphasised the difficulty of teaching certain analytical skills, stating some skills must be learnt through experience:

They have to get information out of people without intimidating and publish that information without hurting those people. They have to make decision about how to write a news story so they can protect their sources. They have to find out documents and find out a way to use them. These things cannot be really learnt unless experienced.

Interpersonal skills

In addition to technical and analytical skills, investigative journalists require excellent interpersonal communication skills, including: the ability to talk to people, build trust, keep sources safe, develop networks and maintain them, and using contacts to get access to information. Interestingly, both Birnbauer (2011, personal communication) and Bossio (2011, personal communication) mentioned social media as a useful tool for managing communication and interpersonal relationships:

The thing that investigative journalists say the most is that they rely on relationships with their sources … You need to understand how to use social networks, how to create relationships that allow you to have information, what ethics to have in those relationships, what social media technology can you use to develop and sustain those relationships as well (Bossio 2011, personal communication).
The job requires contacts and sources, so journalists must possess personal communication skills to develop relationships, and maintain trust and secrecy around source identities (Bachelard 2011, personal communication; Moynihan 2011, personal communication). Baker (2011, personal communication) stressed the importance of developing strong relationships with sources:

*All the good stories come from whistle-blowers or people who are on the inside of a big organisation or a government body where wrongdoings happened. These are the people who have a lot to lose and in general are not inclined to talk to the media. It is a big step for these people to give out information. The most important thing for investigative journalism is to have a personal skill and convince those people to put trust and confidence in you. If you are not a person who is willing to adapt to different personality types and to stand up and be accounted for when the time comes to protect these people, then you cannot be an investigative journalist.*

Confidentiality and secrecy are important aspects of investigative journalism, including keeping ideas and investigated material hidden from others. However Birnbauer (2011, personal communication) remarked that the ability to work in groups is also very important in certain situations. And for that an investigative journalist must have the communication skills to understand complex situations (Hollings 2011, personal communication). Both Simons (2011, personal communication) and Hollings (2011, personal communication) suggested that organisations and individuals can have ulterior motives or personal agendas for sharing information. Bacon (2012, personal communication) suggested that investigative journalists should be able to “*read behind the lines and words*” (Bacon 2012, personal communication).

**Investigative journalism educational trends**

There are more than 30 universities teaching a unit or course on investigative journalism in the Pacific region, that is, Australia, New Zealand, Fiji, Papua New Guinea and other Pacific islands (Bacon 2011). Investigative journalism is still predominantly taught using traditional classroom methods. There are two main types of investigative journalism units: the first teaches basic understanding and conceptual framework; the second is more about
practical expertise and skills. There are many challenges involved in teaching investigative journalism. For example, some of the skills are difficult to teach in the classroom, such as development of trust with sources (Tucker 2011, personal communication). Student-directed courses are different from on-the-job training provided for cadets in the newsroom. They are also different from investigative journalism training offered to journalists in the field.

The data from the interviews suggests that although there are some similarities, most journalism academics devise their own methodologies for investigative journalism courses, which therefore vary from course to course. One example is James Hollings, who teaches two courses on investigative journalism at Massey University, New Zealand. For his undergraduate class he uses academic articles, textbooks, multimedia, Youtube and documentaries to produce and deliver lectures and discussions. The assignments include assessment of academic articles, writing about academic literature on investigative journalism and an exercise on investigative journalism based on a scenario (Hollings 2011, personal communication). For his vocational course, Hollings uses a practice-focussed modus operandi in which the students have to go out into the field and compile an investigative journalism story.

I have various resources like tools for investigate journalists, various sorts of videos that I have collected interviews with investigative journalists and interviews with people like whistle-blowers who are sources, about how to deal with journalists and what’s good practice of dealing with journalists, it’s a wide variety of multimedia tools, anything that could help them to a piece of investigative journalism (Hollings 2011, personal communication).

Most journalism educators use scenario-based activities, for instance using an old news scenario or a past news story to provoke analytical thinking among students – who to talk to, what sort of questions to ask, and how to ask them. Students are then evaluated based on whether they are on the right track of an investigation or not (Birnbauer 2011, personal communication; Mitchell 2011, personal communication).

The University of Canterbury, New Zealand, has a uniquely designed postgraduate journalism course. Investigative journalism is taught as an extension of feature writing and
topics are established based on what the course convener deems significant at the time. For example, after the February 2011 earthquake crisis (Geo.net 2011) in the Canterbury region, New Zealand (where 185 people died), the course was based around stories relevant to impact, survival and rehabilitation struggles.

In both Australia and New Zealand, most of the practice-focussed courses for investigative journalism are postgraduate university courses (Birnbauer 2011, personal communication; Tucker 2011, personal communication; Tully 2011, personal communication). In contrast, the vocational institutes are more focused on practical skills at undergraduate level, and teach less theory, if at all (Hollings 2011, personal communication). In New Zealand, the vocational institutes are considered to have more rigorous training modules than universities (Tully 2011, personal communication), and the vocation-based program at The University of Canterbury is highly selective and prestigious.

In the US, two models of investigative journalism pedagogy that include student participation are worth mentioning. One is the fellowship offered by the University of California, Berkeley, Graduate School of Journalism. The fellowships offers seminars, workshops and guest lectures that include important elements of investigative journalism. Under the supervision of investigative journalist Lowell Bergman, students work on private projects for PBS’s Frontline and the New York Times (Investigative reporting program 2013).

The second model is a highly regarded collaboration between eleven universities and an independent journalism organisation, News21, with headquarters at the Walter Cronkite School of Journalism and Mass Communication (News21 2009). This very practical program was created by the Carnegie Corporation (New York) and the John S. and James L. Knight Foundation (ASU 2013a) and is a rigorous experience for students, who get a chance to work on investigative reporting alongside professionals. Digital storytelling is used to narrate in-depth investigative work. There are different modules for spring and summer semesters, and the summer program also provides a stipend to the students.

The above examples of using students as a part of the workforce allow for realistic work experience, but also the use of students as a resource. Australian investigative journalist Richard Baker (2011, personal communication) suggests:
I would like to think universities are a great talent pool potentially for new journalism products now. They have got so many willing students out there … As a way forward, for journalism’s future, universities are crazy not to make use of their students because the best way to learn is to do, and not just to read it in the text book. Teach them on the job and they might come up with fascinating stories. It is a local community story and they learn as a benefit and it brings credit back to them and to the universities.

Australian investigative journalist and academic Bill Birnbauer at Monash University, Melbourne, conducted a similar exercise with his students. A group of third year students were supervised while they investigated the Victorian Environment Protection Authority’s list of contaminated sites. During their summer holiday these students shot videos and updated information from their earlier assignments. A weblog called Dangerous Grounds was developed as a showcase for their investigative work (Monash University 2011). The blog consists of videos, interviews, documents etc. about various environmental locations and sites in Victoria.

Similarly, Swinburne University involved its journalism students in investigation of documents made public by the government of the state of Victoria, Australia. Also known as Brumby Dump and Baillieu Dump, both of these investigative journalism projects required students to review documents and report stories from them (Dodd & Green 2011). The investigative stories have been published on Crikey, an independent news media outlet.

Another well-established example of quality student investigative work is that of the Pacific Media Centre in Auckland, New Zealand. The students are required to carry out hands-on investigative work for their assignments, and the best quality work gets published on the centre’s website Pacific Media Watch Online (www.pmc.aut.ac.nz). The website is considered as one of the region’s best online investigative news platforms and professional investigative journalists from the Pacific region regularly contribute stories for it (Treadwell 2011, personal communication).

These examples reveal that academics are experimenting with how to teach journalism in the current media environment so that education includes real journalistic challenges.
However, Yvonne Chua (2010, p. 190) cautions that investigative journalism should not appear too daunting to newcomers:

*One of the perennial challenges is to see to it that neophyte investigators take on small, realistic and manageable yet high impact investigative projects. This guarantees a higher success rate and, consequently, builds their self-confidence to embark on more ambitious muckraking projects later on.*

Hollings (2011) also recommends enabling students to learn simple processes of in-depth storytelling, rather than aiming straight for world-changing investigation. Potential techniques for training investigative journalists in a classroom setting include mock interviews, role-playing and analysing documents (Chua 2010).

### 2.4 Dynamics between journalism academics and academia

More than a decade ago, Adam (2001, p. 315) noted that,

*The project of journalism education across the English-speaking world has not produced a professional discipline of great prestige and the field does not possess the levels of legitimacy marking schools of law, medicine, engineering, or even business.*

This conclusion was based on observations regarding journalism academics' failure to “express adequately their professional and pedagogical tasks” (Adam 2001, p. 316). This observation could still be considered valid. With special reference to investigative journalism academics, one of the most problematic issues that journalism programs in universities are facing is that of the criteria required for a journalist to become an academic.

Unlike most of the social sciences, journalism is a very practical, hands-on field. Few of the top investigative journalists have had formal academic research training (Simons 2011, personal communication). Hence, their shift to academia on the basis of practical skills is questioned by one school of thought. Universities are getting stricter about their academic research quality and ranking as funding and grants relate directly to this (Strand 1998). Most universities require academics to have a PhD, which working journalists can rarely afford to complete alongside their employment. The fact that there are so few journalists...
with a PhD degree is becoming an issue in Australia under the current Excellence in Research for Australia system (Simons 2011, personal communication).

In many cases the PhD requisite is counter-productive for journalism departments. Indeed, many journalism academics, even those with a PhD, oppose these criteria.

> I think it’s a bit silly that journalism academics need to have a PhD in journalism … it’s absurd. I think what they need to have is skill with imparting industry practice but also more importantly I think they need to be aware of what’s going on in the industry and be able to operate in an environment that gives them and their students the best chance of becoming adaptable, flexible, committed journalism practitioners, in whatever environment that might be, whether it’s in social media or whether it’s in conventional media (Richardson 2011, personal communication).

Likewise, Simons (2011, personal communication) argued that journalism academics should be able to be judged on professional merits:

> In both law and in medicine, the other professions which get taught at the university, it is well recognized that you can have eminent practitioners coming into the academy to teach without necessarily having a conventional academic career. In the case of journalism, we do not have that recognition at all yet and that is a real problem. Because in terms of people who have had years of experience and runs on the board in terms of professional practice and a higher degree, there is probably about ten of them in Australia. It means that you end up hiring people who are in fact not journalists.

Nevertheless, there are some who consider a PhD a tough but beneficial path to understanding the field. Robie argues that it is a part of developing critical thinking, “I actually think that the process of going through a PhD is a whole new dimension. It’s a part of the role of becoming a critical journalist and to teach critical journalism you actually need that as well” (Robie 2011, personal communication). Journalism academic Philip Chubb (2011, personal communication) is similarly convinced that journalism academics with a PhD can better understand and transfer theoretical knowledge to students along with practical craft. He also deems it important for journalism to survive in the university:
It is also important that in the context of the university that journalism be able to maintain the research profile of university as a whole, maintain its share ... journalism won’t survive in university if it doesn’t do that ... if it doesn’t understand that the education of a journalism student is the requirement is you produce people who understand about the theoretical components and the practical components (Chubb 2011, personal communication).

This view is supported by journalism academic Diana Bossio, who asserts that journalism academics should be required to establish their scholastic and research skills to teach at university level.

To be a journalism academic, you are not working as a journalist anymore. You are taking journalism as your subject and study but you are an academic. So you have to have a research background. You have to establish yourself in the field as a scholar. It is a different thing (Bossio 2011, personal communication).

In addition to a PhD degree, like all academics, journalism academics are also required to carry out and publish their own research. Academic research is somewhat different from journalistic investigation. For instance, the strict ethical rules and laws practised by academia are mostly counter-productive to the work that journalists do (Simons 2011, personal communication). Furthermore, journalistic research for news stories is not included in academic research. Hence, due to the very nature of the system, most journalism academics do not get much opportunity to practice actual journalism. Davies (2011) notices that journalism academics must step into a “field of contention where the familiar act of using a best-practice journalistic approach to unearth or create some new knowledge or insights becomes mired in arguments about definitions of research and compliance with HREC requirements” (Davies 2011, p. 159).

Bacon (2006) agrees with Davies (2011) and suggests that becoming a part of mainstream academia has affected the journalistic production of news stories and articles of journalism academics. However, her opinion slightly differs from Adams’ views about journalism educators’ failure to express their needs and strengths. She suggests that the acceptance of journalism in academia has been a slow and gradual process, but the production of textbooks, peer-reviewed journals and the steady flow of research outcomes are signs of
success (Bacon 2006). It has also made acceptance of journalism in academia “a sort of second class academic citizenship” (Bacon 2011, p. 47).

Zelizer (2004) points out that journalism has mostly used the theoretical foundations of social sciences and particularly sociology to conceptualise the field. Hence, similar ethical concerns are required to deal with journalism research, which often act as a hurdle.

Consider an example of ethical prerequisites required to interview someone for research. Richards (2009) points out the absurdity of both a predetermined script and consent of information, essential for ethics approval in university research, in a journalistic interview.

*Such requirements run counter to standard journalistic practice, where having one’s questions vetted by others is strongly discouraged. The reasons for this derive not from journalistic arrogance or presumption, as sometimes seems to be assumed by journalism’s critics, but from journalism’s historic role in the protection and expression of free speech, and the traditional role of journalists as critics and challengers of those in authority. These roles are undermined if the ability to question is subject to external control* (Richards 2009, p. 38).

Journalism scholars are continually providing practical suggestions to make academic journalism research more relevant to the field of journalism rather than just the field of journalism studies (Lindgren & Phillips 2011). Davies (2011) suggests three courses of action to get journalism projects through university human research ethics committees: (i) carry out in-depth research about the project; (ii) use accepted academic research methodologies; and (iii) use existing research rules to develop case studies. Romano (2012) offers another perspective about this issue with ethics, suggesting that, as ‘gate-keepers’ of information, journalists and research ethics committees have a very similar role to play – both work with limited time and budgets, have limitations depending on their affiliated organisations, and ‘reflection’ is involved in both works. Hence, perhaps it is simply a question of using the right jargon for ethics applications (Romano 2012).

Bacon (2011) calls for a merger of investigative field research and academic research by journalism academics. The 2008 Excellence in Research in Australia framework produced by the Australian Research Council includes both practice-based and practice-led research in the creative and performance arts in the definition of research (Bacon 2011, p. 49). Hence,
such a merger is possible. “If investigative journalism is to be a practical option for journalism academics within the scope of their jobs, it needs to be linked to either research or teaching activities or preferably both” (Bacon 2011, p. 46). Lindgren and Phillips (2011, p. 75) suggest two ways of conducting journalism research. One is a ‘pragmatic approach’, which deals with journalism as a creative practice. The second is the ‘conservative approach’, which involves journalism as a research methodology. The first is a research-based creative work in any long-form of journalism, that is, radio or television documentary, or books. The latter is an analytical approach to methodology and reflection of journalistic practice.

In retrospect, this presents an opportunity for investigative journalists to work on their journalism research projects, include students in their team and achieve academic publication. An example of practice-based student work is that of Bonita Mason, who won a Walkley Award (the highest journalism recognition award in Australia) for an investigative story completed for her masters (Bacon 2011). Mason now holds a PhD and works as a lecturer in journalism at Curtin University (Curtin University 2013).

A good example of transitioning researched journalistic work into research publication is that of the journal Research Journalism (2010). It was launched to provide an academic platform for journalism academics and students to publish journalistic work. It is a unique publication because it accepts journalistic stories and peer reviews them in order to assert credibility; however, it is only in its infancy and is yet to prove itself a success.

2.5 Summary

In summary, journalism education has three major parameters when it comes to the educators versus the practitioners argument: the vocational versus analytical development debate; the profession versus culture debate; and the placement issue within universities. Academics are trying to ensure that the requisites and working nature of field journalism are recognised by higher education institutes. At the same time, investigative journalism educators face challenges adapting to a changing industry and providing practical skills for young journalists.
Although skills like reporting, editing and interviewing can be taught, it is more difficult to replicate real-world situations for practising investigative journalism. As is evident from the examples discussed in this chapter, several academics and journalism scholars from the field are trying to develop projects that curb the academia–industry dichotomy. Creative curriculums are being developed to improve the way journalists are educated and trained in a university environment.

In-depth interviews with investigative journalists and journalism academics conducted for this study provided a deep understanding of the existing issues in the field and pedagogy of investigative journalism. These insights, along with the literature review, provided the foundations for developing an alternate style of teaching investigative journalism students. This study will argue that digital games have the capacity to replicate the experience of news gathering through virtual reality, which is interactive, engaging and participative.
Chapter 3

Digital games and journalism education
Chapter 3 includes a detailed discussion about the attributes and genres of digital games and their suitability for this study. As the ARG that has been tested for its pedagogical benefits in this study is a type of digital game, it is important to understand the significance of digital games for education. First, this chapter will briefly discuss types of digital games used for educational purposes. Next, it will describe the two most relevant genres for journalism education, that is, newsgames and journalism games, and explore their usability for this study.

3.1 Digital games in education

There is substantial evidence to indicate that digital games can be a useful source of learning. Their interactivity, power of engagement, immediate feedback, and ability to develop problem-solving and cognitive skills have been recognised as significant tools for mental and social development (Annetta et al. 2008, 2009, 2010; Barab et al. 2009; Van Eck 2006; Mayo 2007; McGonigal 2003a; Prensky 2001a; Quiroga et al. 2009; Squire 2006, 2008; Susi, Johannesson & Backlund 2007). These characteristics support the role of digital games as a potential tool for training and education, which is what this study intends to test. The main aim of this study is to incorporate a game artefact in a course of investigative journalism in order to teach journalistic skills and provide hands-on experience of the field.

Digital games could be the ultimate “education-entertainment” paradigm, provided that value is given to the developmental outcomes (Ritterfeld & Weber 2006, p. 473). Three potential pathways have been identified for entertainment-education: motivational paradigm, reinforcement paradigm and a blend of these. The motivational paradigm uses entertainment as a “motivational facilitator to process educational information”, for instance, the Sesame Street web-based games (Ritterfeld & Weber 2006, p. 479). The reinforcement paradigm utilises entertainment for reinforcement purposes by enhancing “motivation to process educational content” (Ritterfeld & Weber 2006, p. 480). They suggest that in the motivational paradigm, educational goals can be either implicit or explicit, assisting learning (intentional and/or incidental) and complex problem-solving. In contrast to this, the reinforcement paradigm uses entertainment as a reward, and thus
offers extrinsic motivation, educational goals are explicit and learning is intentional, but
does not enable problem-solving. Evidently, both paradigms incorporate entertainment
with education. On the contrary, the blended paradigm keeps both entertainment and
education parallel to each other, thereby utilising intrinsic motivation to resolve
development tasks. The educational goals are implicit and learning is mainly incidental,
depending on the selection of players and their choice of games. Thus, “this kind of game
play mimics the most effective play observed in young children” (Ritterfeld & Weber 2006,
p. 483).

Several scholars have presented different approaches to the assimilation of digital games
into education. One such approach involves students developing a game from scratch,
usually adopted for information and communication technology relevant courses such as
programming and digital language (Van Eck 2006, pp. 21-22). Another approach takes
existing ‘commercial off-the-shelf digital game-based learning’ (COTS DGBL) games, not
necessarily developed for learning, for use in the classroom (Van Eck 2006, p. 22). Games
such as Civilization, World of Warcraft and Quest Atlantis are used to teach children at school
about history and geography while they utilise logic and critical evaluation. Similarly,
digital games like Wolf Den, Animal Crossing and Lineage have been used to teach students
about science, agriculture and business (Annetta 2008; Squire 2006). However, if games are
not specifically designed for educational use, strategic planning and close supervision are
required to attain desired academic outcomes.

Another category of digital games used for educational purposes is ‘research-based
educational video games’ (Egedfeldt-Nielsen, Smith & Tosca 2008). As the name suggests,
these games originate from research, and often present new approaches that challenge the
existing formula of edutainment. Games such as Global Conflicts: Palestine, Oregon Trail and
Phoenix Quest allow the players to learn by research while they play. Global Conflicts:
Palestine is quite relevant to this study and will be discussed later in this chapter. Digital
games built from scratch entirely for educational or training purposes are known as
‘serious games’, a term coined by American academic Clark Abt in 1968 (cited in Egedfeldt-
Nielsen, Smith & Tosca 2008).
3.2 Serious games

Serious games demonstrate the valuable and functional nature of these games, which are fun to play (Egenfeldt-Nielsen 2006). Serious games are further subdivided into categories including: persuasive games, educational games and health-based games. Serious training is conducted using these games, for example, the military uses simulations such as America’s Army: Operations and Operation Flashpoint to train soldiers (Lenoir & Lowood 2002, 2003). Flight simulations are used to train pilots before they attempt flight in an actual plane, such as Microsoft’s Flight Simulator, which has been used for training naval officers in the US (Macedonia 2002). Furthermore, games have also been used for training business, and management. For example, in The Global Business Game players manage international businesses (Innovative Learning Solutions 2014); Who Wants To Be A CEO offers case studies that test and develop business and management skills (IIDM.com 2014); Win Win Manager enables students to negotiate (Greco & Patriarca 2009); and Bank On It trains students for accounting (AICPA 2014).

Another interesting example is Gran-Turismo (GT) Academy, where they give the best drivers of Gran Turismo, a virtual game, the chance to participate in a real car race (Sony Computer Entertainment 2013). Other games create an emotional impact and thus have the potential to inculcate values such as community mindedness and environmental concern, including: River City, about a town besieged with health problems (Dieterle 2009); Environmental Detectives, in which a toxic chemical leaks into a water reservoir (Klopfer, Squire & Jenkins 2012); and MiniMonos, a virtual world with environmental issues (Minimonos 2013). All of these games have one thing in common, the use of game mechanics for a serious purpose. The previously acknowledged educational outcomes of games are substantiated by the existence of games like these. The main sub-genre of serious games that is relevant to this study is ‘newsgames’.

Newsgames

Although serious games have been discussed by scholars (Abt 1970; Bogost 2007; Gee 2003; Ritterfeld, Cody & Vorderer 2009), the genre of newsgames is relatively new. Frasca coined the term, describing newsgames as “simulation meets political cartoons” (cited in
Newsgaming 2001). They are often developed more quickly and with smaller budgets than commercial video games. There is no general agreement about the definition of a newsgame, although they mainly create awareness about an issue (Ferrari 2009).

Newsgames have been described as a type of political game, editorial game and current event game (Bogost 2006; Frasca 2001a; Treanor & Mateas 2009).

However, political and editorial games may be considered to be driven by certain agendas. Editorial games have been defined as games with arguments or those that “attempt to persuade their players in some way” (Bogust, Ferrari & Schweizer 2010, p. 15). An example of a political game is Howard Dean for Iowa, which was developed for a political campaign of local candidate Howard Dean for the US elections in 2004. This game had some innovative attributes, including that each player’s game affected the games of those who played later (Frasca 2003b).

**Fig. 3.1:** Newsgame: Howard Dean for Iowa.

Political games have also been described as those that harness “unresolved political tensions and tend to be steeped in controversy” (Orewa 2012). These include September 12 (Frasca 2003c), which involves the decision to either bomb different places in a Middle Eastern city, or not to bomb and just observe (Fig. 3.2). In another controversial game, Kabul
Kaboom (Frasca 2001b), the player has to catch food dropped by US planes and avoid missiles; however, players cannot win the game because there are too many missiles (Fig. 3.2). Similarly, in Osama Vs Obama (Kongregate 2011), which came out four days after Osama bin Laden was killed, the player scores by shooting the figure of Osama bin Laden appearing in different places on the screen (Fig. 3.2).

![Image of Kaboom and Osama Vs Obama](image)

**Fig. 3.2:** Newsgames: top left, September 12; top right, Kabul Kaboom; bottom, Osama Vs Obama.

In contrast with political games, which “try to change their user’s frames and ideas on the specific political topics”, newsgames are often less driven by agenda and more by a particular issue (Sicart 2008, p. 29). Thus, a game like Madrid (2002) can be considered a newsgame because it does not take any sides and is simply a reminder of an event that took place (Sicart 2008). Similarly, Airport Security (Addicting Games 2010) could be categorised as a newsgame as it is purely a commentary on the changing practices in airport security. The player is a security guard who has to check passengers according to the rules before they pass the security gates; however, the rules keep changing and the
passenger line keeps growing until the player loses the game. Newsgames tend to have more time limitations, and are ephemeral compared with editorial games (Ferrari 2009).

Bogost (2007) discusses a simulation gap between the real system and the game system. This refers to the process of game development where some facts are omitted from the game design or narrative and an “impression” of the “represented system” is offered (Bogost 2007, p. 230). Whenever facts are overlooked or cut out, the overall representation becomes inaccurate and imprecise. Newsgame developers try to close the simulation gap in order to cut down the bias or incorrect representation (Sicart 2008); editorial game developers narrow or widen the simulation gap depending on their agendas (Ferrari 2009). The decision about what elements to include in a game define if it is a newsgame or an editorial game.

Bogost, Ferrari and Schweizer (2010) strived to categorise newsgames according to their common attributes, including: (i) current event games, which deal with recent issues; (ii) infographics, which provide information through graphical representations; (iii) documentary games, which are usually a long version of some incident from real life, elaborated on through gameplay; (iv) puzzles, which engage players in resolving clues and provides them with an insight about a particular topic; (v) literacy newsgames, which usually teach players about field reporting or news media structure etc.; and (vi) community newsgames, which encourage collaboration between communities and use of collective knowledge to resolve problems. It can be argued that regardless of the terminology, all of these games (political games, editorial games, newsgames) are driven by particular agendas and have been created for a reason that surpasses entertainment or commercial profit. Indeed, there is only a marginal difference between newsgames, editorial games and political games, and in many cases they serve as alternate terms for each other (Breivik 2008). For the purposes of this thesis, newsgames, political games and editorial games, whether they are controversial or not, will be included under the umbrella term ‘newsgames’.

The impact of newsgames is often quite powerful. For instance, the game Operation: Pedopriest (Molleindustria 2007) criticises the handling of paedophilia scandals by the Catholic Church (Fig. 3.3). The player’s task is to cover the priests’ actions and protect them from being discovered. An attempt to explain the way scandals are covered in Italy, the
game was deemed so harmful to the image of the church that it was censored by the Italian Government due to pressure from the Vatican (Breivik 2008). Due to such reactions, newsgames have attracted interest from researchers and academics, and serious game developers are now working on them all around the world (Bogust, Ferrari & Schweizer 2010).

Fig. 3.3: Newsgame: Operation: Pedopriest.

In the light of the discussion above, it can be argued that newsgames have the potential to be a powerful agent of social awareness and social change, like any other traditional media. A very powerful example of a newsgame persuading players to be empathetic is that of Darfur is Dying; a very simple online game about the Darfur crisis (Take Action Games 2006) (Fig. 3.4). Nicholas Kristof, a New York Times op-ed columnist, praises the capacity of digital games to create awareness about real-life issues, providing an example of US school students who were more empathetic towards the situation in Darfur after playing Darfur is Dying than after reading Kristof’s columns on the same issue (AdAge 2009; Dell’Aquila & Johns 2009). Similarly, one study found that students in an Arizona school who played newsgames had a better awareness of world issues than those who did not (Zakrasek 1989).
Fig. 3.4: Newsgame: *Darfur is Dying*.

This leads to two questions. Firstly, why are these sorts of games not yet incorporated in educational settings to their full potential? The answer to this may lie in the gradual rise of the few organisations that actively promote serious games. Institutes such as Games for Change are committed to designing games that create a difference (Games for Change 2013). Most of the digital games mentioned earlier in this chapter were created by game developers who follow similar philosophies (Frasca 2003a; Swain 2007). Although slow, there appears to be improvement in general attitudes towards newsgames, which is evidence of their success.

Secondly, why have these games failed to share the same kind of popularity as mainstream editorials, political cartoons and satire? One of the major hurdles of newsgames being an effective resource of public debate is their platform value (Ritterfeld, Cody & Vorderer 2009). Newsgames tend to be published on gaming sites, reaching gamers rather than the general public. Considering that these sites are visited primarily by young people, reactions to newsgames may be “different from what their creators probably were hoping for” (Breivik 2008, p. 14). Thus, poor distribution models means limited commercial exposure, which may diminish the chances of widespread success of newsgames.
Another factor that probably affects the popular success of newsgames is their poor production value (Ritterfeld, Cody & Vorderer 2009). Most newsgames are built by developers who feel strongly enough about the issue to spend time working on “comparatively unprofitable ventures” (Ferrari 2009). The limited budgets and lack of human resources, in addition to the quick delivery turnaround of newsgames result in poor game design and presentation, which are unlikely to engage hard-core game players.

Newsgames are usually developed according to a certain perspective. Sicart suggests that, like good journalism, newsgames aim to “serve rather than steer”, inform rather than influence (Sicart 2008, p. 29). This results in games with serious subject-related themes, a narrow focus and a lack of narrative depth, compared with digital games developed for entertainment alone. Whether or not players are keen to learn more about the issue may depend on the individual player and their interest in the topic itself. However, just like in other forms of journalism, there are always several sides to one story, so newsgames also have an inherent bias and opinion at their core. Hence, this is steering rather than serving.

There is an untouched and unexplored market for models of economic and commercial profitability of newsgames. As discussed earlier, the economic hit to the journalism industry may be counteracted by introducing new mechanisms of profit. Newsgames have the potential to be one such opportunity to explore. The leading competitors in the online and mobile gaming industry boast over 100 per cent growth in revenue each year (Merel 2010). Newsgames could function as a new form of advertising and/or branding platform, which could help attract funds to improve production values but also expand exposure to a wider audience.

A unique example of this is the latest platform for newsgames, Game The News (www.gamethenews.net), a website designed solely for the purpose of developing and presenting games on news and current affairs. The website is run by Auroch Digital, and according to the creator of the website, Game The News started by attracting advertisers, but later moved on to selling games to news organisations for their websites (Rawlings 2012). Interestingly, on their site they state: “the project is still at beta – in that we’re still exploring how games can mesh with news”, which highlights the still experimental nature of newsgames. One of the games on Game The News is Endgame: Syria, in which the player
is placed in the Syrian Civil War to support the rebels struggling against the current regime, making critical decisions about political and military actions for conflict resolution. The game was rejected by Apple due to its content (Pearson 2013), which raised controversy against Apple’s policy about the applications related to such issues. This instigated discussions around the importance of newsgames in creating social debate as well as their significance as a journalistic tool (Grubb 2013a, 2013b).

**Journalism games**

Another category of games relevant to the news media is ‘journalism games’. Unlike newsgames, which instigate awareness about an issue, journalism games are designed to train journalistic skills. There are, however, very few examples of journalism games, but some covered here include *City Council, News Reporting Simulation: A Fire Scenario, Flood, Global Conflicts series, Dead Rising* and *WARCO*.

One of the first of its kind, *City Council* (Cameron 1999) is a reporting hypermedia training resource. It is a web-based tool to assist students in learning the measures journalists undertake to file a news report. *City Council* demands the player work as a journalist and file proceedings of the virtual Falconville City Council. The action items consist of talking to different people including board members and citizen staff members regarding several issues, which have already been provided in an agenda (Fig 3.5). A variety of questions are presented for the player to use when interviewing. The player has tools to assist them, such as a list of numbers and addresses of the relevant people, and meeting notes that are automatically updated after every meeting. A context has been created by providing background information about Falconville and the issues discussed by the community. The goal is to gather the required information and compile a ‘multiple element lead’ for the newspaper.
Journalism game: City Council.

The simulation *News Reporting Simulation: A Fire Scenario* (2001) was developed specially for the Columbia Center of New Media Teaching and Learning, and was used in classes and e-seminars (University of Columbia 2001). The narrative for this simulation is based on coverage of a fire event (Fig. 3.6). The player is a new newsroom journalist, and is briefed by the editor then sent off to report on a fire in the city. A list of important places in the city is provided along with a map. The journalist can talk to eyewitnesses and affected people. After gathering the facts, a news report is filed and sent through email. Writing techniques such as inverted pyramid and 5W’s are also provided in the reading manual. This simulation includes real pictures and audio voiceovers of the editor and the interviewees. This is an interesting element; however, pre-recorded videos cannot replace practise of interviews with real people, as these cannot replicate real-life conversations.

Simulations like *News Reporting Simulation: A Fire Scenario* can be interactive and engaging (Squire 2008), and so may grasp the attention of students better than paper-based exercises. The slightly outdated *City Council*, developed in 1999, may still be somewhat engaging, and the hypertext platform provides an interesting resource for a class of journalism students;
however, the modern technology utilised in *News Reporting Simulation: A Fire Scenario* makes it a much more appealing experience. This illustrates the brief applicability of these sorts of games.

![News Reporting Simulation: A Fire Scenario](image)

**Fig. 3.6:** Journalism game: *News Reporting Simulation: A Fire Scenario.*

*Flood* is also another web-delivered game developed by Cameron (2004) as a practical component of a research thesis. Participants take up the role of a journalist whose job is to cover a flood in a regional Australian city. Information is provided through various sources such as news releases and wire services, and a contact book is provided. The game teaches the journalist (i.e. the player/student) about news sense, news structure and gathering data for a story, but the journalist has to decide which information is newsworthy. Unlike *City Council* or *News Reporting Simulation: A Fire Scenario,* *Flood* uses more interactive software, so questions asked by the journalist are responded to by a computer program designed to give the impression that a real person is replying. This is one of the most important aspects of this game. Although different people will get different answers depending on the type of questions asked, this element cannot fully imitate the complexity of real human-to-human contact. Unlike the earlier two games, *Flood* was not published for public use.

The games discussed thus far were developed on an experimental basis and are not widely known. One journalism game which has been distributed commercially is the *Global*
Conflicts series. As the name suggests, this series of games is based on global conflicts currently active in various parts of the world. The player takes up the role of a journalist and investigates an issue in order to file a news story.

Fig. 3.7: Journalism game: Global Conflicts: Palestine.

Global Conflicts: Palestine has been one of the most popular games in the Global Conflicts series (Serious Games Interactive 2006) (Fig. 3.7). The player works as a journalist covering an event in a section of Jerusalem. There are six missions, that is, a total of six stories to be covered. The player has to interview people and take notes, and is required to think like an actual journalist and be cautious about how an event is reported as it impacts on the Israel-Palestine conflict. At the end of the game the story is filed and the editor grades it based on the quotes used, and how well the story fits the political affiliation of the newspaper. In an interesting twist, the player can choose whether the paper is Israeli, Palestinian or European. The main goal of the game is to challenge ideas about real-life issues. The Danish developer, Simon Egenfeldt-Nielsen, has a background in both the games industry and research. He considers this game “a very compelling combination of education and gaming, with a bit of tweaking” (Gamasutra 2007). With advanced technology and 3-dimensional (3D) graphics, this journalism game has all the elements of a mainstream digital game, which played an important part in its recognition as the winner of a BETT
award (British Educational Training and Technology) in 2010 (Serious Games Interactive 2006).

There are other games in the series with scenarios in Latin America, Africa and Bangladesh. Some of them have been marketed and released for individual consumers. All of them are being marketed as teaching and training resources for schools (Serious Games Interactive 2006).

Another commercial game that can be referred to as a journalism game is *Dead Rising* (Capcom Productions 2006) (Fig. 3.8). Developed by Capcom, this action-adventure, survivor, horror game makes the player take up the role of a photo journalist called Frank West, who is trying to uncover the reason behind a zombie infestation. Frank has to prevent himself from being infected while covering the incident. An automatic photo scoring system rates the photos taken and assigns them to a particular genre: horror, drama, out-takes, brutality or erotica. Points are gained by killing zombies, helping survivors or taking a ‘perfect photo’. Although this game was not developed for teaching journalism, its gameplay and game narrative strongly demonstrate an understanding of a photo journalist’s job and mindset. Replacing the zombie crisis scenario with a war zone, a hostage situation, a bomb blast or a flood crisis could be equally horrific and challenging. If such gameplay could be incorporated into a game narrative with a real-life crisis situation, it has the potential to work as a powerful training resource. Indeed, Tony Maniaty (University of Technology, Sydney) and his team developed a game along similar lines to *Dead Rising* called *WARCO* (2011).

*WARCO* (Fig. 3.8) (an acronym of ‘war correspondent’) is based in the fictional North African country of Benouja. The main character, reporter Jesse DeMarco, has to record a video or take photographs to capture the story without becoming a victim of the civil-war conflict. *WARCO* was developed by an Australian team including: journalist and journalism academic Tony Maniaty, film-maker Robert Connolly, and game designer Morgan Jaffit. The project was funded by Screen Australia and Screen New South Wales.

The prototype of *WARCO* was developed to prepare journalists and introduce the idea of the complications, risks and trauma associated with being a war correspondent. Players must find time to write, edit and submit a news story while trying to survive. Maniaty does
not suggest this game as a replacement of real-life training, “I would never say this game should replace proper hostile environment training but if we can save the lives of a few journalists it’ll be worth it” (Hughes 2011).

Fig. 3.8: Journalism games: left, Dead Rising; right, WARCO.

3.3 Serious games as a training resource

It is evident that journalism games have the potential to train journalism students. In contrast, although newsgames lack the ability to actually teach journalistic skills, they can help students learn. Newsgames can create awareness of various social, societal, health, political, environmental and economic issues, and stimulate discussion. Rather than serving as a context for reporters in the field, newsgames act like an article in the opinion pages. They can be used as a pedagogical source to serve that purpose by allowing academics to stimulate discussions and debates among students.

A recent example is Eddy’s Run: The Prism Prison (Fig. 3.9). A newsgame about a CIA/National Security Agency (NSA) employee revealing secrets to The Guardian newspaper. Edward Snowden leaked information about NSA confidential programs for telephone and Internet surveillance (Greenwald, MacAskill & Poitras 2013) and was considered by some a traitor and others a hero for this breach of privacy, forcing him to flee to Hong Kong, currently residing in Russia. Eddy’s Run: The Prism Prison is a side-scrolling flash game developed by German game developer Binji (2013). The player participates as Snowden as he runs from federal agents, throwing laptops to slow them down and signing
online petitions if he runs into a federal agent or falls off a cliff. The gameplay is simple but within the context sends out a powerful message about the situation. Perhaps due to its highly intriguing nature – it has been called the most significant leak in US history – there are several newsgames on this issue, such as Snowden Leaks: The Game (Newgrounds 2013), and Snowden Run 3D (Smeets 2013), which are not discussed here to avoid redundancy of the issue.

![Newsgame: Eddy’s Run: The Prism Prison.](image)

Fig. 3.9: Newsgame: Eddy’s Run: The Prism Prison.

Another example of a newsgame is Revolution Shoe Gaddafi (Flash Games Nexus 2011), a game that requires players to hit an avatar of a leader with a shoe. Scores are made by accurate hits and the player can upgrade the type of shoe, strength of throw and attack visibility. The first level’s target is Muammar Gaddafi, ex-Libyan President, and the ultimate goal is to knock out Gaddafi’s avatar. The next level is Iranian President Mahmoud Ahmadinejad, and the hardest level focuses on Zine El Abidine Ben Ali, the former Tunisian President. This newsgame, like others, is simple and easy to play, but its main aim is to incite discussion, for example, about the political situation in Libya, its background and recent incidents. The debates around the rationale for creating a game with this particular angle are significant as they discuss public opinions and media representations.
The ideological standing of such a newsgame is also an important topic of discussion and can be used for developing awareness among students and instigating thought-processing about such issues. For instance, Ahmadinejad’s character is stating a line with the name of Islam’s highly respected prophet. It is considered an offense to hit a person who is speaking that sentence. Hence, such cultural understanding and inter-cultural communication can be comprehended. The game is drawing on a well-known archetypal game of ‘whac-a-mole’ (where moles pop up and gamers get a score by hitting them). This is a use of game logic to make a political statement. Such simplicity can instigate greater discussion about the issue. This game raises questions about tyranny and dictatorship; similarly, issues of terrorism, climate change, world poverty, gender discrimination or religious intolerance can be discussed through newsgames. With this capacity they may be incorporated as a supplementary educational resource to sensitise students about issues and stimulate critical reflection.

On the other hand, journalism games have the potential to serve as a training resource for students to help them acquire reporting, writing and research skills. Two good examples are WARCO and the Global Conflicts series, as discussed above. A simulated digital environment offers students an opportunity to experience situations they cannot visit in person, due to expense and danger. A student can write a report about Somalia by playing a game, while doing background research on the topic and getting evaluated for this task.

Despite their potential, it is surprising that even after a decade of academic discussion around journalism games there have been very few written about. Despite their potential, very few journalism courses employ any kind of digital game. In order to explore their limited application, the academics interviewed for this research were also asked about the role of games in journalism education.

Some of the main reasons for not incorporating a digital game in a journalism education course were related to logistics. Investigative journalist and journalism academic James Hollings points out that he has not used a digital game for his class because he lacks the skills required to develop one. Digital game development is highly complex (Hollings 2011, personal communication). Video game development involves huge software projects and teams of often more than one hundred people, including people from multi-disciplinary
fields such as artists, engineers, writers, researchers and musicians (Moreno-Ge et al. 2007, p. 3; Tran & Biddle 2008).

To create a good digital game, strong team collaboration is important. Tran and Biddle (2009, p. 17) conducted ethnographic research on the collaboration in a game development team. A ‘short iteration cycle’ and frequent testing of functions ensure continuous engagement of team members, in addition to a ‘shared vision’. Whether or not such extensive team collaboration would be plausible in an academic environment would require an investigation of its own. Figure 3.10 demonstrates the steps of digital game development (Moreno-Ger et al. 2007), showing the production of a storyboard (including the storyline, game dialogue, character designs and background scenes) and conversion of the storyboard into a proper video game by converting the images into animated characters, adding music and sound to it.

![Figure 3.10: Development of a digital game. (Moreno-Ger et al. 2007)](image)

Game developers use complicated, difficult programmes to develop games (Moreno-Ger et al. 2007, p. 5). This advanced level of creation is required for a powerful gaming experience that will engage students. Games require excellent game narratives to be successful (Barab,
Narratives as stories have been a key concept in social sciences and humanities (Barthes 1977). Game narrative is considered as one of the most important elements of game design, as it sustains the other elements like intrinsic motivation, curiosity and plausibility of a game-like environment (Dickey 2011). Scholars like Jenkins (2004) and Thomas and Brown (2007) have discussed how game narratives nurture imagination by allowing player interaction with other players and the environment. Narratives enable problem-solving by establishing a cognitive framework (Dickey 2011). Krzywinska (2006) suggests that narrative elements determine the consumer’s engagement with the game. Buchanan-Oliver and Seo (2012, p. 425) argue that, unlike movies or novels where the plot is usually sequential, in games, “the relationship between events is spatial … where one event can lead to multiple other events depending on the rules that govern game play”. This is especially important in ARGs, where in the absence of sophisticated graphics the narrative becomes the most important factor.

In addition to an engaging game narrative, games need a good musical score, elements of surprise and challenges (Crawford 2003; Egenfeldt-Nielsen 2006; Malone & Lepper 1987; Salen & Zimmerman 2003), engaging gameplay (Dickey 2005) and feedback (Gee 2003) to be truly enjoyed by students (Wolf 2010). In order for a journalism game to work effectively it needs to include all these elements, as well as the elements of a good teaching resource. Development of such a game would take extensive time and money, both of which are limited in academia.

It is important to highlight that most existing journalism games have been developed by individuals for their research work. Creating a digital game as an individual, even a prototype, can be more time-consuming and difficult than working in a team. Not only does an effective educational digital game require time and advanced level programming and design skills to develop, but it also has to incorporate educational concepts and activities (Charsky 2010; Fabricatore 2000). The challenge is to “facilitate playing that makes the player engage with the material, discuss it, reflect on it, and use the video game as a means for constructing knowledge” (Egenfeldt-Nielsen 2006, p. 198). Despite journalism games potentially being an effective training tool, they have rarely been used as a stand alone resource. This is perhaps due to the arduous and not completely successful attempts by individuals at developing and testing journalism games.
Likewise, journalism games have not been widely popular among academics because developing a journalism game is too expensive. It can be incredibly difficult to get funding for development and distribution of journalism or newsgames (Maniaty 2012, personal communication). The time, money, expertise and level of collaboration required for development of digital games as pedagogical tools are simply too much to ask from academics who already have an immense workload (Birnbauer 2011, personal communication; Chubb 2011, personal communication).

One of the major reasons for scepticism of the use of digital simulations as an educational resource is ignoring the real context, which is teaching (Tully 2011, personal communication). The students may have a great experience; however, unless they learn from it, the use of a journalism game as a training tool cannot be justified (Tucker 2011, personal communication). Hence, academics would have to plan the game narrative diligently and be actively involved in the game development process. There has to be a clear goal for every activity and task that students have to perform in the game. In order for digital games to work, the alignment of course objectives with the gameplay is fundamental (Shelton & Scoresby 2010). Designing rubrics for a course with respect to the game is also important for fair course evaluation.

In summary, a journalism game requires a detailed plan to be successfully incorporated into a classroom. The educators require an understanding of the functionality of the game and the evaluation tools incorporated in the course. Journalism educators, like others, have been adapting their practice to cope with technological change for decades, and thus should have the capacity to incorporate games as well (Oliver & Herrington 2003).

**Practical use of serious games in education**

Despite the barriers to constructing effective journalism games for education, there are some measures that might be taken to alleviate these problems. One such idea is to have university in-house collaboration between software development, graphic design and game development courses to manufacture training resources. For example, if students in multimedia and information communication technology classes worked on projects to build parts of a journalism game, in collaboration with journalism studies.
One successful example of such a collaboration is the ‘GumShoe Project’ (Pulimood, Shaw & Lounsberry 2011). In this project journalism students collaborated with computer science students at the College of New Jersey to investigate violent gun crime in Pennsylvania, US. Supervisors from both fields, that is, a journalism professor and a computer science professor, monitored the project, in which the computer science students learnt their course goals by developing the required databases and journalism students investigated important stories through ‘computer assisted reporting’. Although such projects require a high level of collaboration and commitment from all parties, as well as rigorous project management, their successful results are proven. Another successful example of such a collaboration is a student workshop on development of newsgames. In March 2013, the New Media Innovation Lab at Walter Cronkite School of Journalism and Mass Communication, and the Center for Games & Impact at Arizona State University (ASU) conducted a workshop for ASU students and journalists (ASU 2013b). This is an indicator that newsgames are slowly making their way into journalism education.

Another idea would be to create a basic immersive virtual world along the lines of Second Life (Linden Research 2001) – a 3D virtual environment that allows users to create their own identity and develop scenarios according to their requirements. Academic researchers have successfully incorporated Second Life into different courses (Boulos, Hetherington & Wheeler 2007; Jarmon, Lim & Carpenter 2009; Martinez, Martinez & Warkentin 2007; Mason & Moutahir 2006; Sanchez 2007). An example of such a collaboration is that of the Virtual Worlds Working Group (VWWG) – a group of academics from 55 Australian and New Zealand universities who work on joint ventures inside Second Life (Farley et al. 2012). This provides “opportunities to harness virtual worlds to help prepare students for an unknown future by demonstrating innovative uses of technology to adapt or transform the curriculum for the future needs of learners and teachers” (Gregory et al. 2010, p. 340). Such a virtual world can also allow collaboration with different journalism departments all around the world, globalising the curriculum. Different projects can be developed within such a computer-rendered world. The students can have their own avatar inside this world, through which they can work as, for example, a journalist acquiring journalistic skills in real-time. Working within a pre-existing game platform would also reduce the amount of time spent on the development of new games. Different scenarios and locations
can be created inside such a world. A US-based example of such an initiative is that of Knight Center’s collaboration with the Virtual Journalism Learning Center, at San Diego State University (Chiang & Schmitz 2011). The participants reviewed a hypothetical crises situation in Second Life, like covering a natural disaster. Towards end of the course they compiled a news story using the concepts they learnt during the course.

Interestingly, like their criticism in other fields, many journalism academics are sceptical about using digital games. Some consider journalism games or their like to be “too gimmicky” to use (Bossio 2011, personal communication). Greg Treadwell adds that “a hypothetical scenario presented in a form of digital game doesn’t meet our requirement for getting students to write real stories” (Treadwell 2011, personal communication). Additionally, journalist and academic Margaret Simons (2011, personal communication) believes that Facebook has served as a collaborative platform for people to communicate with each other, a role that Second Life was envisaged to fulfil. However, these sort of immersive educational spaces have already been worked on and proven successful for business, language learning, and health (Boulos, Hetherington & Wheeler 2007; Coffman & Klinger 2007; Warburton 2009). More research is required to actually test them for journalism education and training.

Academics such as Jim Tucker (2011, personal communication) used earlier versions of digital games for teaching two decades ago. Tucker (2011, personal communication) suggests that if hard news is at one end of continuum, and investigative journalism is at the other end, than the middle ground (community stories, people stories, and human interest stories) is being covered.

> We are covering the middle nicely, but we are not covering the hard news stuff because you can’t do police round or fire round in a journalism school without tripping on the toes of people covering for them, for the real publications or outlets. It’s just not practical because if you are writing for community papers, they only come out once a week anyway, so we can’t cover them properly other than with simulation (Tucker 2011, personal communication).

Although it is suggested that journalism games can assist students acquire the required skills for journalism, there are several skills that would require them to go out into the field and talk to real people. One such skill is interviewing. It would require a great deal of
background programming for a game to be able to incorporate interviewing techniques. Computer-generated conversation or interview replies cannot replicate the complexity of real-life human interaction, as was noted in regards to *News Reporting Simulation: A Fire Scenario* and *Flood*. In order to achieve realistic interviews, a live person would possibly be required to answer interview questions while the game is being played; however, this would make the process quite labour intensive. Hence, in realistic terms, advanced interviewing skills would need to be learnt outside the simulated environment.

As interviews are usually the basis of any journalistic story, the limited ability to teach them in a digital game leads to question about the benefits of trying to incorporate games into the teaching of journalism. Of course, alone, journalism games could not provide all educational disciplines, but that does not mean they cannot be beneficial in teaching some elements of a journalism course (Egenfeldt-Nielsen 2006, p. 206). The above discussion suggests that digital games in their current forms are not the most appropriate or beneficial educational resource for training journalism students.

### 3.4 Summary

In this chapter I explored digital games and their suitability for educational purposes. Serious games have been identified as the main genre of digital games that can function in an educational setting. As this study attempts to use games for journalism education, two relevant existing genres of digital games have been examined: newsgames and journalism games. It has been deduced that neither of these games can serve as an efficient tool for investigative journalism in their existing forms. Journalism games are expensive to develop and take time, and newsgames are not deep enough to function as a good training tool. Due to these limitations, neither of these tools are deemed practically suited for realistic investigative journalism training. However, a few key lessons were learnt here. These include the following important digital game elements that can be used in pedagogy:

- Strong game narrative that can help in student engagement.
- Elements of challenge that allow students to increase their critical thinking and contributes to their problem-solving abilities.
• Feedback, (usually in form of reward or penalty) that assists in both, enhancing students’ concentration and motivation (both intrinsic and extrinsic) as well as enabling students to improve their performance.

• Digital games can also contribute to development of quick thinking and decision-making, both of which are extremely important for a journalist.

As discussed earlier, academics who want to use digital games in journalism teaching need to find a way of incorporating realistic skills such as contacting professionals, interviewing technique and identifying newsworthy points. One way of doing this while combining the advantages of digital games as discussed above with traditional training methods is through what are commonly referred to as alternate reality games (ARGs). An ARG, as denoted by its name, is a game that is played in an alternate reality, parallel to real life. An ARG blends real life with a virtual world, a scenario-based game and role-playing.

According to Educause Learning Initiative, a non-profit organisation that works for promotion of educational technology in higher education,

ARGs open doors into the future of students’ professional lives, where they will be expected to solve complex problems by taking necessary raw materials from multiple resources, thinking critically and analytically, and putting their individual skills, interests, and abilities at the disposal of a group dedicated to a common goal (Educause 2009).

The above statement provides a strong rationale for utilising ARGs for training, in particular, journalists, as they will be required to: uncover news stories (solve complex problems); conduct interviews (raw materials); contact different sources (multiple resources); and use their curiosity, persistence and perseverance (individual skills, interests and abilities) to file news reports (dedicated to a common goal). Considering that ARGs are still a new addition to the list of educational resources, more work needs to be conducted in this area. The next chapter will explore ARGs in more detail and discuss their relevance to journalism education and training.
Chapter 4

Alternate reality games and education
Chapter 3 raised the potential pedagogical benefits of ARGs. Chapter 4 will discuss three broad categories of ARGs: commercial, activism and educational. It will identify the challenges and benefits experienced by academics who have incorporated ARGs as a pedagogical tool. The strengths and weaknesses of ARGs will be examined in regards to the education of journalism. A few examples of journalism relevant ARGs will then be provided.

4.1 Alternate reality games

Jane McGonigal defines an ARG as:

An interactive drama played out online and in real world spaces, taking place over several weeks or months, in which dozens, hundreds, thousands of players come together online, form collaborative social networks, and work together to solve a mystery or problem that would be absolutely impossible to solve alone (McGonigal 2008).

Alternate reality games are gradually gaining attention from academics all around the world. Mostly utilised as a marketing and promotional tool, ARGs are games that combine digital game mechanics with real-world locations, blending the digital and the physical. The game, as denoted by its name, takes place in an alternate reality; participants are required to play as a character in a real-time situation that exists in their real life.

Unlike traditional digital games, ARGs do not make a player sit for hours to complete a mission. In contrast, players have to search for clues in real life. To be able to solve a mystery they must talk to strangers, travel, read books, watch the news, search the Internet, and more. In most cases, the information required for the game is provided through easily accessible media platforms like the Internet, text messages, pamphlets and newspapers. Initiated individually, players usually end up collaborating together in order to complete the game within a specific time frame. According to the International Game Developers’ Association, “alternate reality games take the substance of everyday life and weave it into narratives that layer additional meaning, depth, and interaction upon the real world” (Martin, Thompson & Chatfield 2006, p. 6).
Two features are considered extremely important aspects of ARGs. The first is an engaging storyline and the second is collaborative gameplay (Kim, Allen & Lee 2008). The gameplay is initiated on several communication platforms, that is, web pages, emails, telephone calls, print-based mail, newspapers and text messages (Iuppa & Borst 2006; Kim, Allen & Lee 2008). Players are involved in day-to-day activities while playing the game, finding clues using, for example, text messages received, a website researched on the Internet, or a visit to a local historical monument to find a phrase carved in stone. This makes the game as real as possible, as well as highly engaging and attention grabbing.

As ARG narratives run in real life, timing is a crucial element (Kim, Allen & Lee 2008). In order to solve puzzles, certain clues must be found, or activities carried out at the right time. The game developers of ARGs design each game according to a particular time frame. For instance, The Optimist, an ARG developed as a tribute to Walt Disney’s 90th anniversary was planned for six weeks (Andersen 2013), running at the time ARGFest-o-Con 2013, a festival about ARGs, was scheduled in Seattle DC. The game developers (Walt Disney Imagineering Research & Development, Inc. 2013) did this so the maximum number of people could participate. Timing is also critical for ARGs because its strongest element is its collaborative gaming style, which is strengthened by players’ “sustained, active and voluntary participation” (Kim, Allen & Lee 2008, p. 38). Alternate reality games heavily rely on players sharing information, which sustains the quick pace and interactive nature of ARGs.

Timing is not only an important factor for players but also for game developers. McGonigal (2006, p. 253) uses the term ‘puppet masters’ for these digital game designers, who monitor and evaluate the running of the game, release information at certain times, and keep the game moving if players become stuck. The puppet master could be closely associated with the project manager, who develops the project and is responsible for its success. If the puppet master fails to keep the momentum of the ARG, the players will become less interested and the game will fail (Kim, Allen & Lee 2008). Some commercial ARGs go to such lengths to keep their players engaged they even give out rewards such as smart phones or music scores.
An ARG has been called “a tribute to the game designer’s ability to design a series of events that enable a highly immersive and engaging experience for game players, particularly as it is set in their normal existence of space and time” (Polson & Caceres 2005, p. 2). Iuppa and Borst (2006, p. 226) emphasise that “alternate reality games suggest a new way of thinking about story-driven simulations, drawing inspiration from theatre and print fiction, as well as from movies and videogames”. Most existing ARGs have been produced for commercial purposes, not for education. This will be further discussed later in the chapter.

**Pervasive game**

There is a lack of fixed classification of ARGs. Their placement in a particular game genre, such as serious games or pervasive games, or as an independent game genre, varies (Bogost, Ferrari & Schweizer 2010; Hinske et al. 2007; Montola, Stenros & Waern 2009). Mostly, ARGs are closely associated with pervasive games, which blur the boundaries between the game world and the real world, and where the everyday life blends with virtual reality (Benford, Magerkurth & Ljungstrand 2005; De Souza 2004; McGonigal 2003b, 2004; Nieuwdorp 2005a, 2005b; Walther 2005). A pervasive game has salient features that spatially, temporally or socially expand the contractual magic circle of play (Montola 2005). Castronova (2005, p. 147) defines the magic circle of play as a “world with self-defined rules” in which players can bring real life reactions, behaviours and attitudes (Huynh, Lim & Skoric 2013, p. 251). According to Montola, Stenros and Waern (2009, p. 12), “pervasive games pervade, bend, and blur the traditional boundaries of game, bleeding from the domain of game to the domain of the ordinary”. This definition is almost identical to that of an ARG, which blends real life with gameplay. For the purpose of this study ARGs will be considered as a genre of pervasive games.

Pervasive games have a certain set of attributes that traditional game genres cannot claim. Since they blend the virtual and real environment, they can allow players to access message boards in both virtual and real worlds. Role-play and character adaptation can take place in both these worlds. Similarly, surprise elements, which are considered to be one of the most attention-grabbing features of pervasive games, are present not only in the virtual world.
but also in real life. However, not all games that combine physical and cyber spaces are pervasive games: “only those that take the game to unpredictable, uncertain and undedicated areas” (Montola, Stenros & Waern 2009, p. 14).

Montola, Stenros and Waern (2009, p. 14) suggest that there are three main areas of ‘expansion’ discussed in pervasive gaming. ‘Spatial expansion’ refers to the whole world being part of the gameplay. The girl next door, or the bookseller who lives 2000 miles away, or fossils of an extinct species, anything can be a part of the game. ‘Temporal expansion’ takes the power away from players in regards to the timing of occurrences during the game. From a text message received during a seminar, or acknowledging graffiti while crossing the road, to actually logging on to the website to move forward in cyberspace, to talking to a passer-by. ‘Social expansion’ includes playing or interacting with non-gamers or outsiders in the real world. Interactions with outsiders during pervasive games may draw them in to the game as players, or they may consider the experience interesting but not get further involved.

In a pervasive game these three expansions create the illusion of the game not being one, even with disclosure of the fact that it is a game. Pervasive games are still evolving in regards to practical development and implementation. They are also gaining attention from academics. Questions such as “are games that mainly use mobile devices pervasive games?” have been raised (Hinske 2007, p. 12). Although Hinske et al. (2007, p. 11) argue that these games should not be mixed with ARGs, “which describe a surrealistic game setting”, perhaps they should be.

The main slogan of ARGs is “this is not a game” (McGonigal 2003a, p. x). An ARG is more than just a game. According to Iuppa and Borst (2006, p. 225), successfully executed ARGs create “the potential for even greater immersion into a simulation experience”. Montola, Stenros and Waern (2009) consider ARGs closer to a cross between live theatre and fiction reading.

**Location-based games**

Another game genre akin to ARGs is location-based games (LBGs). According to Polson and Caceres (2005, p. 1), an LBG is a “game that employs mobile technologies as tools for
game play in real world environments”. Despite having the potential to engage with history, local stories and culture as a dynamic agent, most LBGs treat the environment as a stage, normally limiting themselves to treasure hunts, chase sequences and combat scenes that “do not necessarily engage participants in the specific culture of the sites they enter” (Polson & Caceres 2005, p. 2). A good example of an LBG is GeoQuest (by Ludigames and France Telecom as cited in Bellows 2002), based in Marseille, France, which revealed historical facts about local families through an adventure story and clues hidden in puzzles. The subscription was associated with a particular mobile phone network, to which players had to subscribe to receive SMS clues.

Polson and Caceres (2005) developed an Australian-based LBG, Scoot, which they tested in Brisbane and Melbourne. It was designed to “observe people’s responses to the game as an experimental intervention in their everyday cultural places” (Polson & Caceres 2005, p. 5). At the beginning, players received a text message which led them to a parallel world in their existing surroundings. For instance, a cone structure called the ‘alert dome’ was placed at Federation Square as a part of the gameplay (Polson & Caceres 2005, p. 7). This game was played online as well as in the real world. Polson and Caceres (2005) concluded that Scoot was a successful LBG as it managed to use local sites to creatively engage and entertain players through their mobile phones. Further iterations of Scoot have been modified and productively tested (Polson & Morgan 2007).

**Categories of ARG**

Considering the discussion above it can be deduced that both ARGs and LBGs are sub-genres of pervasive games. Both blur the line between real and imaginary, and utilise physical and digital elements in their gameplay; however, ARGs do not have to be strictly location-based and can cater to a wider audience. The comparison of ARGs with pervasive games and LBGs is open to interpretation, but will not be explored any further in this study. Three broad categories of ARG are identified here: commercial, activism and educational. As this study focuses on educational ARGs, the other two will only be discussed briefly.
Commercial ARGs

Commercial ARGs are covered most comprehensively in the literature. One of the earliest ARGs was *The Beast* (2001), created by Microsoft and Dreamworks to promote Steven Spielberg’s film *A.I. Artificial Intelligence* (Handy 2005). According to McGonigal (2003a), “rather than creating virtual environments that were (hopefully) realistic and engaging, *The Beast’s* producers co-opted real environments to enable a virtual engagement with reality”. The game ran for 12 weeks and was played continuously, as players received clues through fax messages at work, cryptic messages on television, emails and postal mail. As it was played in real life, *The Beast* was considered a significant phenomenon due to the fact that it was quite different from other massively multiplayer online role-playing games (MMORPG), which had gradually become a source of entertainment for gamers since the growth of Internet usage.

Another commercial ARG, *I Love Bees* (2004) (Fig. 4.1), was developed by 42 Entertainment to promote the *Halo 2* video game. The game narrative involved an artificial intelligence (AI) known as Melissa whose military spaceship had crashed on earth. In order to survive, Melissa attached itself to a website server, which then affected the website called ‘*I Love Bees*’. The website manager, Dana, identified this and struggled to control the website. At one point a malicious virus, Flea, was produced by Melissa that created havoc. Towards the end of the game, Melissa realised that it has been a tool for distributing the Flea virus and went back to its own time (Iezze 2005). This highly successful ARG was advertised by a subliminal message in the trailer of *Halo 2*. It was played on www.ilovebees.com and was a subtle, yet innovative marketing tool by the game designers that was a huge success (Kim, Allen & Lee 2008). The players did not have any articulated goal or rules to win the game. They were only required to follow random story threads, and respond to them in their own manner. Towards the end, more than six hundred thousand players had collaborated for almost four months to solve the mystery (McGonigal 2003a, p. 203).
A commercial ARG that won the Cannes 2009 Cyber Grand Prix Award, *Why So Serious?* (2007) (also developed by 42 Entertainment) was a viral marketing campaign for Christopher Nolan’s movie *The Dark Knight*. A fictional political campaign for Harvey Dent (a character from the movie) was launched and people had to uncover clues to solve puzzles. The clues led to a picture of the Joker (a character from the movie) and an audio clip. It further led to phone calls and messages from Harvey Dent. The game continued for 18 months across a variety of platforms including mobile phones, emails, web pages, interactive games, print and real world events such as scavenger hunts. Pictures of participants dressed as the Joker were published in *The Gotham Times*, a newspaper designed for this ARG. In the end, the participants were asked to gather outside the movie premiere for *The Dark Knight*. According to TansmediaLab (2012), *Why So Serious?* (Fig. 4.2) accumulated over 10 million participants in more than 75 countries.
Fig. 4.2: *Why So Serious?*

**Activism ARGs**

In recent years, small community-based game developers have begun to use ARGs to raise awareness for various ‘serious’ issues (Kim, Allen & Lee 2008). These activism-based games may be focused on environmental or social concerns, and have a great capacity to emotionally draw in players and even non-players. This is an interesting and evolving potential use of ARGs.

One such example of an activism ARG is *World Without Oil* (Fig. 4.3), a game created by a team of game scholars and developers who design games for social change. This game was played over 32 days by 1800 people from 12 countries all around the world (Eklund 2007). As the name suggests, the story was based on a global oil crisis, and players received information about the onset of global oil shock. The goal of the game was to paint a future scenario of a world without oil purely with people’s imaginations, and help resolve issues that would occur through the collective wisdom of the players. This ARG required players to pretend to live in a world without oil supplies and publish or broadcast stories from their part of the world on a designated website. Players also came up with ideas about various alternate energy resources. Many players reported a change in perspective towards the environment after experiencing a ‘world without oil’ (Eklund 2007). *World Without Oil*
received an SXSW web award in the category of ‘activism’ (Andersen 2008). This ARG was considered a success as it made players appreciate the impact of small but important measures like energy saving and recycling in their current lives (Eklund 2007).

Fig. 4.3: World Without Oil.

A recent ARG that has gained international recognition from human rights activists and the general public is *Half The Sky Movement: The Game* (2012). Initiated by Nicholas Kristof and Sheryl WuDunn, this ARG is part of a broader movement aimed at empowering women all over the world. Participants play as an Indian-looking female avatar called Radhika, who has to run different errands in order to make her life better, including: taking care of the children, negotiating work, and working for community development, while dealing with her husband without breaking traditional customs in a patriarchal society.

There are mini-games, such as harvesting crops and collecting books, which have tangible results. As one plays, Radhika’s economy improves gradually.

Furthermore, throughout the game players can contribute to a real non-profit organisations like the Fistula Foundation, GEMS, Heifer International, Room to Read, and World Vision. For instance, players can ‘unlock’ a free book while playing a game about collecting books, and this free book will be delivered to a real person. Similarly, players can donate money to *Half The Sky Movement: The Game* to be used for purposes relevant to the context of the game. For instance, Radhika buys a goat for community development, then players are
asked if they would like to donate US$10 to deliver a goat to a real-life community. The player goes from becoming a common villager to an advocate, an activist, to a leader, etc. As more tasks are performed, the community improves and the level of the player is raised. United Nations Foundations, Rockefeller Foundation, and Intel also support the game. *Half The Sky Movement: The Game* (Fig. 4.4) incorporates social media to raise awareness of women’s issues and also to raise money. According to Half the Sky Movement, 1.1 million players around the world had played it by 2013 (*Half the sky movement* 2013). Access through Facebook does not need a particular gaming console and is free to play, so it is a strategy that encompasses a new breed of casual gamer.

Additionally, McGonigal (2003a) states the participants of *The Beast*, also known as *Cloudmakers*, got together on an online discussion board after the attack on the World Trade Center to discuss and deal with the harsh reality of 9/11. They started to advocate an organised response to the day’s event in order to discover details behind 9/11. Although they were stopped by the game designers, these gamers accredit that their gameplay mindset helped to resolve such an issue in “an appropriate and productive way” (McGonigal 2003a, p. 110). Hence, a commercial ARG led the way to activism because of the collaboration between its participants.
Educational ARGs

The effectiveness of ARGs has generated interest from several academics, who are exploring their potential as an educational resource. Tsvetkova et al. (2009, p. 1) advocate that “ARGs are especially suited to the needs of teaching and learning”. Supporting this line of argument, Kohen-Vacs, Ronen and Cohen (2012) have designed a system that supports outdoor learning activities as part of the national curriculum for primary schools in Holon, called My Village. This system incorporates mobile treasure hunt activities and aims to enhance technology-supported learning in an outdoor context. Similarly, the use of Treasure-HIT, a treasure hunt app developed by instructional design department HIT (Holon Institute of Technology), enables teachers to select a series of locations and associate them with clues for players. This system was tested at the start of 2013 and the results are yet to be published (Kohen-Vacs, Jansen & Milrad 2013).

Another ARG developed for educational purposes that has been tested by academics is Creative Town (2005). Turner and Morrison (2005) trialled this experimental educational
ARG with undergraduate students in a unit of creative industries at Queensland University of Technology (QUT). This ARG aimed to engage students to design solutions for real-world problems in a virtual town, ‘Ipskay’. The students explored the town and collaborated to resolve issues, such as business opportunities and proposals for the planning and development of the town. They were given solid foundations through frequent lectures relevant to the design course and asked to submit posters for their proposals, which were displayed at a public space in Ipskay and discussed in tutorials. The final written proposals were submitted to the Business and Arts Council of Ipskay and discussed in formal city council meetings held as real council meetings in class. The students were engaged in theoretical concepts through the provision of a practice-based pathway (Turner & Morrison 2005). A simple website was used to attain an attention-grabbing game environment, which actively engaged students’ imaginations.

Another example of an effective ARG, or rather a group of ARGs, for educational purposes is the eMapps project (eMapps games 2008). Co-financed by the European Union’s (EU) Sixth Research Framework Programme (similar to the Australian Research Council), this ARG was developed to motivate participation by primary school children and teachers in digital creativity through multimedia.

> This game was about establishing processes and facilities for teachers and children to access relevant digital content available through a variety of sources while playing the eMapps.com games – and to make the multilingual and multicultural local content created during the games to be shared and repurposed for use in the wider eLearning context of schools and children in new member states (Brophy 2007, p. 6).

Different games were used and developed for different classes for this project. For an age group of 9–12 years, the eMapps project was carried out in eight European countries. The teachers took up the role of puppet masters and the students played the games on mobile platforms, learning about information and communication technology as they created multimedia work. The students were also involved in international collaboration and, hence, learnt about different countries and cultures as well. It was concluded in the validation report of this project that although the location-specific environment added complexity to the game, the project was value-laden and beneficial for both the teachers
and students (Brophy 2007, pp. 26-27). By creating an environment for multimedia production skills, the eMapps.com project effectively encouraged cross-cultural learning as well as building learning communities via an ARG (Butkute & Targamadze 2010).

Another example of an educational ARG is The Tower of Babel (2009) (Fig. 4.5). This ARG was developed for secondary school students to promote language learning through Web 2.0. The project developed a practical, technology-based, innovative approach to teaching languages. The story was set in a future where students had to save threatened languages. This could only be done by building a ‘tower’, which was a wiki. The students were required to complete a quest of saving a language through the use of Internet searches and collaboration with other students for creation of content and feedback (Connolly et al. 2009). This enabled students to provide building blocks for the ‘tower’ (wiki) through text, images, videos, blogs, emails and narratives (Connolly, Stansfield & Hainey 2011).

The Tower of Babel ARG assisted teachers in managing the technology and effectively using it. It also motivated students to engage in collaborative learning by solving puzzles and fulfilling quests that would help them learn a foreign language. One of the most important aspects of this game was that it was an 8-day-long game played by 28 schools in 17 countries (Connolly et al. 2009). The Tower of Babel incorporated all the elements required for an ARG: puppet masters, participating teachers and students, observing teachers, puzzles, quizzes, a dynamic storyline, interactivity and collaborative problem-solving within a limited time frame (Connolly, Stansfield & Hainey 2011). Evidently, these factors contributed to the successful implementation of this ARG as a language learning resource.
Another successfully implemented educational ARGs is *Global Village Playground* (2009), which was tested at a community college in south-western US. The students worked on “real-world problems as a design team tasked with developing an alternate reality game that makes an impact on the United Nations Millennium Development Goals” (Dondlinger & Wilson 2010, p. 1). The 16-week course was an integrated learning community experience and included face-to-face meetings along with online learning and communication tools. The students had the option to enrol in two out of four disciplines: speech, literature, humanities or composition (Dondlinger & Wilson 2010, p. 5). The study concluded that students learnt most from the development of the game, but peer collaboration and sharing were also important learning factors. Students demonstrated learning in “knowledge construction, social responsibility, open-mindedness, big picture thinking, and an understanding of their relationship to the larger society and world in which they live” (Dondlinger 2009, p. 1).

The first pilot of the ARG *Frequency 1550* (Fig. 4.6) was developed by the Waag Society in 2006 and the second pilot was completed as part of a research thesis by Jantina Huizenga for a history course in 2007. This was done with assistance from the University of Amsterdam, the University of Utrecht, the Waag Society, and three schools in Amsterdam (Akkerman, Admiraal & Huizenga 2009). Students aged 12–14 were transported to the year
1550 where they were mistaken as pilgrims. The students were asked to find a relic in order to gain citizenship of the city and were divided into teams of four. Two team members stayed at headquarters and were equipped with a laptop with Internet connection and a videophone. The other two team members explored Amsterdam in search of the holy relic for three days. They had a mobile phone linked to the videophone, and a global positioning system (GPS) receiver. The mobile phone was used to explain assignments and communicate with the players. Communication regarding a particular locality was done when students were tracked through a GPS tracker.

The team of researchers behind Frequency 1550 (Waag Society 2006) tried to develop awareness about history via a game. Both historical facts and learning goals had to be incorporated into the game. The students were not only completing an assignment, they were also competing with other groups of students. Competition is an important aspect of many games. Leader boards, as suggested by some students, work well as a motivational tool because of the competitive spirit of the game.

Some educational systems throughout the world depend heavily on competition between classmates. A few scholars oppose this competitive spirit in the classroom, believing that “the competitive nature of games creates a hostile learning environment” (Talak-Kiryk 2010, p. 7). However, there can be many benefits of using competition in an educational context, as long as it is: based on a learning objective; gives the player control over his/her own destiny; includes doable challenges; is fun and interesting; is based on reality; requires interaction; and includes everyone (Talak-Kiryk 2010, pp. 12-13).

The Frequency 1500 ARG was deemed a successful educational tool because students involved in the game scored higher than those who were taught the traditional history lessons.
The Teaching Teachers for the Future (TTF) project (2012) was funded by the Australian Government Department of Education, Employment and Workplace Relations to enable teachers to become proficient in the use of information and communications technology in education (Lloyd, Mukherjee & Bellocchi 2012). As a part of this project Bellocchi developed an ARG for academic training of teachers using iWeb, an Apple app that allows simple, template-based development of web pages and blogs.

The game narrative of this ARG was based on a ‘science, technology, engineering and mathematics crisis’, a future in which students have stopped studying these subjects and society cannot handle changing world conditions (Lloyd, Mukherjee & Bellocchi 2012, p. 59). The ARG’s main objective was to encourage the participants (teachers) to engage students in online discussion. The gaming experience was planned to encourage teachers to use ARGs in achieving their educational goals. In interviews the teachers agreed that ARGs have the potential to engage school students “particularly in socio-scientific issues” (Lloyd, Mukherjee & Bellocchi 2012, p. 136).

In all of the aforementioned examples of educational ARGs, one universal factor was that all the developers had to start from scratch. There is currently no template for ARG design. Thus, all of these educational ARGs were developed according to the available resources
and set over a context-suitable time frame. These existing games provide us with significant insight into the utility of ARGs in education. This sort of constructive learning experience not only enhances learning by ‘doing’, but also boosts students’ confidence and motivation. Important attributes were identified in these games that rationalised the incorporation of an ARG in this study. These are discussed later in this chapter.

**Comparison between ARG categories**

The different categories of ARGs vary in characteristics such as purpose, participation, ethics requirements, funding, publications and orientation (Table 4.1). One of the important aspects of educational ARGs is that players (i.e. students) are usually required to participate. Furthermore, they cannot be geared purely towards entertainment, but must be closely linked with a curriculum of learning goals. Educational ARGs generally have the poorest funding, and require the most ethics authorisation. These challenges must all be overcome to ensure an educational ARG is engaging, and even fun, for students who have not actually chosen to join in, but that also delivers appropriate learning outcomes.

**Table 4.1:** Comparison of different categories of alternate reality game (ARG).

<table>
<thead>
<tr>
<th>Category</th>
<th>Commercial ARG</th>
<th>Educational ARG</th>
<th>Activism ARG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intended purpose</td>
<td>Commercial, e.g. marketing</td>
<td>Education</td>
<td>Social awareness or campaign awareness</td>
</tr>
<tr>
<td>Type of participation</td>
<td>Volunteer</td>
<td>Mostly compulsory</td>
<td>Volunteer</td>
</tr>
<tr>
<td>Ethics status</td>
<td>Clearance from an ethics committee is not needed</td>
<td>Ethical clearance is required when dealing with children under 18 or using an ARG for research purposes</td>
<td>Clearance from an ethics committee is not needed; however, should be ethically sound to get positive results</td>
</tr>
<tr>
<td>Funding model</td>
<td>Commercial</td>
<td>Often funded by academics themselves or by research grants</td>
<td>Funded by NGOs, and/or by commercial organisations for corporate social responsibility</td>
</tr>
<tr>
<td>---------------</td>
<td>------------</td>
<td>----------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Publication outcomes</td>
<td>Game design process and implementation are rarely published</td>
<td>Game design process, implementation and results are often published in scholarly compilations</td>
<td>Game design process and implementation are often published in media or social media</td>
</tr>
<tr>
<td>Game orientation</td>
<td>Often location-based</td>
<td>Always curriculum-based</td>
<td>Often location-based but could function globally as well</td>
</tr>
</tbody>
</table>

4.2 Educational benefits of ARGs

The earlier discussion of educational ARGs provided a glimpse of the learning potential they can offer. These factors led to the decision to utilise an ARG as an educational resource in the present study.

An ARG mainly requires players to solve problems and challenges. As these problems are positioned in the real world, the players may find them more realistic than digital games. There will always be a gap between the course taught in a classroom environment and experiences faced in a work field. Scholars agree that it is quite difficult to replicate real-life scenarios in a classroom (Gossman et al. 2007). However, the puppet master model used in ARGs has uncovered a new digital realism: “a kind of psychological realism that perfectly complements the ‘immersed in reality’ framework of real-world, mission based gaming” (McGonical 2008).
Thus, ARGs can allow academics to incorporate real-life environments into the curriculum design, aligning the game narrative with the goals of the course. For example, an ARG was used to teach university students about transmedia, which is the technique of storytelling using multiple platforms and formats of current digital technologies (Chess & Booth 2014). The goal was to make an ARG based on a television program, and began from the reference point of *Alice in Wonderland*, so that the students understood the meaning of ‘rabbit hole’, which is the play space for an ARG. It incorporated scavenger hunt, clues, trivia questions and puzzles. Hence, the game narrative was aligned with the course.

A puppet master’s work is similar to that of a project manager. Academic courses run in a similar manner, handling the curriculum within a particular time frame. Hence, the idea of having a puppet master run an ARG sits quite well in an academic setting, especially when it can be based in a realistic game narrative. The existence outside the gaming console or digital setting adds to the realism of the experience.

Designing an ARG might take some time, as it requires extensive planning and arrangement of settings, depending on the complexity of its game design. However, it can also be quite inexpensive to develop. Phillips and Martin (cited in Martin, Thompson & Chatfield 2006, p. 53) strongly suggest that cheap ARGs do not have to mean low quality. An ARG hardly requires any heavy software or time spent on programming. The Alternate Reality Games for Orientation, Socialisation and Induction (ARGOSI) report argues that ARGs “offer a low-fidelity solution, using established web technologies to create cost-effective and accessible content, with an ongoing narrative and visual theme to link the challenges into a coherent game” (Whitton 2009, p. 5). In this manner, ARGs provide a way around the higher cost of game design discussed in Chapter 3. Greater resources can make an ARG more interesting and engaging; however, a basic ARG can run on a small budget. Their cost-efficiency is one of a list of very strong attributes, and particularly why academia should be interested in using them as an educational resource.

Alternate reality games can easily be customised according to the needs of the educational level they are being designed for. They have the flexibility to inculcate diverse game narratives for varied populations. As Whitton suggests, “they can be easily modified or changed to accommodate a different overarching storyline that may be more appropriate
for different age groups, locations or subject disciplines” (2008, p. 4). The simple technology can be used in various geographical locations, so the game can easily be incorporated into different social, cultural and/or economic requirements for a particular context. *Half the Sky* is a good example of the spatially flexible gameplay of ARGs and cultural understanding. Similarly, Brewer successfully developed an ARG for his PhD study among the participants at the University of Hawaii. This ARG, *The Kukui Cup Challenge*, was developed to foster energy conservation and increase energy literacy. The challenge included a variety of elements like “real-time energy feedback, goals, commitments, competition, and prizes” (Brewer 2013, p. 5).

Several ARGs have been run in a global playground, enabling participants from different countries to play the game. *World Without Oil* was only a small example (1800 people) but involved players from 12 countries. Similarly, McGonigal’s ARG *EVOKE* (2012) (described on its website blog.urgentevoke.net/2010/01/27/ as a “ten-week crash course in changing the world”) crowd-sources play spaces for participants all around the world, with a goal to resolve global issues like poverty, water crisis, sustainable energy, food shortage and empowering women. With World Bank Group funding of $500,000 *EVOKE*’s motto is: “if you have a problem and you can’t solve it alone, evoke it” (Waddington 2013). The game is a series of different missions, from rice famine in Africa to water crisis in London, and developing urban resilience for a more volatile living situation (UrgentEvoke 2010).

A number of academics have stated that our educational system needs to move into the 21st century and utilise innovative technologies in education (Liu 2011; Koehler & Mishra 2009; Oliver & Herrington 2003). “It is amazing to me that in the modern age, when we have technologies like the Internet and the hand-holds and the computers and the computer games, we are still teaching inside four walls, where all the information is coming from within those walls” (Foreman 2004, p. 53). Foreman could have been referring to ARGs, even if unintentionally, as an ARG allows academics to use all the suitable platforms to provide the best educational outcomes.

A successful example of such an ARG is *Reality Ends Here*, run at USC School of Cinematic Arts in 2011 and 2012 by Jeff Watson, who developed the ARG as a part of his PhD. The participants had to work together to produce media artefacts, collaborating and competing
to finish the ARG (Watson 2012). The game narrative started with new students in first semester receiving a mysterious communication by a secret committee known as the ‘reality committee’. They gathered in a secret room and were required to solve puzzles and compete at card games. They took an oath to create media artefacts themselves. In 2011 over 120 projects were developed by student groups and in 2012 over 190 projects were developed. The students used online spaces such as Facebook, YouTube and Twitter as well as physical spaces like dormitories, streets, university lawns etc. to work on their media artefacts (Watson 2012). Reality Ends Here won the Impact Award at IndieCade in 2012, which is an important recognition within the field of independent, powerful games (IndieCade 2012).

4.3 Alternate reality games and journalism pedagogy

Based on the above examples, ARGs are identified as a more suitable genre of game than journalism games or newsgames for this study. One of the main attributes of ARGs that make them suitable for use in journalism education is the element of real life. Journalism students already experience hypothetical scenarios in class exercises (Bossio 2011, personal communication; Hollings 2011, personal communication). They also experience activities like conducting interviews and covering events for reporting. Alternate reality games have the potential to place students in real-life scenarios while reporting real-life events. An ARG allows journalism students to gain field experience through the realistic nature of its gameplay. Consequently, this allows a practice-based style of upgrading journalistic skills that are required for proper journalistic work. Sereda (2013, p. 9) states that:

*Reality games encourage players to see [the] ordinary world in a new light and change it. This may include actions, not widely accepted per se. For example, changing the street lights color, making a sweater for a statue, changing [the] look of a building. Participants do not imagine or recreate another world within reality or parallel to it. They operate in reality.*

Hence, an ARG allows students to experience what journalists experience in daily routine. This ability to blend gameplay with reality is the key factor for their usability in journalism education. Hollings’ (2014) five-step model for teaching contemporary investigative journalism identify these main steps as core requisites of teaching investigative journalism:
'find a lead', 'become an expert', 'gather the evidence', 'testing the evidence', 'telling the story'. An ARG can easily assist to incorporate and execute these five steps by including them in game design.

An ARG game design develops and modifies as the gameplay ensues. Hence, for a journalism subject that requires uncovering events in real time, each iteration of an ARG will be more suited than the previous versions. It can also be adapted within each iteration as circumstances dictate. The game design can be continuously tweaked according to recent occurrences. An ARG also allows organised curriculum design and assessment evaluation for academics as it provides sound groundwork for semester design. It also allows the flexibility of scheduling journalistic work by students. In real-life journalism, interviews get postponed, breaking news takes up space allocation and the timing of news stories is constantly reprioritised. An ARG is flexible enough to incorporate these changes and use these real-life routine occurrences when needed for student projects.

An ARG is based on collaborative work. It ensures peer collaboration between students and enhances skills required for teamwork, a mandatory soft skill required in journalism, as was mentioned by several of the interview subjects. (Baker 2011; Moore 2011, personal communication). An ARG can allow interaction with students outside the class as well. Text messages about important information can be sent immediately. This makes an ARG closer to real-life journalistic experience than purely class-based exercises. Alternate reality games can also last longer, spanning several weeks, whereas classroom exercises tend to only go for the duration of the class. An ARG can allow investigation on stories that would need more time and can be distributed over several semesters. Furthermore, the electronic nature of the communication means that interaction can occur regardless of time or location, which is very different to the classroom scenario.

An ARG can include a scenario-based exercise in its game narrative, but it should also be noted that an ARG is different from typical classroom exercises or role-play exercises that journalism academics often use. Hence, an ARG might be considered as an extension of the scenario-based exercises (see Table 4.2). A few examples are provided here to clarify this difference.
This lesson plan for an investigative journalism class, below, was developed by Ariawna C. Talton (Padjane.com 2009) for Malona High School, Dallas, Texas, USA and is available online. It is provided here, along with other examples, to identify the benefits of ARG over scenario-based exercises.

“ASNE lesson plan”

“Investigative reporting”

I). Overview and rationale:

In this lesson students take on the role of investigative journalists, and in the process learn to seek and find pertinent information regarding particular crimes and mysteries for the purpose of completing non-biased individual articles. By doing this, journalism students are sure to learn the importance of going the extra mile to ensure accuracy of all written articles.

II). Goals for understanding:

*By participating in the Molina 48 Hours activity, students will gain first-hand experience in the art of problem solving, and most definitely learn to be more inquisitive.

*The requirements of this activity will test student’s ability to ask questions and to properly dissect the information they’re provided.

*After gaining valuable and excessive information, students will have the task of writing an investigative report, complete with facts and findings but no opinions.

III). Essential questions:

1). What are the direct benefits of asking your own questions as a high school journalist, as opposed to only gathering second-hand information?

2). How does research add to the relevance of published articles?

IV). Critical engagement questions:

1). What challenges are involved in writing an investigative report covering a subject(s) who has/have committed a gruesome crime that goes against your personal beliefs? How do you keep your opinion from creeping into the story?

V). Materials/preparation notes:

– Character photos (print some type of photograph for each case)
You’ll be surprised at how quickly students will assume that one person committed a certain act over another simply based on their appearance.

– Large index cards

On the cards you will place a case title … a few important facts will be on the back of the cards.

– Display board (something like a science fair board)

The purpose of this board is so that students can match up their photos with their facts and display both alongside their written investigative report.

(I display this outside of the classroom for passersby to view).

– Archived newspapers/Internet printouts

These pieces of information are so that students will seek and find storylines on their cases. Here in Dallas, it is very simple to research a case and locate archived newspapers with the Dallas Morning News. The object is not to make the information so in your face, but to make it a challenge.

(Note: This activity does take a bit of preparation by the teacher, but the results are well worth it, if executed correctly. Actual cases were ripped from the news in my lesson, but the instructor can definitely develop fictitious characters as well).

VI). Activity:

1). Welcome students into the newsroom with various news cases, crimes and mysteries written on obvious index cards.

2). Inform students that they are no longer simply high school newspaper students, but now investigative journalists.

3). Allow students to congregate around a table where you’ve placed all of the index cards. Explain to the students that each card has a different scenario affixed to it, and that their job will be to solve the case, finding all of the 5W’s and H if possible.

4). Give each student a copy of the investigative report handout (attached), and a clipboard (if available).

5). Allow students the entire class period(s) (usually no more than two days are needed) to complete their investigations of the case.

VII). Assessment:
*(Formal assessment): Have students individually write their investigative reports, sharing their findings. (Highlight the importance of accuracy here).

*(Informal sharing): To conclude the assignment, have students share their cases with the class. This can be very brief, but allow students to present the photograph that matched their investigation, and any difficulties they encountered in writing an unbiased account.

*Note: If you use high profile cases, such as the (Duke Rape Scandal)- allow students to find conflicting reports, outcomes and any recently developed information. Perhaps the students can even explain in the report how there has been such inconsistent reports regarding the case, and how questions are still lingering years later.

Investigative report handout

Case title: ______________________

Reporter: _________________________

Sources: (newspaper, Internet, etc.)

<table>
<thead>
<tr>
<th>Name of source/publication</th>
<th>Date of publication</th>
<th>Important commentary/findings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Answer the following questions about your case:

1). Who are the main persons involved?

2). What is the nature of the case?

3). Which news sources did you find most useful in solving your case?

4). How did you match your photograph to your case? Were you wrong initially? Was this picture in most articles, news reports you found?

**On the next page, construct your one-page investigative report. Make sure you include all of the relevant findings, but DO NOT include your opinion.

Investigative report by: ____________________________
Another good example is that of Columbia School of Journalism, where investigative journalism is also taught through a “case study method” (Columbia Univeristy 2011). The students place themselves in a position of a character who has to make a decision within a context where no decision is the right one. This exercise replicates real-world situations without threatening the students. It is intended to make them analyse and develop their critical thinking and enhance their problem-solving skills. According to their website, the student grapple with issues they are meant to face in a real-world career. Following is an exemplar case available for free (copied from their website) (Columbia Univeristy 2013).

CSJ-13-0052.0 This case tells the story of a small, online publication in Halifax, Nova Scotia, which has confounded the punditry of the digital era. AllNovaScotia.com (ANS) sits firmly behind a paywall, does not allow its stories to be shared online, and even refuses subscriptions to employees of rival publications. Nonetheless, it has been financially successful. But in 2013, founder David Bentley faced a crossroads. At 69, he was ready to step back. But what should the next step be: sell out? Duplicate the ANS model elsewhere? Go more digital?

The case provides not only a history of ANS, but the larger context of the decline and efforts to recover for-profit mainstream media in the 21st century. It gives students an overview of the disruptions that the Internet brought to the longstanding business model for media, describes many of the experiments that media undertook in order to adapt, and chronicles the financial fallout from the collapse of advertising revenue.

Use this case to examine some of the tenets of digital wisdom: is multimedia always better than print? Is open access to content a plus? What are subscribers willing to pay for? What do they value? Ask students to consider whether the ANS model can transfer elsewhere, or is Halifax a unique market? What about Bentley – is he a genius, or an eccentric? Which of the options presented in the case – or others the class may come up with – is the most plausible if ANS is to continue its success?

Use this case in a course/class about the business of media, strategic management, or entrepreneurship.

The following scenario-based exercises were given to the researcher of the present study by the journalism program convenor, Dr Andrew Dodd, who has been using these for his classes and training seminars. These will now be discussed.
One exercise enables students to work as PR officers and pitch a story about an aged care home to the newspaper reporter, on behalf of the council. Since the students do not have much information to discuss, they are informed that the story does not get a good run. The students receive a call after two or three days regarding a comment about news related to the aged care home. The students are left to think about the non-satisfactory conversation about the issue. It enables them to understand how PR works within the media and journalism and can manipulate issues if done properly. The students are later split into two groups. One group consists of reporters asking tricky questions. The other group consists of trained professionals ready and willing to answer their queries. The students playing the role of trained professionals are often given the role of mayor and trained by one tutor to answer questions with political and diplomatic tactic. The students who play the role of reporters are trained to ask tough questions. They also draft emails for the mayors and the sharpest questions win a reward. After the exercise is completed, the students are debriefed about the learning goals and the sessions.

Another scenario-based exercise by Dr Andrew Dodd and Dr Margaret Simons is conducted in a half-day seminar about re-opening a coal mine in the fictional town of Hillsville. This seminar is conducted for journalism trainees. The students are provided with a media release and details about the project. A mock press conference is conducted in which three or four different professionals are in favour of the re-opening of the coal mine and declare it a positive event. The job of the students is to find out the real story by digging deeper, asking tough questions and finding out the agenda of all the speakers at the conference as well as the media release. Speakers at the conference include the president of Teal Duck Appreciation Society of Hillsville, an activist from Friends of the Hillsville River, and a local farmer. Often actors play these roles and are provided with the background story and script. This leads to a productive session of asking tough questions and reading between the lines, which enable the trainees to think and act as reporters.

Other scenarios include mock press conferences conducted in a similar manner but on a different issues related to bus services, nursing homes, and increasing housing prices. In some media releases, a contact number is given to students for further information. The phone number is handled by one of the tutors who plays the role of another person and gives out relevant information. These scenarios involve a fair amount of hoax information,
facts that serve the purpose of PR campaigns, and role-playing actors evading tough questions or providing diplomatic answers. Investigating the real story and finding out the difference between spin-doctoring is an important part of these exercises.

Another example of a scenario-based exercise is that of a fictional town of Swine River. Details about this scenario are available online. It is a ‘Swinburne Journalism town’ and is often used to provide a fictional context for the students. This scenario is based on Wordpress as a blog. The following (Fig. 4.7) is a snapshot from the weblog.

Fig. 4.7: Swine River website.

The Swine River develops a story narrative by providing different details about occurrences within the town. Details about the town and a few media releases are available on the blog for students to work on. For example, following is a media release available on this blog:
MEDIA RELEASE

Office of the Minister for Teaching

Immediate release

The state Minister for Teaching, John Smythe, said there will be improvements to primary level education to ensure students had the foundations and passion to pursue science and maths subjects in senior secondary school and beyond.

“This budget provides 400 scholarships over four years – worth a total of $5 million – for university science graduates who want to become teachers in Victorian government schools, particularly in maths, physics and chemistry,” Mr Smythe said.

“Revamping maths and science education in secondary schools starts in primary schools and the Coalition Government is proud to fund this long-term improvement in maths and science,” Mr Smythe said. Initiatives include:

- An extra 100 maths and science specialists at a cost of $24.3 million over five years who will work with teachers in primary schools to build their maths and science teaching skills.
- $29.3 million in funding in the 2011-12 Victorian Budget to improve the standard of maths and science education in Victorian schools.
- Purpose built Maths Teaching Labs for the cities of Bendigo, Footscray, Mildura and Swan River, each worth $1.8 million.

“We want our children to have a strong knowledge foundation and the encouragement to pursue excellence in maths and science. This means they will stay at school longer and are more likely to remain engaged in those areas.”

Mr Smythe said the Budget also provided funding to attract more science graduates into teaching.

“The Coalition Government’s plan will help reverse the alarming trend of students turning away from maths and science in secondary school, which the previous Labor Government ignored to the detriment of Victorian students.”

VCE enrolments in some science subjects have fallen over the past five years, with a 5.9 per cent drop in enrolments in year 12 VCE Mathematical Methods, a 15.3 per cent drop in Specialist Mathematics and a 2.9 per cent drop in year 12 VCE Chemistry enrolments. These statistics are particularly alarming in country
regions such as central Victoria and the coastal region of Swine River where enrolments in Mathematical Methods have fallen by 24 per cent in the last four years.

“We’re tackling the problems of declining interest in maths by providing state of the art teaching labs in the grounds of local Primary Schools” said Mr Smythe.

Regional Mayors welcomed the initiative. The Mayor of Swine River Cr Rheinde lauded the “cutting edge” scheme, proposed for the Grey Street Primary School in Swine River, as “a great outcome for the people of the coast.”

There is information about the officials of Swine River as well, including the mayor, the member of parliament and the local media baron. The purpose is to enable students to frame and ask difficult questions and investigate stories hidden in these media releases. It must be noted that all of these scenarios require scaffolding. There were debriefing sessions after each scenario. This was done to ensure that students understand the whole picture and process and get the most out of it.

The above examples of scenario-based exercises are very similar to ARGs. However, ARGs can incorporate work on real information and real topics, which proves beneficial for journalism students. Hence, ARGs are being classified as an extension of scenario-based games within a reality-based context. Furthermore, the temporal and spatial flexibility of ARGs means that they are not restricted to the classroom, unlike a scenario-based exercise. In addition, the continuous game narrative does not end when the class finishes, and can incorporate a reality-based context, both of which make ARGs more suitable to the needs of a journalism unit than role-playing. Lastly, ARGs include emergent gameplay, which is supported and shaped by the participation of players (Fujimoto 2010). The end of a reality-based ARG can have a different outcome than intended, which is not unlike journalistic stories.
Table 4.2: Differences between an alternate reality game (ARG) and a scenario-based exercise.

<table>
<thead>
<tr>
<th>Category</th>
<th>Alternate reality game</th>
<th>Scenario-based exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Spatial flexibility, i.e. fieldwork is easily incorporated</td>
<td>Limited to classroom session</td>
</tr>
<tr>
<td>Time</td>
<td>Temporal flexibility, i.e. pervasive</td>
<td>Limited to classroom session</td>
</tr>
<tr>
<td>Technology</td>
<td>Diverse range of technologies, inside and outside the classroom</td>
<td>Limited to classroom</td>
</tr>
<tr>
<td>Context</td>
<td>Can incorporate reality-based context</td>
<td>Fictional context</td>
</tr>
<tr>
<td>Continuity</td>
<td>Non-stop</td>
<td>Limited to classroom session</td>
</tr>
<tr>
<td>Gameplay</td>
<td>Emergent</td>
<td>Limited</td>
</tr>
</tbody>
</table>

While ARGs are still relatively new as educational tools, there are already initial examples of their use in relation to journalism education. One successful example of an ARG used for real-life journalism is *Investigate Your MP’s Expenses*, run by *The Guardian*. The newspaper had received around 558,832 documents about the expense accounts of members of parliament in the UK, and they invited the public to analyse these documents. According to McGonigal (2011), in the first three days of the ARG 170,000 documents had been studied. At the end of the ARG, the stories covered resulted in resignations, penalties and changes in rules and laws.

One example of an investigative journalism resource tested and developed as a classroom-based scenario and extended as an ARG is *Birds of Paradise* (2005–06), developed by Stephen Tanner from the University of Wollongong. The first iteration used a hypothetical scenario based in a context about a bird-smuggling ring in West Papua. The game was initially played by students in Port Moresby and Madang. The first iteration was simple and involved development of traditional research skills, Microsoft Access and Excel. The
participants were required to think about how they would tackle the investigation. This was similar to most in-class scenarios academics use to teach journalism (Birnbauer 2011, personal communication; Hollings 2011, personal communication).

The second iteration of the game was much more developed and included real-life contacts and interviews with relevant experts to get facts (Tanner 2005). The first iteration could be seen as a well-developed scenario-based exercise. Whereas the second iteration included more finessed elements and included real interviews and interactions with relevant people and was extended into an ARG. The students were required to track down the smuggler by solving puzzles using clues provided every week and feeding the information into a website in order to move forward. Students were required to conduct out-of-class activities, and both individual and collaborative investigation styles were required. They also needed to make a judgement call on whether they wanted to submit their report every week or wait to potentially add late information. A cultural understanding of Papua New Guinea was also required for the students to interact with the locals. Discussion about ethical, legal, moral and economic consequence of the submission was an important part of the learning requirements. Relevant material was provided on the Wollongong University website for academics to use the game for their curriculum as well. This was a great strength of this ARG, that it was repeatable. This ARG was very well structured, but took a lot of time and effort in planning, design and implementation.

4.4 Summary

This chapter has defined and detailed ARGs and analogous gaming genres, including pervasive games and location-based games. It identified three existing categories of ARG: commercial, activism and educational. These categories have been described using relevant case studies of existing ARGs, and the educational benefits of ARGs have been discussed in reference to these examples. It has been argued that ARGs can offer a realistic environment and flexibility of game design, can be cost-efficient, and could be considered a 21st century educational tool. These benefits make them a potential device for training investigative journalism.
Only one example of an educational ARG being used for investigative journalism has been identified – *Birds of Paradise*. The main problem with this ARG was its fictional context and the time it took to develop it. In the words of its developer, “*although I was quite happy with the achievement of students, the time and effort invested in this project was more than I could offer conveniently. Therefore, I won’t be working on developing such a project again, unless there is a way to make it easier to develop*” (Tanner 2012, personal communication).

According to the benefits and limitations observed in the examples discussed in this chapter, it was considered that a realistic context would be practical for the present study. Hence, the ARG developed for this project was based on a real-life context but incorporated different elements of gaming and a multimodal learning environment. The ARG was designed in such a way that it would allow students to work on their investigation with only a little steering from teachers. More details of the game developed in the present study are given in Chapter 6. The next chapter will provide the theoretical foundations for the educational ARG developed for this study.
Chapter 5

Building an alternate reality game:

educational framework
The use of ARGs in education is a relatively recent practice, so there is a need to develop a proper theoretical framework for it. This study is being positioned as an interdisciplinary study with its root in education, games and journalism. This chapter establishes theoretical grounds for the methodology incorporated in this study. In order to justify its validity, it is important to position the ARG developed for this study with respect to the core theories of learning. This thesis will be positioned among the following four theories of learning: constructivist theory, situated learning theory, active learning theory and the theory of transformational play. Other theories that are relevant to the use of games in education will also be discussed.

5.1 Core theories of learning

Constructivism

The constructivist learning theory by Jean Piaget (1967) argues that “humans generate knowledge and meaning from an interaction between their experiences and their ideas” (Piaget cited in Cai & Gau 2013, p. 247). Constructivism theorists such as Bruner (1960, 1985) and von Glasersfeld (1995) suggest that people construct their own understanding of principles, phenomena and perspective. This understanding is based on the integration of past experiences, beliefs and observations of recent or current events and occurrences. Klopfer (2008, p. x) states that “according to constructivist theory, learning is an iterative process of updating existing understanding with new information acquired through activity”. Thus, students learn by activity. Hung, Jonassen and Liu (2008, p. 488) provide a list of assumptions for this theory:

1) Knowledge is individually constructed and socially co-constructed from interactions with the environment; knowledge cannot be transmitted.

2) There are necessarily multiple perspectives related to every phenomenon.

3) Meaning and thinking are distributed among the culture and community in which we exist and the tools that we use.

4) Knowledge is anchored in and indexed by relevant contexts.
Similarly, Coffman and Klinger (2008, p. 30) support that in constructive learning theory “learning environments form a community that provides opportunities for learners to collaborate, manipulate objects, discover new information, and present information in new and meaningful ways”. These descriptions elucidate the parallels between constructivism and ARGs, most notably the importance of activity and communities for learning.

**Situated learning theory**

Situated learning includes social interaction and collaboration as essential components of learning. The term was initially proposed by Lave (1988) as ‘socially situated cognition’. This concept was further elaborated on by Lave and Wenger (1991), who suggested that learning is situated within a culture, activity and a particular context. Every community has its own style of using a particular set of tools – a carpenter uses a chisel in a different way than a sculptor and for an entirely different purpose. Hence, people who use tools according to their community practices put them to their appropriate use. Thus, journalistic jargon is different from the language used by other disciplines and it is easiest to learn it by working as a journalist. Furthermore, digital technologies have become essential tools of the 21st century, a fact that is critically important for current generations of students.

**Active learning**

A comparable theoretical approach that is also significant to this study is ‘active learning’ (Adler & Milne 1997), one of the most significant learning theories to gain recognition over the past four decades, which also postulates a ‘learning by action’ approach. There is no one common definition for active learning, perhaps as it depends on the “intuitive understanding of the educators” (Sivan et al. 2000, p. 381). More than a decade later, a definition of active learning has still not been agreed on. However, a rather comprehensive definition mentioned in the Greenwood Dictionary of Education (2003, p. 5) is:

*The process of having students engage in some activity that forces them to reflect upon ideas and how they are using those ideas. Requiring students to regularly assess their own degree of understanding and skill at handling concepts or problems in a particular discipline. The attainment of knowledge by participating or contributing. The process of keeping students*
mentally, and often physically, active in their learning through activities that involve them in gathering information, thinking, and problem solving.

To summarise, in active learning students are engaged with an activity to understand the concept and learn by doing it. This process requires “a problem solving orientation, a critical approach and an evaluation of knowledge” (Niemi 2002, p. 764). Active learning “eagerly develops and tests new hypotheses as part of a continuing, interactive learning process” (Settles 2012, p. 4). Niemi (2002) further breaks it down into two parts: individual learning and cooperative learning. For the purpose of discussion, this is an appropriate method of categorising active learning styles; although, it must be clearly indicated that individual learning is a strong part of cooperative learning.

Considered to enhance student engagement and learning, numerous disciplines within the fields of education, engineering and health have supported the benefits of active learning (Anderson & Adams 1992; Chickering & Gamson 1987; Johnson, Johnson & Smith 1991). Active learning has also been influential in redefining the role of classroom teachers, in that they are nowadays more interactive, facilitate projects and exchange knowledge instead of transferring it (Grimmett 1994; Stern & Huber 1997). Active learning practices may directly influence social integration, and indirectly affect further education choices and/or drop-out rates (Braxton, Milem & Sullivan 2000, p. 572).

Furthermore, in the contemporary learning context several theories have emerged from different perspectives and approaches (Boekaerts, Pintrich & Zeidner 2000; Niemi 2002; Simons 1997), including: problem-based learning, authentic learning, autonomous learning, independent learning, self-directed learning and self-regulatory learning. However, there are many similarities between these theories, most of them overlap each other and emphasise the same attribute, that is, the active role of the learner in education. The following discussion covers some of these interrelated learning theories.

**Problem-based learning**

Hung, Jonassen and Liu (2008, p. 486) define problem-based learning as:
An instructional method that initiates students' learning by creating a need to solve an authentic problem. During the problem solving process, students construct content knowledge and develop problem-solving skills as well as self-directed learning skills while working toward a solution to the problem.

In problem-based learning, students “learn to learn”, working cooperatively in groups to seek solutions to real problems (Kolmos et al. 2007, p. 2). Indeed, students must regard the problem as being real and having “personal relevance” (Savery & Duffy 1996, p. 144). Problem-based learning is not only effective in enhancing academic achievement but also allows group work among students to develop their social negotiation skills (Bayraktar & Cinar 2010; Polanco, Calderón & Delgado 2004; Sungur, Tekkaya & Geban 2006). The problem-based learning approach has the flexibility to allow students to learn on their own, but at the same time recognises the authority of the teacher to guide them and make sense of the information available.

The roots of problem-based learning can be found in the teaching style of Socrates (Orig 2006); however, in recent times, it was utilised by medical schools in the 1950s (Hung, Jonassen & Liu 2008, p. 486). Since then, problem-based learning has been incorporated in prep to Year 12 education settings and higher education disciplines such as medicine and business (Barrows 2000; Dochy et al. 2003; Torp & Sage 2002; Hmelo & Williams 1998). The ongoing debate about whether journalism education should be taught or trained, presented in Chapter 2, comes under the umbrella of problem-based learning.

Another name for problem-based learning is scenario-based learning, as it is considered to be learning embedded in the context of the work and life of learners (Kindley 2002). This alternative name is based on the concept of ‘situated cognition’, which is the idea that knowledge cannot be developed and fully understood independent of its context (Kindley 2002). It can also be considered a variant of the situated learning theory. Scenario-based learning can be used for teaching any level and any discipline. A scenario-based design allows teachers to place students in a situation that can offer a highly engaging learning environment (Kolmos et al. 2007).

Other learning approaches similar to problem-based learning include a project-based approach or a product-driven approach. Students can be actively engaged in tasks while
constructing meaning; hence, creating knowledge while resolving issues. Savery and Duffy (1996, p. 146) suggest that these sorts of case-based learning approaches use projects either to test a student’s learning and understanding, or as a ‘concrete reference point’ for knowledge. Problem-based learning, on the other hand, additionally incorporates the actual learning of students. The differences between these learning approaches are marginal and essentially overlapping. A more integrated, although less applied term is ‘problem-based learning scenario’, which suits the real-life scenario-based ARG planned for this study; therefore, this term shall be used in this study. Although not designed specifically for education, ARGs match many of the key characteristics of problem-based learning models (Table 5.1). For instance, they encourage groups of players to solve real-world problems with limited instruction. Details about how these theories have informed the design of the ARG and this study are provided later in this chapter.

Table 5.1: Comparison between characteristics of problem-based learning (PBL) and an alternate reality game (ARG).

<table>
<thead>
<tr>
<th>Characteristics of PBL</th>
<th>Characteristics of an ARG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ill-structured, complex problems that are often drawn from the real world provide the focal points and act as stimuli for the course, curriculum or program</td>
<td>Ill-structured, complex problems that are often drawn from the real world provide the focal points and act as stimuli for the game</td>
</tr>
<tr>
<td>Learning is student-centred</td>
<td>Activity is player-centred</td>
</tr>
<tr>
<td>Instructor or teacher takes the role of a supervisor, as a coach or facilitator</td>
<td>Puppet master takes the role of a facilitator and intervenes when the players are stuck</td>
</tr>
<tr>
<td>Learning is realised in small groups of students who analyse, study, discuss and propose solutions to (possibly) open-ended problems</td>
<td>The game is realised in small groups of players who analyse, discuss and propose solutions to (possibly) open-ended problems</td>
</tr>
<tr>
<td>Learner assessment is enhanced by self and peer assessment</td>
<td>Players assessment is enhanced by self and peer assessment</td>
</tr>
</tbody>
</table>

While the major theories discussed so far present the conceptual framework of the ARG developed for this study, there are several other theories that need to be canvassed in regards to its implementation and reception. The relevance of these additional theories to this project will now be covered.
Experiential learning

Closely associated with constructivism and active learning, the experiential learning theory suggests that “knowledge results from the combinations of grasping and transforming experience” (Kolb 1984, p. 41) and involves four elements – concrete experience, formation of abstract concepts, reflective observation, and experimenting in new situations (Kolb & Fry 1975, pp. 35-36) – which have been represented in a cycle (Fig. 5.1). According to Kolb (1984, pp. 21-22), experiential learning involves two important elements – the use of ‘here-and-now’ experience to test ideas, and the use of feedback to reflect and modify practices. The experiential learning theory is relevant in the present study as the ARG developed was continuously modified depending on the feedback and the level of participation of the students.

Fig. 5.1: Kolb’s experiential learning cycle: concrete experience involves actively experiencing an activity (e.g. lab session, field class); reflective observation involves conscious reflection on that experience; abstract conceptualisation involves trying to conceptualise a theory or model; and active experimentation involves planning how to test a model or theory or plan for a forthcoming experience.
Peter Jarvis (1987) criticises Kolb’s theory as problematic because it connects knowledge gain with an awareness of the learning process. Kolb (1984, p. 41) considers knowledge to be something which is intentional as it occurs by ‘grasping experiences’. Jarvis (1987) argues that Kolb’s theory comes from a social psychology background and does not take into account the nature of knowledge as discussed in philosophy and social theory. Furthermore, Anderson (1988) argues that Kolb’s theory is grounded in a western perspective and does not account for cognitive and cultural differences, which affect communication style, and consequently learning style. Jarvis (1994) developed another model of experiential learning, which applies more widely to the experiential learning context (Fig. 5.2).

**Fig. 5.2**: Jarvis’s experiential learning model. Source: Jarvis, P. (1994) ‘Learning’, ICE301 Lifelong Learning, Unit 1(1), London: YMCA George Williams College.

**Collaborative learning**

A common practice, collaborative learning is a methodological approach towards learning where students are divided into small groups to complete work for a common goal. Collaborative learning is also referred to as cooperative learning, peer learning and constructive learning (Li & Campbell 2008). Totten et al. (1991) suggest that due to communication with a diverse range of people, collaborative learning assists in developing
critical thinking. Furthermore, supporters of collaborative learning assert that exchange of ideas within small groups improves problem-solving skills, interdependence, conflict management, teamwork capability and communication skills (CSHE 2002; Gokhale 1995; Gupta 2004; Schofield 2006; Johnson, Johnson & Holubec 1992; Johnson, Johnson & Smith 1991; Porter 2006). Froyd and Simpson (2008) suggested that in collaborative learning, the focus shifts from lectures to group work and enables students to learn more through cooperative working. This learning process enables thought processing based on both individual ideas as well as other participant’s knowledge.

In addition to this discussion, O’Donnell (2013, p. 4) proposes that collaboration is significant for “conceptual growth based on Piagetian theory [that] rely on the concept of cognitive conflict that may be engendered by group discussions and arguments”. Their point is that participation from other members of the group may lead to challenging opinions and stimulate critical thought processing as well as invoke change in thinking patterns and concepts. Adams and Hamm (2005) point out that collaborative learning requires a different classroom design than the traditional rows of desks in front of teacher, as the students will need to sit in groups to work together. They also add that collaborative learning when students work in groups, they have social pressure to take responsibility of their own work as the whole group has a common goal. “Individuals receive support for risk taking, other group members are perceived to be the major source for assistance, support, and reinforcement” (Adams & Hamm 2005, p. 40). Most ARGs are played collaboratively (McGonigal 2003a), and thus lend themselves to these learning benefits, especially when planned for pedagogical purpose.

**Community of practice**

A ‘community of practice’ (CoP) is a concept put forward by Lave and Wenger (1991) as a further exploration of the situated learning theory. An exploration of situated learning theory, communities of practice are:

> Formed by people who engage in a process of collective learning in a shared domain of human endeavour: a tribe learning to survive, a band of artists seeking new forms of expression, a group of engineers working on similar problems, a clique of pupils defining
their identity in the school, a network of surgeons exploring novel techniques, a gathering of first-time managers helping each other cope. In a nutshell: Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly (Wenger 2007).

Wenger (1998) notes that all of us are a part of a CoP, even if we do not realise it, either in traditional communities at work or school, or, since the advent of the Internet, communities in cyberspace. Different names have been allocated to online CoP (Johnson 2001), such as web-supported communities (Barab, Kling & Gray 2004) and virtual CoP (Casalini, Janowski & Estevez 2006). Alternate reality games, if used for educational purposes, promote the CoP ideal, and could be considered a combined form of CoP in both the virtual and real world. The online platform used for the present study, Facebook, could also be considered an extensive virtual community, although it is not usually used for learning.

**Interactive multimodal learning**

Multimodal learning environments use instructional elements, for instance, presented in more than one sensory mode, such as visual, aural and written (Birch, Sankey & Gardiner 2010, p. 853).

> Multiple intelligences and mental abilities do not exist as yes-no entities but within a continua which the mind blends into the manner in which it responds to and learns from the external environment and instructional stimuli. Conceptually, this suggests a framework for a multimodal instructional design that relies on a variety of pedagogical techniques, deliveries, and media (Picciano 2009, p. 11).

Most contemporary academics, including journalism academics, adopt multiple modes of teaching and learning. Indeed, new technologies allow teachers to utilise a variety of teaching media, such as text, video and interactive elements. The open structure of the ARG developed for the present study allows students to learn through several different platforms, including tutorials, lectures, classroom discussions, field interviews, group collaboration, and online interaction through social media, and thus utilises multimodal learning.
Incidental learning

‘Incidental learning’ refers to education that occurs without any planned action (Brown & Duguid 2000; Quigley 2000). According to Rosas et al. (2003, p. 77), “incidental learning is understood as the acquisition of structures of knowledge in absence of explicit presentation of knowledge, with a semi-conscious intention to learn, applying the underlining rules of such knowledge”. For example, most work-related learning occurs incidentally and is self-directed. Incidental learning is thus embedded in experience, so “the visibility and distinctiveness of learning as a separate act diminishes” (Kerka 2000). In the ARG developed for the present study, understanding of various crucial elements of journalism was acquired through incidental learning. Students were not necessarily aware they were learning about, for example, team management, contacting people for interview, compiling data and identifying facts and newsworthy points.

Transformative learning theory

One of the most important concepts relevant to this study is Mezirow’s (2000, 1991) theory of transformative learning. Transformative learning may be defined as: “learning that transforms problematic frames of reference… to make them [the learners] more inclusive, discriminating, reflective, open, and emotionally able to change” (Mezirow 2003). The theory has also been described as an adult learning theory that is naturally prone to function as a judge of both ‘quality education’ and ‘socio-political conditions’ that assist or obstruct learning (Taylor 1997, p. 11).

Three main aspects of transformative learning have been outlined, including reflection (Kreber 2004), establishing relationships (Carter 2002; Eisen 2001) and perspective transformation (Taylor 1998). Cranton and Caruseta (2004) conducted research on how reflection influences transformation in an individual. Kreber (2004, p. 41) argues that learning about teaching through reflection is critical as it makes transformative learning more meaningful. During the evaluation of the ARG tested for this study both academics and students were asked to reflect on their experiences. Another aspect of transformative learning is that of establishing relationships, such as peer dynamics (Eisen 2001), utilitarian relationships (Carter 2002) and self-dialogue (Carter 2002).
There is also an element of perspective transformation that suggests “individuals undergo transformative experiences when they actively use a concept, find that it allows to see aspects of the world in a new way, and personally value this way of seeing” (Pugh 2002, p. 1104). Transformative learning places the notion of using an ARG for investigative journalism into a proper theoretical context. It provides an overview of how effective discourse can become if the educator designs a situation where participants: have all the information; are not being forced to participate; have equal opportunities to adopt different roles; are reflective about their actions; and are motivated to find a mutual ground of work or amalgamate different views to make good judgements (Mezirow 1997). Hence, this whole process of developing an ARG, testing it and evaluating it could be referred to as a transformative learning experience from an academic point of view. Furthermore, from the students’ perspective, participating in the ARG to learn about the process of investigation and reflect on this experience is also transformative learning. Little research has been conducted on transformative learning in an online context, and is therefore an area that warrants future research.

**Theory of transformational play**

A derivative of transformative learning is the theory of transformational play, which is effectively learning through games, often digital or video games. According to Barab et al. (2010), transformational playing involves taking on the role of a protagonist who has to use conceptual understandings to transform: a problem-based fictional context, the player’s understanding of the content as well as the player themselves. In transformational play students are:

*Encouraged to engage not only procedurally with content (learning about what to do) but also conceptually (understanding how their tools work), consequentially (considering the impact of their actions on designed contexts), and critically (reflecting on the effectiveness of particular tools for accomplishing desired ends)* (Barab, Gresalfi & Arici 2009, p. 527).

The power of transformational play is that students are deeply immersed in the context offered by the game. This intellectual engagement makes them experience the gameplay, hence they naturally practise analytical reasoning. This is quite effective as it allows them
to learn by doing something they want to do, instead of merely imagining a scenario and implications of their actions or decisions. Barab, Gresalfi and Arici (2009, p. 3) have termed this ‘consequentiality on context’. They also suggest that transformational play is beyond mere seeing a context or using a concept. It is about being within a context and understanding the values of the concept engaged in that particular setting. Scholars such as Sheridan (1999) look at the concept of being in a game situation with respect to its virtual aspect or presence. However, Dede (2009) expands on this by adding various kinds of immersive learning. The theory of transformational play can be considered a variant of the experiential learning theory, which also supports that knowledge assists in transforming a person through experience (Kolb 1984).

In contrast with the theories discussed previously, most of which are well recognised and established, the theory of transformational play is comparatively new. However, it is of high significance to this study, as it explains the theoretical rationale behind the practical use of an ARG for educational purposes. In the ARG designed for this study, the students were required to undertake the role of investigative journalists and engage with the practical skills and hands-on experience of a working journalist.

The theory of transformational play suggests that transformational learning takes place when they are deeply engaged with the gameplay. Entertainment-based ARGs do not tend to offer as many tangible scores as a digital, console-based video game; however, despite this, the level of engagement that players have with ARGs is often quite high, based purely on an intrinsic motivation to complete the game. Whitton (2009) defines six intrinsic motivators that may compel a player to play an ARG: completion, competition, narrative, puzzle-solving, community and creativity (Davies, Kriznova & Weiss 2006; Whitton 2009). As Barab, Gresalfi and Arici (2009, p. 2) argue, “learning through transformational play can be motivating … because when students have a legitimate purpose for their effort, the outcome of their work is not solely to get a good grade or please a teacher”. In an academic situation, such motivation can allow students to learn while playing because they want to, not because they are forced to. A well-designed, cleverly managed ARG has the potential to do this.
5.2 Theoretical positioning of ARG

The concept of using ARGs in education, and the ARG specifically developed for this study, can be framed within these major theories: constructivism, situated learning theory, active learning theory, problem-based and the theory of transformational play. The fundamental elements of ARGs that make them suited for use in education are that they facilitate learning by doing and collaborative learning, and utilise task-based content in realistic contexts. These features complement the theoretical framework in numerous ways.

Most of the activities in an ARG are problem-based, so the students learn by ‘doing’. This important tenet of constructivism, situated learning and active learning theories advocates that “learning is not a spectator sport” (Chickering & Gamson 1987, p. 4) and argues that “students learn better through activity rather than through instruction and memorisation” (Cameron 2004, p. 25). Additionally, many of the activities undertaken in an ARG require prior knowledge, which is proposed by constructivism and situated learning.

While students are deeply engaged in the gameplay of an ARG, propelled by intrinsic motivation, they gain learning benefits according to both active learning and the transformational play theory. The ARG developed for this study utilises a number of intrinsic motivators, including: competition (a reward point system gives the impression of competition, even though teams are not actually in competition with each other), narrative (a story-based scenario surrounding genetically modified crops), community (group work and collaboration through Facebook), creativity (writing a news feature) and completion (filing a news report). Furthermore, diverse platforms are incorporated into the ARG – that is, mobile phone, email, class-based activities and fieldwork – in order to benefit from multimodal learning.

Collaborative learning is touted as almost essential to learning by constructivism, situated-learning theory and communities of practice. Alternate reality games provide an opportunity to encourage cooperative projects, which mimics skills necessary for work in the real world. In addition, Facebook, which normally contains a social community for students, is used here to provide a community of learning.
One of the most important aspects of ARGs, and a requirement of constructivism and situated learning, is that they can situate problems and activities in a real-world context (Dahlgren & Öberg 2001; Klopfer 2008). Indeed, realism is one of the most important attributes of an ARG that traditional teaching approaches cannot offer. This term ‘traditional teaching will be used here in the context of linear, one-way teaching in a classroom, using a text book with both teacher and student physically present. The ARG designed for this study, to train journalism students, was based on a real-world context with actual problems, that is, that genetically modified crops are starting to be sown in Australia.

By nature, ARGs comprise task-oriented activities. Thus, ARGs lend themselves well to a problem-based learning approach. Problem-based learning advocates that there is no one right answer to a problem (Chamberlin & Moon 2008, p. 7), which complements the teaching of journalism, in which there can be several angles to one issue, and several ways of reporting one angle. Indeed, a problem-based learning approach is used by most of the new media and journalism courses today.

The slow take-up of ARGs in academic teaching is surprising, as they offer much potential. However, ARGs are a relatively new development and might become a part of mainstream education in the years to come. In particular, ARGs could be useful for teaching investigative journalism as they allow students to explore and develop a news story, each different from one another.

5.3 Summary

This chapter has outlined the theoretical framework within which this study has been positioned, including several major learning theories. Through an ARG, students are anticipated to construct new understanding as well as transform understanding on the basis of existing knowledge. Collaborative learning, which is espoused by several theories, partially informed the idea of splitting students into teams. In addition, online group participation of students augments the idea of a community of practice. Furthermore, the theory of transformational play was discussed as a very relevant game studies offshoot of transformative learning theory. The theory of transformative learning is closely associated
with action research (Lange 2004), which is the main methodology of this study. The next chapter will discuss the methodology used to gather the contextual information about the ARG developed, tested and evaluated in this study.
Chapter 6

Methodology
Chapter 6 establishes this study as qualitative research that incorporates a number of research methods to collect and analyse data. The main methodology for this study is action research, which Avison et al. (1999, p. 94) describe as “an iterative process involving researchers and practitioners acting together on a particular cycle of activities, including problem diagnosis, action intervention, and reflective learning”. The present study uses in-depth interviews, surveys, and development and testing of a prototype of an ARG for an investigative journalism unit. In this chapter we will discuss the epistemological and methodological approach to action research, then the rationale, practical implementation and limitations of the research methods chosen for this study.

### 6.1 Qualitative research

Before discussing the definition, categories and benefits of qualitative research methodology, it must be noted that for the purpose of this study, in-depth data were required from the field. The study required a contextual understanding of investigative journalism and its education, which could not have been possible through quantitative measures alone. Similarly, detailed feedback was required about the ARG tested for this project; therefore, a qualitative research methodology was adopted.

The term ‘qualitative research’ has been used since the late 1960s and early 1970s as a challenge to the dominant process of quantitative research methodology and as a response to positivism (that is, research that is scientifically verified with mathematical evidence) (Hammersley 2013; Schwandt 2003). Qualitative research has been defined in various manners and cannot be interpreted through a single definition (Hamersley 2013, p. 2). Qualitative research is often described as a broad umbrella term for research methodologies that aim to discover how human beings experience, understand, behave and interact in social contexts, without the use of statistical procedures or quantification (Fossey et al. 2002, p. 717; Sandelowski 2004, p. 893). For the purpose of this study the following definition will be used:

*Qualitative research has become associated with many different theoretical perspectives, but it is typically oriented to the inductive study of socially constructed reality, focusing on...*
meanings, ideas and practices, taking the native’s point of view seriously (Alvesson & Deetz 2000, p. 1).

The phenomenon of ‘understanding’ is the core characteristic of qualitative research as it attempts to comprehend complex issues, relationships and structures instead of the statistical values and quantity of an empirical phenomenon (Hesse-Biber & Leavy 2006; Schwandt 2007). Yet, good qualitative research can be quantifiable (Hickson 2011, p. 653). The main difference between qualitative and quantitative research is that the latter emerges from objectivism and uses experiments and observations to verify the reliability of the knowledge acquired (Xuehong 2002, p. 48). On the other hand, qualitative research adheres to subjectivism and contends that people have free will. Specific actions or events can only be explained and interpreted with subjective methods (Xuehong 2002, p. 48). Qualitative research deals with population, whereas quantitative research deals with a sample (Hickson 2011).

A qualitative research program is incorporated when an issue needs to be understood in a deeper manner and attempts to comprehend and explain the constructive aspects of the social world (Mcleod 2001, p. 133). This study aims to explore the way students and academics engage with an innovative pedagogical resource by analysing their actions and rationales for those actions by developing a particular context for them and enabling them to share their feedback with the researcher. The researcher tries to minimise the “power relationship between the researcher and participants or co-researcher by empowering them to share their stories” (Tavallaei & Abu Talib 2010, p. 570). In qualitative research, theory may emerge as data are collection and analysed, so it is normal to use theory towards the later stages of the research process (Creswell 1994, pp. 94-95).

Three main research paradigms have been extensively discussed in the literature, including positivism, interpretive research and critical research. A positivist approach to research deals with natural sciences and empirico-analytical research, is based on the grounds that knowledge can be deduced and is objective, and is quantitative. In contrast, interpretive research and critical research fall under the category of qualitative research. Interpretive research focuses, primarily, on the interpretation of human experiences or meanings of
human actions (Rice & Ezzy 1999; Schwandt 2003). Methods like phenomenology and ethnography contribute to the interpretive research paradigm.

Critical research, on the other hand examines the historical, cultural and political contexts of critique in order to change current relationships and structures (Strauss & Corbin 1990). It emphasises the need to transform the conditions that shape the development of social practices in communities “rather than the acceptance of discoveries” (Fossey et al., 2002, p. 720). Methods such as ideology critique and action research contribute to the critical research paradigm.

Fossey et al. (2002, p. 720) contend that “the implication for methodologies informed by this perspective is that they aim to foster self-reflection, mutual learning, participation and empowerment”, and place participatory action research under the critical research paradigm. Charles and Ward (2007) also agree that action research is heavily influenced by critical research. Others are of the opinion that action research does not fall neatly into any of the categories of positivist, interpretive or critical research (Lather 1986; Morley 1991), and consider it a research paradigm of its own (Longstreet 1998).

This “refusal to adopt one theoretical perspective” has been considered an “expression of a postmodern sentiment” (Reason & Bradbury 2006, p. 4). O’Brien (2001, p. 6) uses the term “paradigm of praxis”, which he insists is “where the main affinities lie”. Longstreet (1982) considers action research to be a new paradigm itself, markedly different from others. It must also be pointed out that action research does not necessarily fall under qualitative research only. As Hickson (2011, p. 652) argues, action research is more relevant to applied research because it is “context bound”. Action research can use methods from both qualitative and quantitative research as suited to the context; however, mostly it incorporates qualitative research methods.

The methodology employed for this study is qualitative, and the research as a whole can be classed as action research. The following discussion will provide details about action research and highlight why it was selected for this study.
6.2 Action research

According to Gilmore, Krantz and Ramirez (1986, p. 161), action research has dual commitment to the field of inquiry as it attempts to study a system as well as collaborate with the members of that system to bring productive changes to it. This active collaboration between the two parties, that is, researcher and participant, makes collaborative learning a significant aspect of action research. It is suggested that action research is viewed to have “a natural affinity with transformative learning as it allows the study of how understanding develops in the midst of bringing about change” (Lange 2004, pp. 123-124). Hence, this method is closely associated with its theoretical foundations.

One of the main foundations of action research is that the researcher should feel the need of it in order to initiate some change (Elliot 1991). Similarly, action research is often undertaken to help change a process or practice while evaluating that change (Jenks 1999, p. 255). This aspiration for change usually emerges through daily practice and understanding of a particular context. Thus, the main aim of action research is to develop a situational understanding and consider practical wisdom (Elliot 1991). For professional development, both situational understanding and practical wisdom are considered requisites (Somekh 1995).

Action research distinguishes itself from traditional research because it does not aim to identify particular ‘outcomes’ or ‘findings’, but “explores multiple determinants of actions, interactions and interpersonal relationships in unique contexts” (Somekh 1995, p. 3). The process of modification is continuous. Kemmis (2001) suggests that action research is ‘fluid’, ‘open’ and ‘responsive’ (p. 591). It can be modified and changed according to contextual demands. The idea of change is central to discussions about action research (Carson 1990; Carr & Kemmis 1983; Kemmis & McTaggart 2000).

Action research is different from other research methodologies because it changes the context while being conducted (Davis 2004). Most of the research methodologies, such as ethnography, phenomenology and ethnomethodology, require results from the research before proposing changes to a particular context, method or phenomenon. Although these methodologies can still be used as a part of action research, when they are used, their
results are iterative. Wadsworth (1998, p. 9) adds that it is “not just research which we hope will be followed by action! It is action which is researched, changed and re-researched, within the research process by participants”.

There is subsequently a cyclic pattern to action research (Dick 2002). Kemmis and McTaggart (1988) describe an action research cycle with steps of planning, acting, observation and reflecting. Sands (1988, p. 42) suggests that action research is a spiral in nature as it “reconstructs past action on the basis of observation, and constructs future action in the light of reflection”. Davies (2004) considers it to be a vague way of inquiring about a topic as the researcher does not always know where the research is going. “It is a probe or a prospective action into an unknown future” (Sands 1988, p. 42). However, every step of this enquiry is considered useful as change is central to action research. A new or unpredictable end of a step is another phase in the evolutionary process (Winter 1998).

Action research has been used in different contexts such as education (Barrett & Danks 2003; Curry 2005; Knop & Lamaster 2004), health care (Fennessy 2001), information systems (Baskerville & Wood-Harper 1996) and organisational development (Wilkinson 1996). Active research has also been categorised in various ways. Grundy (1982) identifies three modes of action research: technical, practical and emancipatory. O’Brien (2001) highlights four types of action research: traditional, contextual, radical and educational. Newman (2000) categorises the forms of action research carried out in an educational context: narrative inquiry, critical inquiry and reflective practice. The present study is being categorised as a reflective practice, as it tests an ARG and then reflectively evaluates it.

**Reflective practitioner**

An important component of action research is illuminated in Schön’s (1983) theory of the reflective practitioner:

> A practitioner’s reflection can serve as corrective to overlearning. Through reflection, he can surface and criticize the tacit understandings that have grown up around the repetitive experiences of a specialized practice, and can make new sense of the situations of uncertainty or uniqueness which he may allow himself to practice (Schön 1983, p. 61).
According to Schön (1983), there are two kinds of reflection: reflection in action, and reflection on action. Action research incorporates both of these as it functions in an iterative cycle.

*The practitioner allows himself to experience surprise, puzzlement, or confusion in a situation which he finds uncertain or unique. He reflects on the phenomenon before him, and on the prior understandings which have been implicit in his behaviour. He carries out an experiment which serves to generate both a new understanding of the phenomenon and a change in the situation* (Schön 1983, p. 68).

This refers to a situation that a practitioner is engaged in without understanding the full scope of the context. The problems are dealt with as they come and new strategies are incorporated to avoid the same problem again. Usher, Bryant and Johnson (1997) suggest that the impact of Schön’s theory has been very visible in the field of education and training.

**Types of action research**

This study spans several different forms of action research. There are two main reasons for this. Firstly, there is no main typology of action research. As discussed earlier, scholars have identified various classifications (Grundy 1982; Newman 2000; O’Brien 2001). However, in practice these variants overlap and the difference between them is negligible. For instance, ‘emancipatory action research’ calls for academic participation in researching educational practice and its effectiveness within social and organisational boundaries (Light 2003, p. 160). However, this can also be placed in ‘educational action research’, or ‘education action research’, which has its roots in the writings of the American education philosopher John Dewey, who supported the involvement of professional educators in community problem-solving (O’Brien 2001, p. 7). However, emancipatory action research can be practiced in a contextual action research setting as well. ‘Contextual action research’ is defined as:

*Reconstituting the structural relations amongst actors in a social environment; domain-based, in that it tries to involve all affected parties and stakeholders; holographic, as each*
participant understands the working of the whole; and it stresses that participants act as project designers and co researchers (O’Brien 2001, p. 7).

Similarly, ‘participatory action research’:

seeks to understand and improve the world by changing it. At its heart is collective, self reflective inquiry that researchers and participants undertake, so they can understand and improve upon the practices in which they participate and the situations in which they find themselves. The reflective process is directly linked to action, influenced by understanding of history, culture, and local context and embedded in social relationships. The process of participatory action research should be empowering and lead to people having increased control over their lives (Baum, MacDougall & Smith 2006, p. 854).

However, action research is all about reflecting on one’s practices individually or collaboratively and modifying those practices while the process continues (Kemmis & McTaggart 1988; Stringer & Genat 2004).

### 6.3 Action research in an educational context

Grundy and Kemmis (1982, p. 165) provide a comprehensive definition of ‘educational action research’:

*a term used to describe a family of activities in curriculum development, professional development, school improvement programmes and system planning and policy development. These activities have in common the identification of strategies of planned action which are implemented and then systematically submitted to observation, reflection and change. Participants in the action being considered are integrally involved in all these activities.*

According to Sands (1988, p. 39), the role of a teacher in action research is a developmental one, that is, to generate knowledge rather than apply knowledge. Elliott and Adelman (1976) support that action research has improved the quality of student work.

Action research methodology is well-suited to the educational context of the present project. It allows the necessary change required for modifying the content on the basis of
evolving circumstances. Sagor (1992, p. 8) highlights the three stages of action research in education pursued by academics: initiating action, monitoring and adjusting action, and evaluating action. These are required for adjusting course content according to a particular class and making it more effective for the students.

**Critique of the use of action research in education**

Despite more than 30 years of practice, there is very little critique on action research. Hodgkinson (1982) suggests that action researchers use precaution, in case their critique obstructs the progress of the research. Gibson (1985), in his critical review of the Carr and Kemmis’s (1983) book Becoming Critical: Knowing Through Action Research states:

> Action research has a pressing need to examine not only the ‘community’ in which it is embedded, but its own community. It has, understandably, always been in danger of excessive ‘cliquiness’. Its characteristics (marginal, low-level participants, mainly classroom focussed, poorly funded, neglected or warily regarded by other influential educationists) all make for the group solidarity of beset minorities. Being an ‘[A]ction-researcher’ confers status within the [A]ction research network, it enhances esteem. The very peripheralness of the movement within mainstream education and educational researchers strengthens the sense of allegiance to other [A]ction-researchers. Such allegiance can serve to dampen internal criticism (Gibson 1985, pp. 60-61).

In contrast, Zeichner (1993, p. 200) argues against the assertion that action research leads to “uncritical glorification of knowledge generated through practitioners” in order to strengthen their own self-esteem. He views this as “condescending towards practitioners” and impertinent towards “the genuine contribution they make” (Zeichner 1993, p. 200).

Another important aspect of action research highlighted by Badham, Garrety and Zanko (2007, p. 14) is the ‘informal’, ‘covert’ and ‘messy’ style of research due to the complexities and intricacies of conducting research in practice. They argue that,

> as a part of an attempt to negotiate their way around such conditions, by ‘purposive muddling through’, action researchers are required to balance ‘rhetorics of administration’ with ‘rhetorics of realpolitik’ in the ‘garbage can’ of inter-organisational collaborations. What
might appear initially (or on reflection) as rational action informed by clear knowledge of structures and interests can collapse into less ‘rational’ endeavours drawing on subjective and contentious opinions about contexts and realms of manoeuvre (Badham, Garrety & Zanko 2007, p. 14).

Their project on Evaluation for Learning (2007) funded by the Australian Research Council analyses some of the critical, macro and micro problems that action researchers face in their institutions. Research projects require funding and the funding bodies require tangible outcomes. Badham, Garrety and Zanko (2007) highlight the irony of presenting an overly simplistic narrative nature of action research due to institutional pressure for outcomes.

In the late 20th century there was a dearth of guidelines for novice action researchers:

Although there are examples of action research articles, there is still a lack of detailed guidelines for novice researchers and practitioners to understand and engage in action research studies in terms of design, process, presentation, and criteria for evaluation (Avison et al. 1999, p. 96).

This has changed drastically over the past decade, with the publication of several handbooks and guides on action research. In addition, there have been a number of case studies published in research papers. However, the nature of action research is that each study is rather unique and particular to one situation (O’Brien 2001). Therefore, for most researchers it is a process of trial, error and modification which directly affects the work as it progresses. Moreover, although action research for each case is different and based on the contextual requisites, the continuous recording of steps, modifications and results can provide learning material for future researchers.

Despite these concerns, one of the main strengths of action research is its holistic approach and incorporation of several methods of data collection and analysis. Thus, it allows for:

several different research tools to be used as the project is conducted. These various methods, which are generally common to the qualitative research paradigm, include: keeping a research journal, document collection and analysis, participant observation recordings, questionnaire surveys, structured and unstructured interviews, and case studies (O’Brien 2001, p. 7).
Indeed, several different methods of data collection were used during the evaluation phase of the present project including surveys, focus groups and in-depth interviews.

6.4 Methodological framework of the present study

In the first phase of this study, key problems in the investigative journalism industry and in journalism pedagogy were systematically explored. In the second phase, an innovative teaching resource was formulated based on insights acquired from the background review phase. In the third phase, this teaching resource was tested and analysed. This was followed by devising plans and providing suggestions for improvement. These steps are consistent with action research (Stringer 1999, p. 17). While working on this study, the researcher covered the basic literature in the field as a starting point and pursued with the research methods selected. However, there was an addition and modification with the questionnaire based on the data received as a part of the first round of interviews. Hence, the relevance of action research with respect to an overall educational context is what will be discussed for the purpose of this study.

This dynamic and cyclical nature of ARGs compliments and is in accordance with the tenets of action research. In addition, an ARG is flexible enough to allow modifications in the game design in future iterations according to the level of the participants. It also enables the developers to add or remove certain elements. For instance, adding a discussion on challenges faced in accessibility to interviewees was added to a tutorial discussion, when the tutors felt it was needed. The Seed ARG was continually tweaked and modified as the game proceeded throughout is scheduled six weeks.

Furthermore, as an undergraduate, the researcher experienced personal difficulties with insufficient resources for studying investigative journalism. Not being currently employed in the journalism industry gave the researcher the benefit of having an external view as well. In regards to action research, the researcher had experience in the practices of journalism in addition to the context of study in the field. Thus, research aims of improving the practices of both working in and studying journalism can be considered to be within the bounds of action research.
Research methods

There are three phases of the present study: (i) contextual research, (ii) experimentation and (iii) evaluation. In phase one, contextual research, background research was conducted using in-depth interviews to identify current trends and issues in journalism and journalism education. Incorporating data from the first phase, in the second phase, experimentation, The Seed ARG was developed and tested in an investigative journalism class. In the evaluation stage, the third phase, research data were collated from surveys, focus groups, in-depth interviews with tutors and participant observations. This was done to assess the successes and limitations of the ARG prototype and propose future iterations. It is extremely important to note that the second and third phases were cyclical. Experimentation and evaluation was happening recurrently throughout the six weeks the ARG ran. The ARG was modified on the run, depending on the needs and requirements of the students.

Phase 1: Contextual research

In-depth interview

In order to verify the results from the literature review, and to gather feedback about investigative journalism and its education, in-depth interviews were conducted with journalists and journalism academics. The data collected from these interviews have formed the basis of chapters 1 and 2. A qualitative research method, in-depth interviews are detailed individual discussions with a small number of respondents to gain an understanding of their opinions or perspectives (Boyce & Neale 2006, p. 3; Seidman 2006). In-depth interviews were considered the most suitable method of gaining a contemporary perspective of the journalism industry and its teaching in the initial phase of this study. Although they might appear to be simple, in-depth interviews require substantial preparation, a well-designed questionnaire and an attentive interviewer (Mears 2012).

Some of the key attributes of in-depth interviews include open-ended or semi-structured questions, an aim to seek understanding and clarity, and recording responses (Guion, Diehl & McDonald 2011, p. 1). In addition, in-depth interviews are great for exploring themes as
their interactive nature allows the researcher to probe into certain responses (Legard, Keegan & Ward 2003; Ritchie & Lewis 2003). However, there are also a few limitations to in-depth interviews, including that they are prone to bias, often time-intensive, not generalisable, and require prior training in interview technique (Boyce & Neale 2006, pp. 2-3). To minimise participant bias, a variety of individuals from Australia and New Zealand were interviewed. Further, to validate the findings, their perspectives were analysed alongside the existing literature in the field.

Recruitment of participants

For this study, purposive sampling was conducted to recruit participants with particular skill sets in investigative journalism and academia. Interviewees were identified through the literature review and discussions with supervisors, then leads for other interviewees were taken from these participants (MacDougall & Fudge 2001, p. 120). It is recognised that one of the risks of purposive sampling is omitting some experts in the field as not all can be interviewed (Weisberg, Krosnick & Bowen 1996).

Additionally, it is difficult to decide how many interviews are ‘enough’. Mears (2012, p. 171) suggests that “essentially, you are required to collect sufficient data to represent the experience you are investigating and you may stop when you reach saturation”. In the present study, 17 participants were interviewed between July 2011 and February 2012. Three more participants were interviewed between September 2012 and December 2012 to cover additional issues which were identified while editing thesis drafts. This was done within the parameters of action research, as the study itself helped in identifying holes in the required knowledge.

Analysis of data

Each interview was audio recorded and later transcribed. The data from the in-depth interviews were analysed in two ways. First, manual analysis was performed using thematic analysis techniques. The transcripts of interviews were read thoroughly and different themes discussed by the interviewees were identified and colour coded. These results were supplemented by uploading the transcripts into data analysis software NVivo.
9 for further analysis. Through a comparison of these results a number of themes emerged. This was an iterative process and was repeated for all the interviews as well as the transcripts for focus groups with students during the evaluation phase. Data from these interviews have been discussed in chapters 2, 7, 8 and 9, as well as the Introduction and Conclusion chapters.

Phase 2: Experimentation

Alternate reality game The Seed

An ARG based in a real-life context was developed for this study. This was designed using insights from the literature, interviews with journalism academics and journalists, and feedback from conference presentations by the researcher about this ARG. Insights from the study of existing ARGs were also influential in its development.

The Seed ARG was developed for Journalism Practice IV, convened by Dr Saba Bebawi at Swinburne University of Technology. The journalism program at Swinburne University of Technology, Hawthorn campus in Melbourne, Australia, started in 2008. The first class of a 3-year Bachelor of Arts (Journalism) graduated in 2012. In its initial stage, it recognised the paradigm shift led by the rise of digital media and changing economic models, as discussed in Chapter 1 (Bossio 2011, personal communication). The program’s website states this manifesto: “This course combines traditional journalistic skills with a range of new skills, including self-sufficient internet publishing, multimedia production skills and the skills involved in interacting with audiences, social networking and building online communities. This practice-based course also provides an understanding of the broad social, historical, legal and moral context of journalism” (Swinburne University 2014). It is obvious from the above statement that Swinburne, at least in theory, aims to develop an understanding of both practical and theoretical knowledge among its journalism students to provide them with the skills needed to function in the contemporary journalistic environment. When this study was being designed in 2011, Dr Margeret Simons was the convenor of journalism at Swinburne University and was involved in planning the recently launched course.
We were able to think it through right from the ground up as to where will the industry be and what skills will the students need when they graduate in three years’ time. And that is a very interesting process to go through given that I think a lot about how the industry is changing. We are trying to embed skills like critical and analytical thinking, ability to detect newsworthiness, reading behind the lines, et cetera, throughout the degree, while still concentrating on the things which have always been important like research, writing, ethics, law. Those things have always been important and remain so … We have a whole unit in which we teach them to self-publish material to the web, and think through how to use social media to research and promote their work. We are making them do an introduction to entrepreneurship unit so they are thinking about the possibility, which will be a real career option for many of them for starting up their small enterprise rather working for big legacy media enterprises (Simons 2011, personal communication).

As noted in Chapter 2, journalism education is currently divided into courses that focus on practical skills and courses that focus on theory; however, Swinburne’s course attempts to blend them. Both the current manifesto and the statement from Dr Margaret Simons suggest that the journalism program at Swinburne University of Technology adheres to a blended approach, where it is aiming to provide students with practical skills as well as continue broadening their horizons about philosophical and theoretical knowledge. This approach was adopted in the investigative journalism unit as well. As the unit outline (Appendix xviii) suggests: “This course will introduce students how to deal with media trained people through developing skills in interview techniques for investigative work. Students will produce investigative journalism stories and develop critical arguments in regards to the range of issues relating to investigative reporting as a form of journalism”. Both skills and understanding of the bigger pictures while developing critical and analytical thinking were deemed important here.

This unit was the first attempt to teach investigative journalism to students as part of this course. The elements in the ARG were directly relevant to the goals of the Journalism Practice IV unit. (A unit outline has been provided in Appendix xviii.) Ethics clearance for this testing of the ARG was approved by Swinburne University of Technology’s Higher Education Research Ethics Committee (Appendix xvi). The ARG was run by the researcher, course convener Dr Saba Bebawi and tutor Dr Denis Muller. Dr Andrew Dodd, who was
also an assistant supervisor for this study, provided continued support through discussions and feedback (for consent information statement and forms for academics, see appendices xi and xii). Both Dr Saba Bebawi and Dr Denis Muller were later interviewed for their feedback (for lines of questioning, see Appendix xv). There were two tutorials: tutorial A had 18 students; tutorial B had 16 students. There were 34 students enrolled in the subject. One student had special arrangements and did not participate in the ARG. However, this was not seen as a challenge as they did not attend either of the lectures or the tutorials. The results from data collected about this ARG are discussed in Chapter 7. The ARG design depicted in Fig. 6.1 was used as the main document for this project.
Fig. 6.1: *The Seed* alternate reality game (ARG) design: L = lecture, T = tutorial, W = week.
There were a few design challenges to effectively incorporate an ARG in an investigative journalism context:

- How to develop a game narrative that incorporates real-life experience?
- What platforms to use for student engagement?
- How to include elements of gamification in the game design?
- How to ensure the game design reflects an ARG and not just any other journalism project? (covered in Chapter 7)

As discussed in earlier chapters, the narrative of an ARG developed for an investigative journalism unit would ideally be placed in a real-world context. This would allow students a realistic experience while researching and writing their news stories, perhaps even with the potential to publish these in a media outlet. The game narrative of The Seed ARG was based around genetically modified (GM) wheat in Australia. This topic was selected due to its current recognition and importance in Australia. Before the start of the game, in week one, the students were informed about the ARG. They were given consent information statement and consent forms were signed by participants (for consent information statement and consent forms, see appendices ix and x). The game started with an anonymous text message received by the students before their class from a fictional farmer worried about cross-pollination with genetically modified crops (As indicated in Fig. 6.1). Although the farmer was fictional, the issue raised was close to reality. The following is a snapshot of first text message sent to students (Fig.6.2).
As the game took place over a 6-week period, the assignment submission was due by the last day of the final week. The second text message was sent to students close to this assignment submission date,

Hello, I am Australian citizen who works for Bayer CropScience. One of our colleagues from Germany has informed us that a newly bred packet of wheat seeds has been sent to Australia for the trial in Australian soil. This has raised a concern amongst some of us who have families and kids living here. I am not in a position to investigate this matter myself but I would be willing to help anyone who would. Best,

In addition, in the subsequent tutorial the students received a press release about a test trial taking place in Canberra sanctioned by the government (Fig. 6.3). The press release was taken from the website of the Office of Gene Technology Regulator of the Australian Government. This was a two-month-old press release. Nothing was changed or modified.
NOTIFICATION OF DECISION

Issue of licence DIR 111 to the Commonwealth Scientific and Industrial Research Organisation for a limited and controlled release of GM wheat and barley

On 5 December 2011, the Gene Technology Regulator (the Regulator) invited submissions on the consultation version of the Risk Assesement and Risk Management Plan (RARMP) for licence application DIR 111 from the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

The Regulator has now made a decision to issue a licence in respect of application DIR 111, authorising the limited and controlled release of a range of GM wheat and barley lines that have been genetically modified (GM) for altered grain composition, nutrient utilisation efficiency, disease resistance or stress tolerance.

The release is authorised to take place at one site in the Australian Capital Territory, on a maximum area of 2.1 ha per year between May 2012 and June 2017. The purpose of the trial is to assess the agronomic performance and grain properties of the GM wheat and barley lines grown under field conditions. The GM wheat and barley will not be used in commercial human food or animal feed. However, products derived from the grain of a few GM wheat and barley lines with altered grain composition may be used for a range of carefully controlled small scale animal nutritional trials, and products from the same GM wheat lines may be used in human nutritional trials.

The decision to issue the licence was made after extensive consultation on the RARMP with the public, State and Territory governments, Australian Government agencies, the Minister for the Environment, and the Gene Technology Technical Advisory Committee as required by the Gene Technology Act 2000 and corresponding State and Territory laws.

Issues relating to the health and safety of people and the protection of the environment raised during the consultation process were weighed against the body of current scientific information in reaching the conclusions set out in the finalised RARMP and in making the decision to issue the licence.

The finalised RARMP concludes that this limited and controlled release poses negligible risks to people and the environment. Licence conditions have been imposed to restrict spread and persistence of the GMOs and their genetic material in the environment and to limit the release in the size, location and duration requested by the applicant, as these were important considerations in the evaluation process.

Appendix A of the RARMP summarises the submissions that were received from prescribed experts, agencies and authorities, and indicates how issues raised relating to risks to human health and safety or the environment were considered in the document. Three submissions were received from the public on the consultation RARMP and the issues raised are summarised in Appendix B of the RARMP.

The Executive Summary, Technical Summary and complete finalised RARMP, together with a set of Questions and Answers on this decision and a copy of the licence, can be obtained on-line from the Office of the Gene Technology Regulator’s website or requested via the contacts detailed below.

Office of the Gene Technology Regulator MFD 54 GPO Box 9848 CANBERRA ACT 2601

Fig. 6.3: Press release from the website of the Office of the Gene Technology Regulator, Department of Health and Ageing, Australian Government (OGTR 2012).

By this stage the class had been converted into a newsroom. The tutors informed the students about this and encouraged them to find out about this issue in detail. Students were split into groups of four and were required to come up with one topic to investigate in the field of genetic modification in crops. The subsequent tutorials included more press releases, more text messages from the anonymous farmer, and newsroom discussions. A
real life company, Monsanto, selling GM seeds was revealed in a real news item for students to background check. The students were also provided with leads in the tutorial discussions directing them to environmental, financial and health issues relevant to genetic modification technology. Those who followed up on the first text message were directed to two Canadian farmers, Matt Gehl and Peter Eggers, who were conducting seminars against GM technology and were visiting Australia at that time. At the university, during one lecture, the students had to attend a seminar about gene technology and its effects on the environment. This was planned and organised while working on the game design. They also had to find scientific evidence and locate scientists expressing concern over this issue. Based on their research findings, they were allowed to develop their own conclusion, which was ‘filed’ as a news report, in paper copy. In order to provide a realistic environment, both genuine and false leads were provided to students. Table 6.1 outlines the timeline of activities for the ARG, as it was integrated into the structure of the unit.

Table 6.1: Timeline of the alternate reality game (ARG), The Seed, for HAJM 301: investigative journalism.

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture topic</th>
<th>Lecture activity</th>
<th>Tutorial activity</th>
<th>Weekly activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is investigative journalism?</td>
<td>Consent information statement and forms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Forensic analysis of media release</td>
<td>Anonymous text message about plans to start GM wheat in crop in regional Victoria received by students</td>
<td>Relevant press release introduced; students background research GM technology; student groups and Facebook groups set up</td>
<td>Read more and online discussion on Facebook</td>
</tr>
</tbody>
</table>

The scenario presented in the class could easily have become analogous to any journalism assignment which requires student to go into the field and investigate a story. Hence, the game design had to incorporate other elements of an ARG. Additional ARG elements
| 3 | Cultivating contacts and digging deeper | Land title searches demonstrated | Land title searches carried out; groups of students sent to meet contacts from Greenpeace and relevant fields | Interviews and online discussion on Facebook |
| 4 | FOI and press conferences | How to write FOI and Bob Phelps’s press conference | Students write FOI relevant to their group work | Online discussion on Facebook |
| 5 | Corporate searches and assignment feedback (first draft) | Demonstration | Corporate searches (Monsanto, Bayer etc.) and researching representatives from these companies; feedback on first draft of assignment | Online discussion on Facebook |
| 6 | Mid-semester break | | | |
| 7 | Reviewing the ARG and submitting the assignment | Review | Review of ARG – focus groups | Submission of final story before the tutorial |

integrated into The Seed ARG were the anonymous tip-offs, press releases, converting the classroom into a newsroom, and ‘gamification’ elements such as a reward system.

According to Yerby et al. (2014, p. 336), “Gamification includes using game-like elements in non-game contexts to promote learning and engagement and help an individual engage in problem solving”. As discussed later in this chapter, gamification is one of the main things that distinguishes the ARG from a regular scenario-based activity.
An investigation is like a jigsaw puzzle, requiring a “methodical fitting together of apparently unrelated pieces to reveal the big picture” (Forbes 2005, p. 15). In The Seed ARG, students working as real-life journalists had to attend press conferences, interview people and interact with professionals, then combine all they had learnt into a news story. The students were evaluated on various elements of their filed news feature, including: structure of the news feature, depth of content, accuracy of findings, quality of resources used, proper use of researched data, language and style of writing.

Facebook

Alternate reality game players are required to effectively communicate in ‘real-time’ because of “rapidly changing gameplay and ever-developing situations” (Connolly et al. 2011, p. 1391). In the present ARG, the students corresponded with each other as part of a team to work on a story. In addition to that, the players required a platform for regular interaction and updates as they had different schedules. The researcher decided to use Facebook as the online platform for two main reasons. Firstly, the social media website was already set up and had features that could work well for an online discussion board. Because of this the researcher did not have to develop an online platform, which saved both time and money. Secondly, most of student participants were already active users of Facebook, so the researcher merely had to develop a profile for The Seed ARG and network with the students.

Facebook is an online social networking website developed by Mark Zuckerberg in 2004 for Harvard University students as a social networking tool. Today anyone above the age of 13 can legally use Facebook. The last officially updated figure of Facebook users from all around the world was 250 million in 2009 (Zuckerberg 2009). However, by 2011 there may have been over 600 million active Facebook users worldwide (Wong, Kwan & Leung 2011).

Facebook users each have their own account, or profile page. Any user can create an account, which is associated with an email address (usually the username) and requires a password. A username is different than the account name (profile name). While the account name is visible to others, the username is not. For the present study, a profile page
called ‘TheSeed ARG’ was created, with which the students were asked to become ‘friends’ with through Facebook.

A Facebook group can be created by any account holder. Other accounts (people) can be invited to join the group. These people do not have to be friends with the primary account that created the group. The settings of the group page can be customised so it is visible to everyone on Facebook or only to group members. The information summary about the group can also be made visible to everyone but only group members can view the activities on the group page. Every time a group member posts a comment on the group page, each member of the group receives a notification. The Seed ARG account created group pages for each of the student teams. Only team members and the teachers were added to the group, and so could view discussions on the group page.

Facebook groups can work like message boards with strings of posts, like a virtual conversation. People can interact with each other without having to physically get together for meetings, so it can be a very effective platform for communicating with project members and updating each other about progress. It also allows academics to review individual work and team effort in group-based projects, which can be otherwise difficult to ascertain.

It is important to note that Facebook was not designed to be an educational tool. However, Facebook allows users to interact on discussion threads, through personal messages (which are private messages between two or more people) and instant messages and upload text, audio and video documents, as well as post external links and share information with other users, so it lends itself well to educational scenarios and multimodal learning. The fact that Facebook is easily accessible, allows for distribution of course material, supports online discussions and assessment, does not require excessive training and is familiar to most students are advantages of using it for educational purposes (Phillips, Baird & Fogg 2011, p. 2; Shiu, Fong & Lam 2010, p. 60).

One benefit of adopting social media networks in university is based on the familiarity of students with such platforms. For this ARG, only two students out of thirty-three participants had to activate new accounts as they did not have pre-existing Facebook profiles. Since they had the option to hide their profile from being publicly available, these
students did not have any ethical concerns. Jeness (2011) suggests that for many academic institutes the use of Facebook for student interaction starts before they arrive on campus. Madge et al. (2009) found that students join Facebook groups of academic institutions prior to their registration in order to make new friends at the university. Also, orientation activities are often promoted through Facebook groups, such as campus activities, sports clubs and student entertainment (Eberhardt 2007). Facebook is already an important aspect of the social life of students today.

Although Facebook was not intended to be an educational tool, due to the central role it plays in the online community it has a vast potential to be utilised as a pedagogical tool. Indeed, since its inception in 2004, several studies have been conducted on the use of Facebook in education. Tiryakioglu and Erzurum (2011) found that instructors showed some reluctance in using Facebook as an educational tool, but concluded that Facebook can be useful for delivering information and group assignments (Tiryakioglu & Erzurum 2011). Similarly, English and Duncan-Howell (2008) concluded that Facebook could be used as a supplementary educational tool in tertiary education.

Facebook has already been proven to boost student engagement. It allows the space, time and convenience for serious discussion on real-world issues, for instance, students have been found to engage in political and civic discussions on Facebook (Jeness 2011). Although students mostly engage with Facebook for personal use and social interaction, it appears they find it acceptable to use it for educational use as well (Roblyer et al. 2010).

Conversely, Selwyn (2009) studied the Facebook ‘wall’ of 909 students at Coalsville University School of Social Sciences in the UK. He suggests that instead of regulating Facebook as an educational resource, educators should allow the practices to continue as they are “unabated and firmly ‘backstage’” (Selwyn 2009, pp. 172-173). Nonetheless, most studies on the effective usage of Facebook for academic interaction and student motivation strongly support its use in education. Although the full potential of Facebook as a pedagogical tool remains to be explored, “understanding and incorporating these digital learning technologies … coursework will increase student motivation and enhance learning, while better meeting the needs of today’s students and their digital learning styles” (Phillips, Baird & Fogg 2011, p. 13).
Students have different timetables and work on a variety of schedules. Facebook offers them a mutual platform to engage with group discussion and work together as a team. In addition to this temporal flexibility, Facebook is easily accessible via several technologies such as computers, laptops, tablets and mobile phones (i.e. smart phones).

The use of Facebook in an investigative journalism unit, whereby students use it to interact, research and write an investigative story for the purpose of ‘deepening their knowledge’, emulates a community of practice (Lave & Wenger 1991). Although student groups also interacted in the classroom, the use of Facebook allowed them to collaborate on the project continually outside class time.

According to Wenger (2007) there are three important elements that distinguish communities of practice from other groups: the domain, the community and the practice. In this case, the shared “domain of interest” (Wenger 2007) comprised all the students participating in the ARG. Inside this ‘domain’, smaller communities of members (that is, project groups) engage in joint activities and discussions, help each other, share information and “build relationships that enable them to learn from each other” (Wenger 2007). Together, members of this community of practice develop a shared repertoire of resources – experiences, stories, tools, ways of addressing recurring problems – in short, a shared practice (Wenger 2007). In the present case, through the investigative process and writing the news story, each project group would have established their own particular ‘practice’.

Communities of practice connect people in a shared context, enable dialogue and interaction, invigorate learning, encourage collaboration, assist in getting organised, as well as gather and disperse existing knowledge while developing new knowledge (Cambridge, Kaplan & Suter 2005). Thus, as a communication platform, Facebook is an appropriate facilitator of communities of practice. For this journalism unit, students were connected to each other and could practise ongoing interaction and dialogue. Thus, learning was being stimulated with the help of peer collaboration. Articles and updates about interviews were shared and feedback provided. Projects and personal work were planned and organised. Working drafts based on teamwork and individual efforts were being produced and revised.
Earlier studies on online users suggest that working alone online can cause isolation and loneliness (Elling & Brown 2001). However, more recent research shows that users engaged in online communication and social networking are also engaged with others and are participating in the community (Anderson & Rainie 2010). This overlap between real world and Social Networking Service (SNS) communication has been supported in a study by Heiberger and Harper (2008), who found that students engaged in social networking websites are more frequently engaged in real-world activities and campus events.

**Facebook vs Blackboard**

The formal virtual learning environment used at Swinburne University of Technology is Blackboard, which was designed for staff and students for online administration and course management. The students are enrolled into their respective courses or programs through Blackboard. Information about units, assessments, deadlines and policies are provided through Blackboard to every student. This information cannot be viewed by any external person. Academics can control particular settings for their units. Students cannot control anything unless access is granted to them by teaching staff.

Many students use online tools for their work other than Blackboard or other university-provided virtual learning environments. These are known as ‘personal learning environments’, and include Facebook, Google+ and similar social media websites (White et al. 2013). According to van Harmelen, a personal learning environment can mean “any environment that has been tailored for an individual prior to use” and “is one that can be personalised at the time of its use, either by the user or by the system on behalf of the user” (van Harmelen 2006).

Facebook was chosen over Blackboard for The Seed ARG for a number of reasons. First of all, Facebook is an extremely popular social networking website. This high exposure to the site “is likely to contribute to users’ skill in navigating the site, and therefore their ability to use it for whatever purposes they choose” (Parslow et al. 2008, p. 8). Facebook is also more convenient to access due to particular apps on mobile phones and tablets. Blackboard is a tool for eLearning whereas Facebook “is much more of a social tool than an eLearning environment” Parslow et al. (2008, p. 5). A comparative analysis of Blackboard and
Facebook as learning environments found that 51 per cent of students discussed coursework on Facebook compared with 30 per cent on Blackboard (Parslow et al. 2008). Selwyn (2007b) describes Facebook as a space for challenging the asymmetrical power relationships that characterise university. Students feel a sense of liberty working on their own platform rather than one that is administered by the university.

**Ethical issues of Facebook**

It is important to note that discussions on Facebook’s use as a pedagogical tool are yet to deal with the complicated ethical issues concerned with using an online public platform like social networking websites. Maranto and Barton (2009) studied the ethical complications of using Facebook and Myspace for student interaction and collaborative work and suggested that these social networking websites “contribute to and undermine student and faculty ethos” when teachers add students as ‘friends’ to their profile (Maranto & Barton 2009, pp. 36-37). Selwyn (2009) also points out that the “use of Facebook does raise a number of ethical issues which require attention” (Selwyn 2009, p. 160).

By being online friends with the account ‘TheSeed ARG’, the students on Facebook were sharing their “private lives in public spaces”, a term coined by Davies and Merchant (2007, p. 177). This is an important issue as it may give teachers access to students’ private profiles on Facebook. Facebook allows every user to control what information they want to reveal to other users. Although students do have the right and control to choose what to share with their teacher, they may not have the proficiency to manage this. Students were made aware of such vulnerability associated with using the online platform, and privacy management through Facebook settings was clearly explained. The Facebook groups were not searchable or visible to anyone outside the project, and obviously academics did not explore students’ profiles.

Despite these potential issues, Selwyn (2009) argues that “the primary ethical issues relating to using students’ online Facebook data could be argued to be less those of access than how the data are used and presented by the social researcher”. Although carried out on a public online platform, access to private information or research data must remain anonymous. Therefore, for this study, student participants remained anonymous, a fact
that was clarified with the ethics committee at Swinburne University. Hence, the data analysis from the online discussion does not include any pictures or names.

**Gamification**

Fontana (2008) suggests that when use of Facebook is not required as a part of course grade, student commentary is often lacking. In other words, if there are no additional marks allocated to it, students might not willingly invest their time in Facebook interaction. To resolve this issue, ‘gamification’ was introduced to Facebook activities. The term ‘gamification’ has been defined as “the use of game design elements in non-game contexts” (Deterding et al. 2011, p. 3). According to Smith-Robbins (2011, p. 58), “gamification is an effort to gain points and status for completing tasks”. Indeed, gamification was added to *The Seed* ARG in the form of a point system. This was one of the main advantages of the ARG over a traditional classroom-based scenario, because it gave students an extra level of motivation. Table 6.2 illustrates the allocation of points.

**Table 6.2:** Point allocation for Facebook discussion.

<table>
<thead>
<tr>
<th>Items</th>
<th>Experience points</th>
<th>Bonus points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action updates</td>
<td>1</td>
<td>x</td>
</tr>
<tr>
<td>Detailed updates</td>
<td>5</td>
<td>x</td>
</tr>
<tr>
<td>Action taken</td>
<td>x</td>
<td>1</td>
</tr>
<tr>
<td>Response received on action taken</td>
<td>x</td>
<td>2</td>
</tr>
<tr>
<td>Miscommunication between members</td>
<td>x</td>
<td>-2</td>
</tr>
</tbody>
</table>

‘Experience points’ were provided for every update provided, for example, a detailed update would attract five experience points. Groups were given bonus points for every communication they made. For example, for an email or text message sent or phone call made, one bonus point was given. For every response received, two bonus points were given. For miscommunication or communication breakdown between group members (e.g. two people contacting the same person), two points were deducted. Only group members could see each other’s work and points. There was a psychological rationale for using this
technique. Gamification can increase the engagement and motivation of players. As Fernandes et al. (2012, p. 69) suggest, “points and levels can be used outside the traditional video games environments and applied in common tasks leading to an increase of motivation and engagement”.

Furthermore, Ramani et al. (2008) suggest that games can be used to target the competitive nature of students by offering modern packaging, in the form of game-related scores, for traditional assessment models. Although, in the case of The Seed ARG, formal grades could not be associated with the game elements (for example, the points system) due to ethical limitations, in a non-research context academics would have more freedom to integrate the points system with grades, as they would not have to get approval from the Human Research Ethics Committee (HREC). Alignment of grades with ARG goals could make pedagogical ARGs much more efficient in terms of educational benefit. For instance, grades could be allocated according to conducting good interviews, or developing contacts.

There are a number of ARG features that have been proposed for educational contexts (Moseley 2008). Some of which were incorporated into the present ARG, The Seed. These include problem-solving elements, the use of rewards and narrative devices (Table 6.3).

<table>
<thead>
<tr>
<th>General ARG features</th>
<th>Features of The Seed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem-solving at varying levels (graded challenge)</td>
<td>Students worked on different angles of the story according to their own respective backgrounds and skill sets</td>
</tr>
<tr>
<td>Progress and rewards (e.g. leader board, grand prize)</td>
<td>A reward points system was implemented</td>
</tr>
<tr>
<td>Narrative devices (e.g. characters, plot, story)</td>
<td>There were characters, a loose narrative, and a leading real life story that the students developed</td>
</tr>
<tr>
<td>Influence on outcomes</td>
<td>The news stories and the particular angles that the students covered were influenced by The Seed ARG</td>
</tr>
<tr>
<td>Regular delivery of new problems/events</td>
<td>Regular updates were happening in real-time as it was a real-life ARG</td>
</tr>
</tbody>
</table>
Potential for large, active community

The Seed ARG could also be played by a bigger group

Based on simple, existing technologies and media

The Seed ARG included simple technologies like text messages and Facebook as an online platform

### Phase 3: Evaluation

In the present study, the effectiveness of the ARG was evaluated using two sets of data, that is, feedback collected from students and from academics (Table 6.4). A total of thirty-three students participated in The Seed ARG. Out of these, twenty-four students participated in surveys and focus groups. All of them participated online, although their level of participation varied. As noted earlier this was an iterative process with ongoing evaluation changes in the ARG as the project continued.

**Table 6.4: Data collection for evaluation of The Seed alternate reality game (ARG).**

<table>
<thead>
<tr>
<th>Data collected from students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Survey</strong></td>
</tr>
<tr>
<td>Students were given a survey to fill out at the end of the ARG.</td>
</tr>
<tr>
<td><strong>Focus group</strong></td>
</tr>
<tr>
<td>Students who gave their consent to participate in this research project were requested to participate in a focus group after the ARG had finished.</td>
</tr>
<tr>
<td><strong>Online platform</strong></td>
</tr>
<tr>
<td>Facebook was used as a platform for general discussion about the project and issues around it as a part of the ARG.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data collected from academics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Survey</strong></td>
</tr>
<tr>
<td>Academics were given a survey to fill out at the end of the ARG.</td>
</tr>
<tr>
<td><strong>Interviews</strong></td>
</tr>
<tr>
<td>The lecturers and the tutors were interviewed to gather feedback on this ARG at the end of the ARG.</td>
</tr>
</tbody>
</table>

*Surveys*
Surveys are used to measure attitudes and preferences, beliefs and predictions, facts and past behavioural experiences. Examples of surveys include political polls, commercial research, governmental census, media research including marketing and advertising, academic research and consumer research (Weisberg, Krosnick & Bowen 1996; Wimmer & Dominick 2011). In the present study, survey contributors were recruited through purposive sampling, in which the researcher chooses the sample based on appropriateness for the study (Stopher 2012). In this case, all students and academics who participated in The Seed ARG were approached to voluntarily complete the survey.

The main aim of the survey was to understand the usability, strengths and weaknesses of the ARG designed for their assignment. The paper-based self-administered survey was conducted to validate the findings of the primary data collection method, that is, focus groups (see subsequent section). The students were easy to access and willing to fill in the questionnaire. The survey was filled out in the tutorial after the ARG finished. This survey allowed anonymous feedback about The Seed ARG and contributed to the analysis (see Chapter 7).

Stopher (2012) considers the timing of conducting a survey to be important as it can influence responses. In this case, the survey was conducted just after the mid-point in the semester, after the students had submitted their assignment but before they got their results. The choice of this timing was intentional, as poor or good grades could have affected the reaction students had towards the ARG. In this study, the ARG was being tested as a stand alone learning and teaching resource and so was nor compared with any other educational method. It was designed to understand the learning experience of students with the ARG irrespective of their grades.

Surveys can use two kinds of questions, closed-ended and open-ended, each with their own advantages and limitations (Table 6.5). Closed-ended questions ask respondents to choose answers from a set of options provided by the questionnaire designer, whereas open-ended questions allow respondents to provide their own answers (Andres 2012; Weisberg, Krosnick & Bowen 1996). An open-ended questionnaire allows respondents to offer insights about issues unknown to the researcher and is more appropriate for qualitative research analysis. For this survey participants answered open-ended questions
(for details, see Appendix xiii), as the researcher wanted feedback from the students regarding the ARG.

Table 6.5: Comparison between open-ended and closed-ended questions.

<table>
<thead>
<tr>
<th>Open-ended questions</th>
<th>Closed-ended questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent provides answer of their choice</td>
<td>Respondent chooses answer from a list of options</td>
</tr>
<tr>
<td>Respondent provides answer in their own words</td>
<td>Respondent chooses answer from list of answers developed by the researcher</td>
</tr>
<tr>
<td>Respondent provides answer without particular direction</td>
<td>Respondent has a limited choice of options to select from</td>
</tr>
<tr>
<td>Researcher does not have a common list of answers to analyse in the data set</td>
<td>Researcher has a common list of answers to analyse in the data set</td>
</tr>
<tr>
<td>Coding of responses is difficult</td>
<td>Coding of responses is easy</td>
</tr>
<tr>
<td>Respondent can provide insight about issues unknown to the researcher</td>
<td>Respondent only response to the questions based on researcher’s knowledge</td>
</tr>
<tr>
<td>More appropriate for qualitative analysis</td>
<td>More appropriate for quantitative analysis</td>
</tr>
</tbody>
</table>

A self-administered survey in a group environment, that is, the classroom, was conducted because they do not require the aid of an interviewer for completion and are done by the respondents themselves (Weisberg 2008). For this study, out of thirty-three students, twenty-five were present in the class when the survey was conducted. Twenty-four students participated in the survey. Some of the benefits of group-administered survey include minimal cost, the ability to identify samples in advance, ease and speed of administration, and completion of the survey on time (Andres 2012, p. 48). One drawback of self-administered survey that has been identified is that the answers to open-ended questions might not be detailed enough (Czaja & Blair 2005), although this is not always the case (Andres 2012; de Leeuw 2001). In the survey conducted for the present study, a few questions received brief responses but this varied from person to person.

Focus groups
In addition to written surveys, focus groups were also conducted to gather feedback from students after they had participated in the ARG. A focus group is an effective exploratory method of gathering opinions (Dijkstra & Gutteling 2012; Kerr, Cunningham-Burley & Amos 1998). Krueger (1994) advocates that focus groups are cost-efficient yet still have high validity. According to Hennink (2007, p. 4), the essential purpose of focus group research is:

*to identify a range of different views around the research topic, and to gain an understanding of the issues from the perspective of the participants themselves. The group context is intended to collect more wide-ranging information in a single session that would result from one-to-one interviews.*

After the running of the ARG and after written surveys, three focus groups were conducted with twenty-four participants (eight participants per group) from the two tutorials (groups A and B were from tutorial 1; group C was from tutorial 2) (for the questionnaire, see Appendix xiv). Between six and twelve people is considered the ideal number of participants in a focus group in order to have rich discussions of high quality (Hennink 2007; Krueger 1994; Stewart & Shamdasani 1990). None of the participants were forced to participate in the focus groups, and only one student took the opt-out option which was offered to all students.

All focus group discussions were audio recorded and transcribed for analysis. The researcher was the ‘moderator’ for these focus groups (Morgan 1998). A moderator is described as a person, who “reflects the special function of guiding the group rather than solely asking questions” (Krueger 1994). According to Jakobsen (2012, p. 113), “a moderator keeps the discussion as focused, non-threatening and ‘natural-feeling’ as possible with minimal self-involvement”. These attributes were carefully adopted to increase the validity of the focus group discussions. While this dual role of researcher and moderator could be seen as a potential conflict of interest, it is quite common in action research to have this duality of roles.

There are several benefits of using focus groups for data collection. For example, “the group method attaches importance to shared narrative structures, life stories and identification of experience among participants” (Winship & Repper 2007, p. 129). A focus
group can assist in exploring a broad range of perspectives (Downs & Adrian 2004). Indeed, the focus groups were quite useful in understanding different aspects of the feedback for the ARG. Group interactions can also bring out perspectives that individual participants had not considered (Dijkstra & Gutteling 2012). Focus group participants can provide a response without standing out in a group (Vaughan, Schumm, & Siaguh 1996).

In the focus groups carried out for the present study, the respondents sometimes took their time to consider replies. Despite this, they did not seem hesitant, confidently offering positive and/or negative responses. As Folch-Lyon and Trost (1981, p. 445) suggest, participants may “feel more comfortable and secure in the company of people who share similar opinions, attitudes, and behaviour or simply, because they become carried away by the discussion”. This was quite helpful when discussing the negative elements and the weaknesses of the ARG. Butler (1996) suggests that the participant’s response in a focus group can be more spontaneous than any other form of interview. This undoubtedly contributed to the credibility of the responses from students in the present study.

One of the disadvantages of focus groups can be group impact. Various scholars have highlighted the gap between the practice and theory of the use of participant interaction in focus groups (Belzile & Oberg 2012; Kitzinger 1994; Webb & Kevern 2008). Carey and Smith (1994, p. 125) argue that “researchers who use focus groups and do not attend to the impact of the group setting will incompletely or inappropriately analyze their data”. In the focus groups for the present study, group impact was considered while assigning participants to focus groups. No more than two participants from each project group were assigned to the same focus group to ensure responses were as independent as possible. However, focus group discussions may result in affecting the perspective of a respondent according to the other participants (Hydén & Bülow 2003; Webb 2002). This is an avoidable limitation of focus groups. In order to overcome this, an attempt to retrieve individual opinion was made earlier with the survey questionnaire. The initial questions for the focus groups were derived from the questionnaire so as to validate the earlier data, but after the initial questions the focus group was allowed to expand to other topics. Once the discussion was proceeding, in-depth questioning was conducted with participants. Questions emerged from their responses and themes were explored during the face-to-face interaction. These focus groups assisted in enriching the quality of data collected through
surveys. Data from both of these collection methods were analysed together to get a deeper understanding of participant responses.

6.5 Summary

This chapter provided a context of methodology in which the present study has been positioned, that is, action research. As a qualitative research study it incorporated four main methods of data collection:

- In-depth interviews to gather contextual information from investigative journalists and journalism academics.
- Experimenting with an ARG in an investigative journalism class.
- Focus groups and surveys from student participants to gather feedback on the ARG as an educational resource for investigative journalism.
- In-depth interviews with academics who participated in the ARG to collect feedback about the effectiveness of The Seed as an educational resource.

*The Seed* ARG was planned and developed from scratch based on data collected from interviews, literature and opinions of academics involved with the project. As an action research study, it was cyclic in nature and the game content was modified through its course of running according to suggestions by the relevant teaching staff. Every single item of the content was taken into consideration and was repeatedly evaluated and modified according to the requirements. In Chapter 6 I identified and established the methods and process involved in developing *The Seed* ARG. The next chapter will discuss feedback from students and academics about this ARG, and analyse whether it worked as an efficient investigative journalism unit educational resource or not.
Chapter 7

Alternate reality game analysis
Chapter 7 will offer a detailed evaluation of feedback given by students and academics about the ARG developed for this study, *The Seed*. This includes data collected from surveys, focus groups and in-depth interviews. The following major themes were examined through manual analysis and use of the qualitative analysis software NVivo: group work, tutorial activities, tip-offs, the online platform, the reward system, the realistic context and flexibility. The focus of this chapter will be on identifying the major themes found in the feedback, with the aim being to identify the main strengths and weaknesses of the ARG. This discussion will be extended in Chapter 8, which shall focus more on how the iterative nature of action research created a positive learning environment for the students.

### 7.1 Feedback

In order to analyse and understand student feedback, data collected from surveys and focus groups were sorted into several themes. Out of the thirty-three student participants, twenty-four responded to survey and were included in focus groups. This was done in two ways, manually and with the use of qualitative statistical analysis software NVivo. These themes were then narrated with respect to the existing literature. An important factor that needs to be highlighted before discussing the data is the fact that they are based on self-reporting, in which the participants responded without intrusion from the researcher. While the use of self-report metrics is often practical, there can be concerns about their accuracy and validity; specifically, “it is impossible to determine the extent to which participants behaved as they indicated” (Schrader & McCreery 2008, p. 569). Hence, the following analysis is positioned within the parameter offered by that limitation.

The following main themes were identified in the feedback data: group work, tutorial activities, tip-offs, the online platform and the points system.

**Group work**

Investigative journalists sometimes work in teams, and often in pairs (Muller 2012, personal communication). Indeed, journalists “use teamwork to capitalize on individuals’ strengths and alleviate individuals’ risk” (Kolodzy 2006, p. 83) and rely on “collaboration to build trust” (Glaser 2004). According to Dr Denis Muller’s suggestion, each working
group comprised four members (and one team had three members). Group work was incorporated into this ARG for two main reasons: to encourage collaborative learning and to manage an extensive workload for the academics. Each group had to submit an investigative report within seven weeks as their first assignment.

As discussed previously, collaborative learning is a common methodological approach in which students are divided into small groups and work towards a common goal. Collaborative learning is often referred to as cooperative learning, peer learning or constructive learning (Li & Campbell 2008), and it is thought to foster critical thinking, problem-solving, positive interdependence, conflict management, personal communication and teamwork (CSHE 2002; Gokhale 1995; Gupta 2004; Johnson, Johnson & Holubec 1992; Johnson, Johnson & Smith 1991; Porter 2006; Schofield 2006). In addition, group work is an important facet of constructivism. Fig. 7.1 shows feedback from students about group work mentioned in the survey.

![Feedback on group work](image)

**Fig. 7.1:** Feedback on group work.

Figure 7.1 indicates a 70 per cent (seventeen out of twenty-four respondents) positive attitude towards group work. Although the above table (Fig.7.1) indicates high degree of positive response, a qualitative analysis of the data suggested that some students had a limited experience of group work, particularly around writing: “I found it quite different as we have never had the task of writing an article in a group before”. Other students stated that they had not experienced group work in other subjects: “This learning experience was different
altogether because it’s the first time we’ve worked in groups”. Others did not enjoy working at the group’s pace rather than their own. In contrast, one student confessed that on his own he would have left work until the last minute, but working in a group “helped me stay on track”. Another expressed: “I think it was a good experience and I’m very happy with how our group worked together”. A few students thought that working in groups was the most valuable aspect of the ARG, albeit challenging.

However, not all the students considered this challenge to be a positive experience: “It was a bit hectic. Working in groups on a single story is challenging”. This hectic pace of the ARG was intended based on feedback from interviews with journalists and academics about the pace of real fieldwork. Indeed, journalism was described as “hectic” and “not a comfortable job” (Tully 2011). A few of the students were not comfortable with the mandatory group work: “I found that being part of a group added much pressure because I wasn’t doing the work for myself but for my peers also”. However, the ability to go out of one’s comfort zone was pointed out by several journalists and academics as a requisite for investigative work (Simons 2011; Hollings 2011).

Some students were happy working in groups for the research elements of the project, but were less pleased about writing the story together: “Researching as a group is great, writing together is not. Ideally, we could research together and then write different stories in the end”. One participant considered it to be: “The most frustrating aspect”. Another student was worried about the negative effect of group work on the quality of the final news story: “Working in a group sometimes proved to be problematic as some didn’t understand what was required or didn’t produce a quality piece of writing at the end”. These comments were disappointing, as students could have seen that submitting one story by a group allows for copyediting and proofreading to improve the language and quality of the story (Brooks & Sissors 2001).

Perhaps the group size of four was an issue, as the smaller group seemed to fare better: “With the three of us it was really efficient work because it was sort of easy to allocate work”. However, another student thought that the group work was useful in tackling the intensive workload and considered the number of group members (four per group) a strength: “It was good to be able to work as a group because it’s not so easy to speak to people usually. Especially when you are trying to contact three different people from three different areas, so it was good to
allocate different people different departments”. This response supports the argument that, “teamwork provides an apt framework for examining the unique nature and features of online news: interactivity, searchability, and multimedia” (Kolodzy 2006, p. 189).

It is understood that students today are required to juggle a frenetic schedule that includes university assignments, part-time jobs and their social life. Perhaps because of this “they want a more defined, perhaps even simplistic, learning experience” (Arthur et al. 2007, p. 8). However, this challenge could be seen as ideal practise for a frenetic journalism career. In addition, the fact that many of the students found group work difficult suggests that it was a learning experience for them; one that would be useful for future journalistic work.

"I think it was good in that respect that it taught them to collaborate and divide the labour, to try and make sense of how it fits together, to try and make sense of each of the components of the story and it is like that in the real world (Muller 2012, personal communication).

**Tutorial activities**

There were two types of face-to-face student interaction for this unit per week, a one-hour lecture and a two-hour tutorial. The tutorials were split into two cohorts, and functioned as a newsroom, as students were working as journalists and tutors were providing editorial advice. Activities in tutorials included provision of press releases.

Most of the students gave positive feedback on tutorials, for example: “I found this learning experience helpful compared to others as I … receive[d] positive feedback from our tutor in regards to our progress (points)”. Although many students considered the tutorial discussions to be very useful and the tutors very helpful, others did not. One student suggested that there should have been “more engagement/feedback, say, every fortnight, to let us know how we were going and perhaps give tips to guide us when we were stuck”. This might mean that one meeting session every week was not being accounted for, or this student did not consider that they got actual feedback every session, or perhaps this student was irregular in their attendance. Another student stated that “when we had questions our tutor didn’t know how to answer a lot of the time”.
Most of the stories submitted at the end of the project were of a good quality. This itself is evidence that the students were fully engaged with the project and had proper guidance. As Shuell (1986, p. 411) states, “the teacher’s fundamental task is to get students engaged in learning activities that are likely to result in achieving outcomes”.

In one of the lectures, a press conference about GM wheat trials in Canberra was scheduled for the students to attend, which covered GM wheat seed in Australia. Detailed discussion and a question and answer session followed the press conference. Some students found this to be the least useful aspect of the entire ARG, while others proposed that there should have been more press conferences and that it: “helped to make it feel like a real journalistic experience". This was gratifying for the researcher, as an important aim of the ARG was that it provide a realistic experience.

It is important to note that since this ARG was based in a realistic context, the academic modified the content on the run in a more effective and time efficient way, as the information relevant to content was coming from real life. Since this ARG was being tested as an action research study, this time efficient modification was contributing to the strength of the research as well as the quality of the ARG as an educational resource. The modifications enabled academics to steer students towards a realistic investigative journalism experience as both helpful and distracting information was offered by the academics. As one student commented: “At times I found it very overwhelming to work on this topic as there was so much to explore. We were flabbergasted by the amount of information that we found on our own and was pointed out by both Denis [Dr Muller – tutor] and Saba [Dr Bebawi – tutor]”.

There was a mixed response about the topic itself (that is, GM crops). Corbit (2002) suggests that the plot or the topic is an important factor in educational contexts. However, some students did not like the topic: “The topic was very dry, boring”. One student recommended that the ARG could be made more interesting by having a “more engaging topic”. On the other hand, some students enjoyed investigating the story and considered the topic a good starting point. One student considered the topic – “learning about genetically modified food and the scientific/political debate involved” – the most interesting aspect of the ARG.
Working journalists seldom get to select their topics, especially in the early stages of their career. Inquisitiveness is one of the key qualities of a journalist (Moore 2011, personal communication) and Baker (2011, personal communication) argues that journalists will only be hired if they “think outside the box, and have a general curiosity about the world”. If a final-year student does not understand this about real-life journalistic work then there is certainly a problem with the curriculum design or the student’s engagement with it. This could also be taken as a criticism of the unit and course design at an institutional level.

**Tip-offs**

One of the elements of gamification of *The Seed* ARG was the anonymous tip-offs sent to students by text message. Figure 7.2 demonstrates feedback regarding text messages sent to students.

![Figure 7.2: Feedback on text messages.](image)

Fifty-eight per cent (fourteen out of twenty-four respondents) of students conveyed a negative response towards these anonymous tip-offs, saying they didn’t think they contributed to the assignment and were not engaging. One student recommended removing the tip-offs altogether: “Possibly remove text message feature? I found it ultimately ineffective”. Although there was a clear link between the text messages and the topic, one student stated that the tip-offs did not direct their attention to the topic, but said: “We did
find out, through researching, that the first text was legitimate information”. This suggests the text had actually brought their attention to the topic.

An important attribute of investigative journalists is their ability to develop trust with confidential sources (Baker 2011; Birnbauer 2011; Hollings 2011, personal communications). This attitude was not observed in this case, as the students did not show much interest in the source. Three groups did reply to the message, but did not ask follow up questions. In addition, a couple of the assignments included interviews from sources that were identified in the first text message. This indicated that instead of following up with the anonymous source, they followed on the lead provided, which is a perfectly appropriate action, although a thorough investigation should cover all possible information sources.

The academics had a similarly negative response to the tip-offs, expressing low engagement. In commercial ARGs, information is commonly provided through text messages. For instance, during Why So Serious? (2007) text messages sent to its participants revealed locations and clues. While there may be potential for engagement, and convenient access to an anonymous source makes it a potentially good element to use in a journalism education ARG, they need to be planned properly. The data collected here reflect that timing is an important element. The Seed ARG timed the first text message right and it was considered as useful by students as it led them towards the field of GM seeds. However, the second text message was poorly timed and ended up being discarded by almost every student participant. This was a design flaw and better planning of timing and content of the anonymous tip-offs should have been executed.

Despite the generally negative attitudes towards the tip-offs, many responses indicated that the problem was not with the tip-offs themselves but rather their frequency or the amount of information: “We would have liked more messages as I only received two”. “I found the tip-off text messages more of a distraction. The first text was useful to begin with but there was not much follow-up after that”. Similarly, another student considered the lack of detailed information in the anonymous tip-off to be a negative attribute: “The first message attracted my attention and our group wanted to get as much out of it as we could but it was so short on info; even when we answered it we ended up being tired of them”. Some students proposed an
increase in the number of tip-offs: “I think everything that was there was quite good. I just think that there should have been more of it. So, more messages whether it was one a week or more”.

There was possibly a miscommunication or misinterpretation when the ARG was being explained in the first week. Two students professed inconsistency: “At the start we were told we would receive several text messages and tip-offs; however, we only received two” and “… the last was kind of just chucked in”. The second text message was sent late by design so that students could add some last minute information, as real-life journalists would. However, the purpose failed here because students had already finalised their assessment drafts. This meant that it was a poor design element and should have been timed better. Only 20 per cent of students thought that the tip-offs were useful. A few participants thought they were a little helpful and a “good starting point”, which, according to Birnbauer (2011, personal communication), is precisely what a tip-off should be:

A tip-off is a message of information provided by named or unidentified informed or party-informed sources who believe the information provided should be made public by journalists. It generally does not contain the physical information, that is, documents; however, it alerts reporters that such documents exist, that particular meetings were held, decisions arrived at and so on. It is then up to journalists to try to verify that information or access the documents referred to.

Increasing the number of text message tip-offs could enhance student engagement with them. However, this would require the academics to spend more time writing and replying to them. Bebawi (2012, personal communication) considered that text messages could be sent periodically, as long as the tip-offs are planned ahead and included in the work schedule: “Perhaps, we could develop a combination of random messages based on both correct information and hoax clues in advance, while we are planning to game. A weekly message would probably be more difficult but a fortnightly should work fine”.

The feedback about tip-offs suggests that students were only considering this investigative report as a course assignment to get a grade and not as a real news story. For instance, the students expressed their disappointment in the second text message, thinking it was too late, and hence, useless. One student explained: “There were only two text messages sent, one at the start (which I looked into) and one at the end when our project was due. Thus not relevant to
us as we had already written up drafts”. Another student suggested that the late delivery of the text message caused concern and confusion about whether they were covering the right angle of the story for their assignment. One group thought it was late by mistake, which was incorrect as it was planned to be delivered towards the end of the ARG. Some students simply didn’t bother to consider the tip-offs worthy of their attention: “I didn’t pay much attention to them”. One such student was too busy to consider them important: “Sorry, not really. I had other assignments”.

Furthermore, some students were clear that it was an assignment and not real life: “We didn’t have the time to get response for it, like, we received the message on Wednesday and had to submit on Friday. It wasn’t very good. Obviously, we would wait in real world but it was hard to do that”. This reflects that for some students the realistic context of the ARG did not manage to create the same sense of obligation as it would for a working investigative journalist. It also implies that they weren’t fully engaged with the ARG.

Perhaps the students confused a tip-off with a confidential source and that was why they were disappointed. Only three students interacted with the character that sent the first message and only one student replied to the second message.

Student 1: Sure – when can you meet for an interview?
Farmer: Hey, I ain’t meeting nobody. They will come after my crops. You could try talking to Gehl and Eggers though. They speak in public.
Student 2: Hi, my team and I are interested in your story, and would like to know what is your biggest concern at this stage, so if you have any more detailed information we’d be pleased to hear from you again on xxxxx.
Farmer: Hello, Thank God I got a response. How come you guys never followed the GM wheat trial in Victoria? Look into it (name of person). I am telling you. This will help all of us.
Student 3: My name is xxxxx, student from Swinburne University. I am currently reporting on the topic of genetically modified foods and was wondering if it would be possible to set up a phone interview with you? If not, would you be able to answer the following
questions: what do you farm? What did you mean when you referred to the genetically modified wheat as an evil seed? How are the companies making you their guinea pigs? In the early tests were your crops affected? How much of them were affected? Have you always been opposed to genetically modified crops? If it would be easier to email your responses my email is xxxxxx. Regards, xxxxx

Farmer: Hello xxxxx, I grow wheat. The last time they used GM wheat here, my crop was damaged. It tasted horrible, bland! They still tasted bland to some extent! What can I do but try to stop it from happening again! Bugger them! They are planning to test it again. Talk to the government officials. They will tell you. Please stop them!

Student 3: I would like to help! but we would need to meet. I can keep you confidential. Would you have pictures that you could show me? Please let me know!

Farmer: You don’t understand. The last time I went on record, I was threatened with a court case. I don’t have any evidence. I can’t prove that it was their seed that polluted our crops. They are smart people. I am a nobody!

Student 3: I will ask some officials and look into it further. Thank you for your reply.

It was interesting to see how hard the students tried to organise interviews. This should be something built into the next iteration. Further consideration of changes can be found in the conclusion of the thesis. Despite this continuous direction towards the topic, the response about “not enough information” indicates an indulgence towards spoon-fed information. Real-life journalists get limited information. One student suggested that the ARG needed more tip-offs “to create real-life situations”. Another important aspect to identify and explain to students is the danger of relying too much on tip-offs in real journalistic settings. This could result in following misleading information as well as trusting an anonymous source.
Contrary to the low engagement of many students, others found the tip-offs quite interesting and considered them a strength of the ARG. Some students also thought that these anonymous tip-offs reflected a real-life investigative journalism environment as they helped the project by “putting it into reality”. One student stated: “They provided a starting point that shaped the angle we ultimately took”. Not all of the students who thought the tip-offs were useful actually engaged with them: “Although not personally engaged with it I saw it as a potentially engaging technique for others”.

It is possible that the student did not receive the text message and hence was not interested or engaged with it. Unfortunately, due to some unidentified technical glitch, a few students reported not receiving the tip-offs. Although their group members knew about the messages, they personally were not able to engage with it. Had this not been a group assignment, these students would have missed out on an important attribute of the game.

Sixty per cent of students thought that the text messages could have been effective if everyone did not have a different story to follow. In this case they were all working in the field of GM seeds but chose their own story focus. One student stated: “I think it would help but for this subject, everyone’s story worked on different level. It wasn’t just about one thing. So ... our angle didn’t match”. Some students provided suggestions for making the text messages more useful, such as sending out a variety of messages so that the students could choose the ones which were relevant to their area: “Maybe different people should get different messages about specific areas that they are working on and then it would be more useful for them”. Or an assortment of text messages during the first week that they could narrow down to a lead to follow: “Maybe like a selection of texts in the first week when we are about to start working on the project so that we can decide which one we want to follow”.

**Online platform**

There was 100 per cent positive (all twenty-four respondents) feedback from students about the use of an online communication platform for group members to communicate with each other. As demonstrated by the student survey results in Fig. 7.3.
One student stated, “I thought the Facebook account was great. I thought it was really easy to communicate and just a good platform. It was really easy to upload information at any time of the day and put up information that you wanted to discuss outside the classroom”. Furthermore, Facebook is a technology that students are very comfortable using: “The Facebook page was an excellent online forum to use that we were all familiar with”. Selwyn (2009, p. 159) also agrees with this, “Facebook offers perhaps the most appropriate contemporary online setting within which to explore how social software applications ‘fit’ with higher educational settings and communities of educational users”. Students suggested that Facebook made group work easier and communication with group members more effective: “I was motivated to work on the assignment and it was easier to work in a group because of the Facebook. Other students called it “the best platform to use” and the “easiest ways to stay connected and communicate ideas and share the articles”.

Different students have different timetables and work on a variety of schedules. Facebook offered them a mutual platform to engage with their group discussion and work together as a team. Anderson and Rainie (2010) found that such online interaction can help overcome potential communication barriers. Some groups mostly used Facebook for organising group meetings: “Facebook was mostly to agree for when to meet up … more than the information about how we did work”. Other groups, who did not have matching schedules, found Facebook useful for sharing work online: “Our group posted a lot of our findings and
our answers from interviews on there, so we found it useful because we couldn’t always meet”. Seventy per cent of students felt that Facebook helped keep their project organised: “It allowed us to keep in contact very easily and plan our interviews and meeting times etc.”. And monitor their progress: “It allowed us to keep notes on how we were progressing as a group and how much research was required”.

There were only two students who thought that Facebook was helpful but had its weakness. One of them suggested that their group had a lot of face-to-face interaction which made Facebook less useful: “A lot of our communication wasn’t just on Facebook. It was in person as well”. The second student disliked its overuse for contact: “It made it easy to post things but people did not swap numbers as a result which meant Facebook was the only option, not always ideal”.

There were threads of conversations between students (Fig. 7.4), which demonstrated their efforts to resolve issues and develop strategies for their work. One group member mentioned that it would have been better for them to sit together and work on their draft but was happy to receive input and submit the draft on her own after everyone had given their consent. Examples of sharing of information on group pages were abundant. Longer documents were shared on Facebook group pages by creating Google documents. One student pointed out that Facebook assisted in retrieving information that was shared and posted earlier: “We used it for putting up a lot of information when we were doing it earlier. To the point that we had forgotten what we were putting up and then we went through the stuff and got a lot of useful information that we would have missed if were just doing by ourselves. So we found that very useful”.
One student suggested that if the Facebook group was not present, they would have still used an online communication platform for their group: “I mean we would have communicated anyway via email or Facebook”. It should be noted that email can be arduous when used by groups to share information, as each member receives long strings of emails, which can be difficult to keep track of. Moreover, another student pointed out exactly why Facebook was helpful: “Yes, [Facebook] replaced the need to set up another online forum”.

Facebook not only helped students by providing an online platform, but it also allowed academics to monitor their work. This was a great strength of using Facebook for the ARG. The teachers involved in the process did not interfere with the Facebook group activities, but provided suggestions and feedback during the tutorials. It was interesting to note that the students did not interact with academics on Facebook. Despite an awareness that academics were able to access the group pages, only one student asked a question, and this was not directly relevant to the group work. The academic suggested that student discuss it more in the tutorial.

In order to keep track of student work, frequent monitoring by teachers or the puppet master was required. This was managed by planning a schedule and allocating time...
specifically for this purpose. If students had interacted with academics on Facebook it could have become an important issue for instructors, “since students could have high expectations of teachers’ availability resulting in feelings of frustration if these expectations are not met” (Contreras-Castillo, Favela & Pérez-Fragoso 2004, p. 244).

The constant monitoring of Facebook turned out to be a motivating factor for increasing online participation. Forty-seven per cent of students felt that their progress and work were being observed by the tutors and hence put more effort into their work and online discussions: “Reminding us that there was someone monitoring our work and that we were participating for a reason”. Similarly, another student mentioned: “It reminded you of the fact that someone was keeping an eye on your participation”.

An additional requirement on Facebook was that students treat it as a logbook and file records of their actions, for example, writing about calling or mailing a potential interviewee. Some students were clear about this: “We knew because I had written it down so I told my group members about it. If I hadn’t written it down, we wouldn’t have known”. Some were clear about some aspects of using it: “I think we knew we had to post it but we didn’t know it was going to show our progress”; however, others were unaware. One student thought that it might have been a communication issue, because one class was very clear about it while the other was not: “I usually take the class after this and we all knew that we were supposed to use it this way. Like we knew what we were supposed to do and what not, so maybe there was a difference of communication between two classes because we were very clear”. This is a curious point because the same tutor facilitated both the tutorials. However, it is possible that they described it differently to the two classes.

Bebawi (2012, personal communication) also agreed that Facebook was a useful online platform, and was interested to watch how the students engaged with it:

“Students came up with more creative ways of how to use Facebook” and “there were one or two that were more active than others and kind of led the discussions” (Bebawi 2012, personal communication). Despite variation in the activity of students on Facebook, there was definitely “collaboration at a group level through the use of Facebook with an exception of one or two students overall” (Bebawi 2012, personal communication). As Facebook is an online platform, students and academics were required to have access to a computer, laptop,
tablet or a smart phone as well as have Internet connectivity. These are obviously absolute requisites for such a pedagogical resource. These requirements can be easily met in developed countries, but not necessarily in developing ones. Although journalists use social media platforms like Facebook and Twitter to access new information, they do not use it for interaction about sensitive issues for security and confidentiality reasons (Hollings 2011, personal communication). While Facebook cannot be used by students for a real-life investigation, both Bebawi (2012, personal communication) and Muller (2012, personal communication) agree that it is of great advantage for student work: “in the real world, because of the risks of leaks, breaching confidence, Facebook would probably not be used for such collaboration, but amongst students it makes perfect sense” (Muller 2012, personal interview).

The only major shortcoming of Facebook involved the reward system and automated updating. On Facebook group pages points were awarded for individual participation, as was explained in Chapter 5. Most games are driven by such a reward system. Some have points; others have badges or level-ups. However, on a group page, Facebook automatically brings up the most recent comment that is added. Hence, when a point was provided, it automatically brought that thread to the top of the page. Therefore, the students missed some important links and earlier comments or questions that were uploaded by their group members: “It is kind of annoying when we had a lot of posts, like the most relevant ones were at the top and then the bonus points were given and so the ones commented recently on would go on the top and all of our relevant stuff would kind of get lost in it.”

This issue had not been identified initially by the puppet master (the researcher). Therefore, some of the students that should have received points did not, as their updated comments were hidden among the older threads: “We missed points because the recent one was shifted and the older ones were updated so whoever was in charge didn’t give us a few points”. Unfortunately, if Facebook is to be used as the main online platform, this issue cannot be resolved. However, more frequent updating of scores could avoid such situations. Monitoring notifications received by individual members on Facebook and checking relevant ones could avoid missing updates. In addition, the students could be informed about this issue to help them look for it.
**Reward system**

The points system allocated on Facebook, as discussed earlier in Chapter 6, was generally taken seriously by students. Statements like: “This interview is fantastic!!! Well done. TheSeed had better give you massive bonus points ...”, and “Ooh, this game is getting interesting ...” demonstrate that the students were tracking down these points. Student survey results in Fig. 7.5 demonstrates that 66 per cent (16 out of 24) of the respondents gave a positive response to the point system and agree that it increased their online participation.

![Bar chart showing feedback on the reward system.](image)

**Fig. 7.5:** Feedback on the reward system.

One student mentioned that they were surprised by the points at first: “We were a bit like wow we got a point there”. One student stated that this was a different learning experience: “Normally there isn’t someone checking up on what we’ve done constantly and giving ‘bonus points’ for work done”.

Bonus points provide immediate goals, which are well known to motivate learners (Lee & Hammer 2011, p. 3). Indeed, the bonus points system in The Seed ARG was found to increase student motivation: “I thought the point system was good and it motivated people to put up more work”. Some considered it to be the most interesting aspect of the ARG, encouraging them to contribute to group work and motivating them to do extensive research: “It was a good encouragement/motivation tool”; “I think it encouraged doing extensive research in order to gain extra bonus points”. It made some students work harder: “it increased
my motivation to work harder to receive points”; and snatch points: “I wanted to get bonus points to get the highest score possible”. The immediate gratification of getting points stimulated active contribution in group work, providing: “Incentive which gave more reason to contribute and not lag behind in your group”. Another student appreciated the way the points identified individual work in the group: “Bonus points increases chance of individual participation”. Another student admired that way the points system provided feedback for students: “Sometimes I’ll get an assignment task and the tutor won’t know how hard I tried based on my final mark”. Indeed, the provision of feedback is considered an important factor of increasing student participation (Barnett 1999).

A few students responded that the point system increased their online participation but they were not sure how it worked: “It was at times unclear how the points were awarded”. This response was similar to that of the students who did not think it was a very useful or interesting experience because of the: “Lack of communication about what it was all about. We only knew we were getting points online but not how”. One student mentioned that he did not deem the points system useful for increasing his participation online or motivating him to work: “Because I didn’t know what would give me the points”. Similarly another stated: “I still don’t really know what the point was, did we get extra marks for ‘playing the game?’ I’m still a little confused”; and simply: “I didn’t understand the point system”. Another response suggested that the point system would have been more useful with: “More elaborate details and instruction”; or: “If it was detailed prior to the beginning of this assignment”.

It is known that “learners should have an opportunity for mastering the game in the form of an orientation; otherwise they will be frustrated and will lose their interest towards the game” (White 1984). This is exactly the kind of situation that arises here. This unclear reward system was one of the weaknesses of this ARG. Indeed, there should have been a much clear explanation about the point system at the start of the ARG. Not only did this create confusion about the rationale for points, but it also generated a negative image about the way points were being given. One student complained: “They didn’t consider conversation and research not conducted online”.

The bonus points, as explained earlier, were provided for any communication made with a person relevant to the project. Hence, they did cover the research and any communication
conducted offline as long as it was posted about on Facebook. Some students understood this: “I think it was alright, I think when you call you get one point but when you get a response from someone you get three points which I thought was good. Because you are still getting points for doing some work and you are getting more points for making a contact”. Others were not happy with the point system because it was simply giving out points for uploading information and action on the Facebook platform: “People said they contacted a number of people but didn’t get a response and still got points”. Some students were more comfortable about the point system after they clarified it with the tutors: “We understood because we asked the tutor. Since we understood what the points were for and how we were receiving them, it motivated us more to get more points and so we did put a lot of stuff for them”. One participant objected that the bonus points were often given after a misread comment – i.e. after someone said they had hit a dead end: “I know they were counter relevant because there were points given out for the same thing twice or when someone said that they hit a dead end than they got a point and I didn’t think that that was relevant. It was kind of patronising as well, like, here is a gold star”.

Although the students were informed during the tutorial that two sorts of points were given out, bonus points and experience points, not many people understood the difference between them, as mentioned in Chapter 6. The difference that bonus points were given out for action items, and experience points for summary of weekly activities was identified by very few students: “Yeah the experience points were for what you did during the week and what you did in the tutorial. The bonus points were when you wrote about a contact you made so when you called someone or when you emailed someone for answers”. Some only knew about the experience points and were not very clear about bonus points, “I only had experience points but weren’t experience points for more like just telling what you did and bonus points were going out and calling people?”

Some students claimed that they posted material online for getting points but these were not necessarily significant to their research: “We posted a lot of things not because they were important but because we figured it was a way to get points. It was all kind of confusing. It wasn’t so much boring but confusing”. A few students were annoyed at other people trying to get points through these materials: “What happened was that someone would put up a 2000 word article and they would get a point score. So we have to read through all that and sometimes it wasn’t even relevant”. Similarly, another student sounded frustrated because of such practice: “I
just found it really boring to read a lot of crap that was posted up on Facebook. I thought a lot of it wasn’t necessary so ... to read through all of it just because people wanted points was annoying”. This feedback confirms Lacoss and Chylack’s (1998) findings that students do not give much value to obligatory participation rules because some just participate to get a credit instead of participating in the discussion.

This might have frustrated students who were doing honest group work, but cheating has long been a part of both games and academics. Hamlen (2012) conducted research into the willingness to cheat in business or academia. He found that those who were willing to cheat in these situations deployed similar techniques when playing video games. ‘Cheating’ strategies were incorporated to make problem-solving easier, by-pass a difficult task or get away with not completing tasks at all. McCabe (2005) found that 60 per cent of students agreed to cheating at some point during their academic life. Happel and Jennings (2008) suggest that this lack of ethics could be because of the increasing pressure to get good grades. Whereas Turner (2005) suggests it could be the acceptance of cheating in informal learning, such as video games that has resulted in their acceptance of cheating in academic contexts. There may be a gap of understanding about what constitutes cheating between teachers and students (Bisping, Patron & Roskelley 2008; Broeckelman-Post 2008; Higbee, Schultz & Sanford 2011).

In addition to bonus points, there were also points deducted, for instance, for lack of communication between group members, such as when two students contacted the same person. This was deliberately done when more than one student complained to the tutors that the point system was very simple and boring. This was mainly done to communicate to students that such a misunderstanding would be considered unprofessional in a real journalistic environment. As action research process is “more fluid, open, and responsive” (Koshy 2010, p. 5), and The Seed ARG was flexible enough to allow this modification of point system, it added to the challenge of getting points and maintaining them. One group protested against the deduction of points (Fig. 7.6): “We lost two points, which was just mean, really”; “I quite enjoyed the points aspect ... until you deducted two points from our group for ‘lack of communication’! That’s just mean!!!” However, another student from the same group expressed that the point deduction inspired them to, “work harder and research and find out more in order to earn more points".
Fig. 7.6: Snapshot from a Facebook group thread.

Fourteen per cent of students suggested practical ways of allocating points, for instance, for summarising a relevant article and providing a link. Another student proposed that instead of getting points for both, attempts to contact interviewees as well as getting a response from them, they should only be rewarded if they get a response. A few other interesting suggestions were provided to improve the efficiency of the points system, including: setting up a ‘general knowledge test’ at the beginning for people to get bonus points for understanding and answering basic knowledge of the topic, and setting goals for participants to provide certain answers to gain extra points. If another iteration of the ARG was to occur then these points would be added in.

Several students suggested a competitive point system with other groups: “I think that could be tweaked. If you have some kind of leader board for point score during the game”. Other students
agreed that it would be useful as it would, “add to the spirit of competitiveness”. However, such a competitive scoring board or leader board would mean that every group would be aware of the points of other groups, and group progress is usually a private and confidential matter for the university. The students may not be concerned about this, as it wasn’t an actual score: “It would be a bit less confidential but I don’t think anyone would care”.

As discuss in Chapter 4, competition is an important element of games and ‘gamification’ (McGonigal 2011), as it strengthens players’ engagement with the game (Vorderer, Hartmann & Klimmt 2003). While students’ recommendations for the point system are all manageable, it may be difficult for an academic to dedicate a lot of time to updating score boards (Bebawi 2012, personal communication). Bebawi (2012, personal communication) suggests that considering it a part of the original workload and adding online participation to assessment while planning the semester could make this possible. However, despite proper planning, it is still a time-consuming process. It took the researcher, who worked as puppet master, around 90 minutes thrice a week to update scores. If an academic is not comfortable with this sort of work, then the score board would need to be automated, which would not be achievable through Facebook.

In the present case, the competitive element implied by the reward system could not be fully realised because the scores were only visible to each group. This was done because of confidentiality of student work and results, so a leader board would only be possible if the rewards system was completely detached from the overall grading. In The Seed ARG, the online rewards system was based on online participation, which was a part of overall class participation. Although there was no direct link between the reward points and the students’ actual grades, overall student participation was considered.

Student participation in online activities without relevance to their actual grade is a tricky target to attain. Most students would not bother participating and spending time on it if it did not go towards their grade (Carnegie Mellon University 2013; Kohn 1999). However, attaching assessment to online activities can improve student engagement. Gikandi, Morrow and Davis (2011, p. 2334) also agree that “effective integration of formative assessment in online learning environments has the potential to offer an appropriate structure for sustained meaningful interactions among learners and teachers, and foster
development of effective learning communities to facilitate meaningful learning and its assessment”.

Another possible way of increasing competition is by enabling peer evaluation. Lee and Lim (2012, p. 215) state that “peer evaluation is an effective way of allowing every student to participate in team-based learning and monitor the process”. Groups can be divided in such a way that each group gets to roughly evaluate other groups’ work. To avoid any conflict of interest, this has to be done in a cyclic manner so no group gets to grade the same group that has evaluated their work. Peer evaluation has been reported to encourage individual students to be more responsible and reflect on their own work while comparing it with others (Liu et al. 2002; Topping et al. 2000). More details about peer-review and its relevance with ARG are provided in Chapter 9.

The reward system in The Seed ARG was useful in engaging students with the online platform and motivating participation with group work. The most significant pedagogical value of games “may be that they aid greatly in developing, motivating, and sustaining multiple, overlapping forms of expertise within a common domain” (Squire, Devane & Durga 2008, p. 249). Hence, although this reward system should have been more clearly described, it could be considered a successful element and strength of this ARG, in respect to increased student motivation.

**Realistic context**

Pleasingly, almost 88 per cent of students appreciated the realistic nature of the ARG and considered it useful as it “assisted in creating a real journalistic experience”. A realistic environment is one of the most important aspects of any learning experience. “What you must learn is directly related to the environment in which you learn and demonstrate it; thus, the learning is not only relevant but applied and practised within that context” (Van Eck 2006, p. 4). This realistic context was one of the most important characteristics considered when deciding to use an ARG for an investigative journalism course.

The academics also appreciated this attribute of this ARG: “The students felt that they didn’t know anything about the topic, which I felt was a weakness for them but strength for me, but they were struggling with it. And one of the things we kind of kept telling them that in real-life
investigative journalism, you are not going to investigate stories that you know about. The whole idea is to kind of have a fresh eye and dig deeper to find a story and so the ARG was really good” (Bebawi 2012, personal communication).

Despite this realistic experience, not all the students knew what an ARG was or found it a learning experience, “I don’t feel the ARG was beneficial to my course because not enough communication was received from tip-offs. I suppose that is to mimic life. It was more of an extra hindrance’. The lack of interest in the tip-offs in The Seed ARG may stem from the complexity of using a game in pedagogy: “It was hard to take the assignment seriously with all the anonymous text messages; we were all sure they came from the university”. This inability to suspend disbelief may reveal the generally cynical attitude towards using games as an educational resource. Many researchers argue that this has been one of the main reasons educational games have not been part of mainstream education until recently, despite their potential (Gee 2003; Prensky 2001b). Similarly, play is generally thought of as a “childish activity” (Vandenberg 1998, p. 296); although Van Eck (2006, p. 17) contends that “we have largely overcome the stigma that games are ‘play’ and thus the opposite of ‘work’”. This is contradicted by one student’s comment: “I didn’t feel like this was an effective way of learning: referring it as a ‘game’ took away the legitimacy of the project”.

According to some scholars, a classic ‘game’ requires voluntary participation, so by using it in an educational context, that voluntary participation is withdrawn (Huizinga 1949; Caillois 2001). Generally, people who participate in an ARG do it of their own will and not because they have to play it to complete an assignment. For instance, students participating in Voila Quest, a game developed for induction purposes at Manchester Metropolitan University, were all volunteers (Whitton 2008). Similarly, for commercial ARGs like Charlie One Umbra (2012), The Pizza Code Mystery (2012) and Conspiracy For Good (2010) all players were volunteers. However, none of the students in the present study were forced to participate in this ARG. It was a part of the tutorial activities, yet one student who did not want to be a part of this game was allowed to investigate a project in their own manner and was given the same attention as other students who participated in the ARG. All of those who participated in the ARG willingly gave their consent to participate. It was understood that some students may feel social pressure to participate as their tutors were involved in
the game. However, both Dr Saba Bebawi and Dr Denis Muller made it very clear that any student not participating will not be discriminated against or be affected in any manner.

However, conviction in the potentially beneficial use of games in pedagogy is increasing, with many believing that “games can serve as learning objects from which both students and educational staff can learn” (Alexander 2008, p. 65), and that “everyday environments can and should be places for group play” (McGonigal 2003a, p. 21). Despite this, there is still a question about the complex role of ARGs in academic courses and for research purposes. An ARG by its very nature is a game and requires a certain anonymity in order to maintain curiosity. Curiosity has been identified as one of the important aspects of a good game (Malone 1981; McLeod et al. 2013; Sedano et al. 2007). Additionally, a mysterious game narrative is quite similar to an investigative story, into which a journalist is required to dig to find out the truth.

Forty per cent of students claimed that the ARG didn’t seem much like a game: “I didn’t feel that it was a learning experience because it didn’t feel like I was even actually part of a game”. This indicates that the students interpreted the information statement provided (Appendix ix) differently than intended. This ARG is a game played in real life, yet the word ‘game’ might have a different interpretation than a real-life scenario, as it was meant to be. As one student mentioned: “I found that it wasn’t as much of a ‘game’ as we were originally led to believe it would be”. This is an interesting point, as the way an ARG is set up can dramatically alter people’s experience of it. Another student responded that: “The only time it felt like a game was when we got a clear idea about what the points were for and then we were like okay we need to post more to get more points. That was when I was aware of the game”. This reveals an interesting disconnect here around the perception of The Seed ARG, and affirms the earlier discussion in Chapter 4 about ARGs blending and blurring the line between reality and fiction.

Another indicated that this confusion about the ARG was present from the very beginning. As one student pointed out: “Some parts of the game were confusing”. One student insisted that only the Facebook component assisted them: “The only aspect which actually helped was creating a group on Facebook and keeping well updated”. This reveals that a few students did not understand what an ARG was, despite being provided with a detailed definition in the consent information statement. Moreover, there was a sense of disconnect between the
elements of the ARG. Several students believed only the anonymous tip-offs were a game element: “We spent a lot of time trying to work out what the ‘game’ aspect was all about, and we were confused because, to me, it wasn’t playing out like a game, we basically received a text message and that was it”. One student thought only the online group was a game: “We didn’t realise that we were playing a game. I mean we would have communicated anyway via email or Facebook so it didn’t seem like a game”. Yet another student thought: “The ARG was a distraction”.

In fact, the online component, the text message tip-offs, press releases, press conferences and tutorial discussions were all a part of the game design provided in Chapter 6. An interesting point is that despite being as important as the tip-off, the press release was mentioned only twice. Hence the students could not draw a clear line between what was the actual game and what was not. This is intriguingly similar to commercial ARGs that try to obfuscate their existence as games. The fact that the assessment was designed in such a way that it was blended with the ARG was discussed in one of the focus group discussions: “The ARG was probably well-integrated with the overall structure. We couldn’t really distinguish between what was game and what was assessment. It was all sort of mixed up”.

In the case of this study, the course convener showed a little concern about the lack of student engagement with elements they considered were game-like, for instance, the text messages: “I think it was a good idea that they weren’t feeling that it was a game but my worry is that they didn’t really play the game as a result. I mean in many areas they did not know that it was a game many times. Maybe it would have been more fun if they actually felt that there was more of a game component and they could have been more engaged with it. I do think that it is a good that they don’t realise that it’s a game but they could have done more with it if they knew it was” (Bebawi 2012, personal communication).

Contrary to this opinion, Dominick argues that “the ARG becomes a reality where players are no longer playing. They are simply living” (2008, p. 1). From this perspective, most of the players did not feel like they were playing a game, that is, they were merely working on their assignment as a student as any investigative journalist would do. Hence, The Seed ARG could be considered successfully incorporated into the curriculum.

In addition to this some students found it to be an interesting and useful project: “The game did help us with the project allowing us to interview people that we came to know about from the
text message and using Facebook for communicating and co-ordinating. It was an interesting project”; “I thought it was a useful thing to have. I was motivated to work on the assignment and it was easier to work in groups because of the Facebook. So really it was good”. One student clarified: “I do think the idea was right with this game, it just needed a bit of work to make it more relevant”. Another student even commended the unit designer: “It’s a great, interesting subject. Well done!” Another student enjoyed the ARG and found it so useful that they recommended it for another assessment item as well: “Maybe include ARG in the second assignment?”

The ARG was based on a real-life context. The topic of GM seeds gave them a broad canvas to work with. This also allowed the academics to deal with the limitations of non-publishable student work due to hypothetical scenarios used in the classroom (Treadwell 2011, personal communication). In accordance with the reality-based context, the students contacted real people for information. The tutors encouraged the students to develop networking with their sources and attempt to gain their trust, one of the most significant attributes of investigative journalism (Baker 2011, personal communication; Moynihan 2011, personal communication). Some obtained responses from the relevant people, while others had to shift the angle of their news story due to unavailability of certain contacts. Some managed to find alternate sources for their work as well.

Flexibility

The flexibility of ARGs allowed the developers to attain a well-designed game that was effective in attaining the goals of the course. According to the description of Brookes and Moseley (Schaffer 2005 cited in Whitton & Moseley 2012, pp. 92-93), this ARG was based on a ‘thickly authentic context’, where activities were “simultaneously aligned with the interests of the learners, the structure of a domain of knowledge, valued practices in the world, and the modes of assessment used”. The alternate reality game The Seed was designed in a reality-based context, which contributed to its authenticity. It was developed to cater to the contemporary nature of study. According to Conole et al. (2006), there are eight factors (as discussed below) that characterise the way students work today, which primarily involve using technology to support all aspects of their study. These characteristics were incorporated into The Seed ARG, including the pervasive nature of
technology in their lives, their adaptive use of technology for practical uses, and as a community to share and help each other.

Students of the 21st century “use technologies to support all aspects of their study” (Conole et al. 2006, p. 521). For the present study, technology was utilised for almost every aspect of the project. Students needed to use technology to communicate with their group members, research online, communicate with contacts, check facts, and then write and file their story. The use of mobile phones, Facebook and email was necessary for this ARG; hence, the technologies that were incorporated here were those they would use in their everyday life. Although students will automatically use most of these technologies of their own accord, by actively encouraging the use of technologies for study, the aim was to further absorb them in their education.

Students also use “appropriate technologies to suit their own needs”, even utilising personal technologies for learning, for example, MSN chat, Amazon, eBay and Skype (Conole et al. 2006, p. 521). In the case of the present study, the use of Facebook as a communication platform attempted to facilitate the digital learning style of today’s students (Phillips, Baird & Fogg 2011). The tools that students used were well integrated with the game, so they were in their technological comfort zone much of the time – text messages were sent out as tip-offs, press releases were emailed to them, and discussion was encouraged through Facebook. Students use “new working practices using [an integrated] range of tools… [to] gather, use and create knowledge” and they are comfortable “switching between media, sites, tools, content, etc.” (Conole et al. 2006, p. 522). This was observed when, without any instruction, students shared Word and Google documents on Facebook, thus combining technological tools in a very natural manner.

7.3 Summary

This chapter has mined themes identified through analysis of feedback on the ARG collected through surveys, focus groups and in-depth interviews with students and academics who participated in the study. The data from focus groups and interviews were thematically organised and examined in discussions around group work, the tip-offs, the online platform and the reward system. The ARG narrative and tasks were directly aligned
with unit objectives – a basic requisite for any educational technology project. An extended discussion of how these objectives were met can be found in Chapter 9. Furthermore, the whole setup was discussed and planned with input from the academics teaching this course.

As an action research project, *The Seed* ARG enabled academics to test, evaluate and modify elements to improve the educational experience for students, on the run. This iterative inquiry was assisted by the ARG; the students finalised their angle of investigation, planned a schedule and worked collaboratively, but stopped researching when they thought they had enough information to write up and submit by deadline. The realistic context of the ARG was considered its biggest strength for use in investigative journalism education. However, based on the feedback, although the students responded positively to the realistic context, they considered the use of an ARG for their investigative journalism subject purely as an assignment.

The online platform (i.e. Facebook) received positive feedback, but would not be useful in a real-time investigation due to confidentiality reasons (Bebawi 2012, personal communication). However, this worked well for an assignment as it allowed continuous monitoring and encouraged regular progress from students on their work (Muller 2012, personal communication). Some aspects of the project didn’t work as well as expected. For example, the anonymous tip-offs did not receive as much attention as was intended. More text messages, more information about their project, both true and false leads, as well as a longer duration of investigation could assist in better results. The next chapter will further explore the proceedings of this student work through an iterative instructional approach of using the ARG as an investigative journalism pedagogical resource.
Chapter 8

Learning through practice in *The Seed* ARG
This chapter aims to analyse the process and progress of student investigative work and compare it with the pedagogical goals of *The Seed* ARG. It analyses student interaction and collaboration recorded on the Facebook group pages and ascertains whether there was a connection between student learning and the ARG design. This discussion is related back to the findings of the interviews with investigative journalists and journalism academics. This section will provide some examples of student work and will attempt to explore whether these examples are in accordance with the investigative journalism requisites in the field. Whereas the previous chapter focused on identifying the main themes found in the data, this chapter focuses more on exploring how the instructional design of the ARG enhanced the students’ learning through an iterative approach to problem-solving.

As noted earlier, this project was under ethical obligations to maintain student confidentiality. Student scores were also strictly confidential. This meant that, as a part of the unit team, the researcher could review the assignments but not incorporate them for analysis or discussion. Therefore, an alternate way of assessing student progress was through in-depth interviews with the tutors and review of the posts, comments and drafts presented by students on Facebook.

### 8.1 Facebook usage

The Facebook groups provided a convenient transparent platform for observing how the student groups interacted throughout the process. Indeed, most students utilised Facebook regularly and actively throughout the ARG, for communicating a variety of ideas with their group members. Initially, during the broad research phase, groups posted entire articles on Facebook, so all members could read the same material. Most of student groups started by working on a review of the current happenings in the field of GM technology. For example, one group started researching existing GM crops in Australia. During the first two weeks they posted articles from different sources on Facebook on this topic (Fig. 8.1).
Fig. 8.1: Facebook post of an article on genetically modified (GM) foods.

At times, similar articles were posted by different groups on the group pages, as they were discussed during the tutorials or because the initial research involved scanning the field for possible storylines. Before the week two tutorial, some students also used Facebook to pose questions to be raised during the in-tutorial editorial meeting (Fig. 8.2).

Fig. 8.2: Facebook post on questions for discussion in the editorial meeting.

Later on, students proposed potential investigative angles on the basis of their initial research (Fig. 8.3).
Guys, the first angle I have found is regarding the scale of the test. In all their risk management, they say that risks are "negligible" due to the small scale and short duration of the test (5 years). This could be an angle. Assuming that there is an aim to test its viability in the future on a mass production scale, is this a problem? We should ask all sides if we decide to pursue this angle.

Fig. 8.3: Facebook post on a potential investigative angle.

In general, group members encouraged each other and supported proposed ideas by providing further resources and critical insights (Fig. 8.4).

Fig. 8.4: Facebook discussion regarding investigative angle.
In addition, student groups used Facebook to organise methods of working together on the assignment, for instance, by allocating tasks (Fig. 8.5). It is also important to point out how the tutors’ input influenced the students. As mentioned in Fig. 8.5, Denis Muller’s suggestion about exploring relevant information about GM seeds in the USA was incorporated into the students’ discussions.

---

**Hey Guys,**

Here is what we each need to do before next week. I think we have decided to pursue the angle of the small nature of DIR 111, and the potential effects any GM crops may have on a larger scale.

- You're going to email Louise Dunn at Swinburne requesting an interview. Also, give Greenpeace a try. If they do not reply, we can always just take some quotes off their website.

- Email whomever you believe is the best contact within the CSIRO. This will be important as it is their test we are pretty much basing our story on.

- Search for any GM wheat and barley trials on a larger scale. Dennis thinks the US will be the place to look. When you have found some, we need to possibly then compare weather patterns with those that we may have in Australia.

- Will email the Australian Wheat Board to see if they have a stance on GM wheat.

We also need to find out where most of the wheat is grown in Australia. I'm sure where the trials are being undertaken, it is not representative in terms of weather patterns of where they would be sewn on a commercial level.

With all the emails we send, keep a record of them for us all. If anyone does nail a face to face interview, before committing to a time just drop in here and post the potential time to see if more than one of us can make it.

Hopefully we can get some good stuff this week. We will also organise a catch up early next week to touch base and get on top of it! Coffees will need to be had.

---

**Fig. 8.5:** Facebook post on task allocation within a group.
8.2 Use of digital technology

In interviews with field and academic experts (2011, personal communications), Moore, Baker, Birbauer, Mitchell and Simons all emphasised the importance of using digital technology for research and understanding how to access information and carry out background searches about companies, land ownership and family connections (see Chapter 2). Thus, land search software and an understanding of accessing information was added to the ARG lecture and tutorial design. A whole lecture was allocated to the submission of freedom of information (FOI) request forms. In the subsequent tutorial, tutors demonstrated the land search and land ownership database and its usability.

During the tutorials, background searches were carried out on companies that manufacture GM seeds. Seven out of the nine student groups posted relevant articles or details about organisations that academics considered important for the subject (Fig. 8.6).

Fig. 8.6: Facebook post on genetically modified (GM) food organisation.
8.3 Critical thinking

In addition to digital research techniques, investigative journalists and academics highlighted critical thinking as one of the required skills of investigative journalists (see Chapter 2). Simons (2011, personal communication) repeatedly emphasised the importance of journalistic judgement and evaluation of information; the importance of asking the ‘why’ and ‘how’ questions. Indeed, development of critical argument relating to investigative reporting was one of the learning outcomes of the investigative journalism subject in the present study. Throughout the ARG, student groups did exhibit increasing degrees of critical thinking. For example, in Fig. 8.7 a student is sceptical about the lack of information regarding wheat plantings provided by the Australian Wheat Board. The students’ gradual understanding of the principle of critical thinking through lectures and tutorials could be considered indicative of successful teaching.

![Discussion on Facebook that reflects critical thinking.](image)

Another important learning point in the subject within the realm of critical thinking was understanding that different organisations have their own agendas for taking actions or issuing statements. Again, this was highlighted by journalism academics and investigative journalists as an important skill. For instance, Bachelard (2011, personal communication)
insisted on the importance of reading behind the lines, “If someone is providing you with information, they have a reason for it. You have to find out what their reasons are and see whether they are manipulating you for their personal agendas”. Similarly, Pacific Media Centre’s director David Robie (2011, personal communication) stated that,

One of the essential things to try and get through to the students is that they are not and should not be a part of the power group, even if their career drives them to nice, affluent positions, nicely paid salaries, and high public profile, never lose sight of the fact that they are for the ordinary people, on the behalf of the ordinary people and should be constantly investigating and asking questions that ordinary people need answered. That’s all about human rights and social basics.

In Fig. 8.4 one student points out that Greenpeace appears to have deliberately not included some information in their report, which demonstrates critical thinking about agenda. Furthermore, the students identified a major problem with the running of GM trials in Australia, that is, endangering a successful export industry. Another indicator that students developed critical thought processes is their changing viewpoints (Fig. 8.8). In the early stages of the ARG, students tended to have a generally negative view of genetically modified crops. However, their critical thinking ability evolved throughout the project to consider more than one angle, thus practising objective impartiality – another important journalistic skill.

Working from the introductory press release, they started to investigate genetically modified canola. Initially, the students were quite concerned about what was being sold. I suggested they talk to people in the industry. They had a U-turn after their interviews and presented a few passages of positive features of GM food (Muller 2012, personal communication).

Muller (2012, personal communication) further stated that,

I encouraged them to be critical about their interviewees and analyse their agendas. They interviewed a couple more people. It was interesting to see how frustrated they were after they realised the earlier interviewees had been marketing their products. After the press conference on anti-GM seeds they had a lot of questions and paths to follow. I suggested that they interview a couple of relevant scientists as well. Their final feature was a much more balanced
version of the story with concern about one company and GM seeds but positive reviews about another one.

March 15, 2012

a little draft about gm canola, nothing wrong with it as a food product compared to dairy (and it reads like a media release because i couldn’t find anything bad about canola oil from gm canola) so i’ll keep looking for more on wheat.

Genetically modified (GM) canola crops have been planted in Australian states since 2003, though unlike other GM crops such as fruit and vegetables, its health impact has largely been kept quiet.

Nearly four years on from the first round, GM canola crops cover almost 300,000 hectares of farmland in Victoria, New South Wales and Western Australia.

GM crops in Australia are generally received negatively; however GM canola has the benefit of keeping farming costs down through a lower amount of chemicals needed in the process.

The canola seed is modified before being planted to increase herbicide tolerance and there is actually no reported negative health effects once it has been produced as a canola oil.

Canola oil is the healthiest and most popular option for cooking because of its low levels of saturated fat.

Fig. 8.8: Facebook post showing turnaround of students’ views after industry interviews.

Similarly, Bebawi (2012, personal communication) described one group that had interviewed two experts against the production of GM seeds, both from organisations outside Australia, “their discussion in the editorial meeting mentioned these interviews but it was quite one-sided. They had only discussed the negative incidents, case studies and quotes from two interviewees, all of whom were anti-GM seeds”. Bebawi encouraged them to interview representatives from companies that manufacture GM seeds and/or experts in favour of it.

The students carried out several more interviews, including with an important figure from a high-ranked university. Their final feature was still anti-GM seeds; however, it included the opposing views as well. Moore (2011, personal communications) considered balance as an important part of an investigative journalism story, “without which you are not providing the truth, you are merely providing one angle of the whole picture”.

In addition to teaching the students to question all source biases and practice objective impartiality, the tutors also discussed how to cover different aspects of a topic, such as the economic, environmental or health factors associated with GM seeds. This idea of honing the research approach quickly showed up in Facebook posts (Fig. 8.9). As expressed earlier, a direct link could be found between tutorial discussions and student suggestions. Thus, the students took advantage of the discussions in tutorials and incorporated the material into their work.

This article raises a few good points, questions and potential angles we could follow.

1. We could approach it from the human health angle described. This, I believe is a pretty simple approach that has no doubt been flogged to death in the media. I don’t think we would have to look hard to find something relating to the affect GM foods may have on humans. Whilst it is an important angle, I think we could do much better if we went for something a little less obvious.

2. The effect it has on the environment. Again, probably reported on extensively before, especially with both The Greens and Greenpeace opposed more or less to GMO’s (http://greens.org.au/.../genetically-manipulated-organisms). We could if we wanted to simply convey both sides stories but again, for good marks, Saba says we need to break news or at least write something that hasn’t been reported a lot.

3. The economic, business model of GMO companies may be interesting. With regard to Australia, I don’t know if there are any companies that currently ‘sell’ GM seeds or whatever. Is it even legal in Australia? I haven’t been able to find that out yet. However, with relation to the DIR 111 we I haven’t been able to find much on terms of economic impact.

What I really find interesting about this article is the fact that I believe, by the wording, World Vision would like any crops grown to help food crisis overseas. So who would we be growing the crops for? Australians or people overseas? I know it may make me sound a little insensitive but if we are to spend this amount of money and research time into this field, we may like to see the fruits of that for ourselves and not just shipped overseas.

A lot to take in. Any thoughts?

Fig. 8.9: Facebook post referring back to tutorial discussion, press release and student research on the topic.

The ARG enabled the tutors to provide the students with relevant press releases, and throw them off guard with confusing points of view to drive critical thinking, “this scaffolding of learning objectives was possibly the best aspect of the ARG design” (Muller 2012, personal communication).
8.4 Interview technique

Another important intended learning outcome, and thus an element of the ARG design, involved interview technique. Without exception, all the interviewed investigative journalists and academics mentioned the art of conducting interviews as a critical aspect of investigative journalism, “asking the right question is a technique that can be learnt over time. It is, however, crucial to learn” (Baker 2011, personal communication). Hollings (2011, personal communication) stated that one of the problems with scenario-based exercises is that “although you can give students an idea about how to ask questions, this has a different feel to it when they conduct proper interviews in real life”. Thus, in accordance with the real-world setting of the ARG, students carried out interviews with real people, which avoided artificial exercises.

The students had a lecture on interview technique; however, they started conducting interviews before the lecture. We deliberately arranged the ARG so that the students conducted some interviews before they were actually taught how to do it. This was done to facilitate learning, as the students could reflect on their previous experiences with interviews. Bebawi (2012, personal communication) considered these reflective experiences one of the key strengths of the ARG as an educational resource. It must be noted that these were third year journalism students who already had two years of learning basic techniques and skills required for journalism.

The lecture covered the importance of conducting interviews, and techniques of asking questions were practised during tutorials. The students regularly discussed their attempts to interview people from the real world on Facebook. The students discussed different issues that came up during the interview process, such as the accessibility of interviewees. For example, in the case of almost every group, some of the people they wanted to contact were not available and they had to try several times to get an appointment (Fig. 8.10).
Difficulty gaining interviews is common in journalism and was pre-identified by both Bebawi and Muller as “a part of any journalistic process” (Bebawi 2012, personal communication). Baker (2011, personal communication) also raised this issue,

If you are very lucky, your source will agree to talk to you, on record, on first attempt.

Normally, that does not happen, especially in investigative journalism. Sometimes people are busy, other times they are hesitant to go on record. Then there are those who simply do not want to talk about it at all. There are all sorts of reason. You cannot give up. You have to keep trying. Perseverance is the key.

Tully (2011, personal communication) also pointed out the importance of learning to accept disappointment and finding out a way to get things done, “the harder one works to achieve something the more accomplished one feels”. Indeed, some students did experience excitement on finally getting an interview after several failed attempts (Fig. 8.11).
ok...so Jock finally got back to me regarding the legal issues surrounding our story, and recommended that I contact three other university lawyers that were more suitable. So I contacted them and only one has replied so far... she was very unhelpful at first and didn't believe that Jock had recommended her!! However, after many persuasive emails back and forth, she came thru for us in the end and linked me some info which may help! I will read thru the material and get back to you 😊

PS: GREAT WORK TODAY GIRLS!! Had a very progressive day 😊

Fig. 8.11: Facebook post on overcoming an interview challenge.

Students also discussed retrospective questions which were raised during discussions about interviews, and often the students attempted to follow up with their sources with additional questions (Fig. 8.12) includes one such conversation about questions to be asked during an interview.

Fig. 8.12: Discussion on Facebook about interview questions.
8.5 Source management

Getting information from sources with a one-off interview, or a series of interviews, requires developing relationships with contacts while maintaining their confidentiality (Hollings 2011, personal communication; Moore 2011, personal communication). This topic was discussed in several tutorials as a critical investigative journalism skill. Indeed, some groups were able to go back to sources for more information (Fig. 8.13).

![Image](image.png)

**Fig. 8.13:** A group utilising a relationship with one of their contacts.

One group of students appeared to build a strong relationship with one of their interviewees. After resigning from an organisation, the source was not meant to talk to media for legal reasons and was applying for work in the same industry. Despite this, the source responded to the students and gave a very valuable interview. If the story had leaked out, the students could have led the trail to the disgruntled ex-employee. This group learnt an important real-world lesson about source protection. However, they did not manage to develop a good working relationship with him as they were sceptical about his intentions for the interview and his motives for turning against his company. The group who came across this story was in an ideal position to get an inside industry viewpoint. When this challenge was mentioned to the tutors, it was added to a discussion in the tutorial as an example of how to gain trust of a source. This example also indicates that the
students were practising critical thinking and not taking anything at face value, which is also a positive learning outcome.

This flexibility to include new elements during the running of an ARG underlines why it was considered useful for this type of study. Action research also allows modification to different steps of a research project. As there were two tutorial groups of students, this modification enabled the second group of students to learn about an issue before it might arise. On further reflection, perhaps an in-class scenario or a role-play exercise on building relationships with contacts could also be incorporated in the ARG design. Though, it must be added that these student got a rare experience and considered this as a positive learning experience. One group member from the focus group stated, “I think the fact that we got a call from him was because of the way we interviewed him earlier. He knew we were trying to get information out of him. We knew he was hiding something because a similar story was mentioned during the editorial meeting in class”. These regular editorial meetings were a part of the ARG and allowed academics to discuss student progress and challenges. The informal feedback from students helped enrich the next tutorial discussion as well as the overall structure of the ARG.

Another example that illustrates the importance of source management was a group working on a farmer whose land had been affected by GM trials conducted by his neighbours. This farmer sued his neighbours and, due to legal reasons, wasn’t able to comment. However, the group convinced him to provide them with information, which was ultimately achieved through his lawyer (Fig. 8.14).
The importance of maintaining source confidentiality was pointed out by several field experts (Birnbauer 2011, personal communication; Hollings 2011, personal communication). As Baker (2011, personal communication) pointed out,

> The most important thing for a journalist is to have personal skills and convince people to put some trust and confidence in you. If you are not a person who is willing to adapt to different personality types, build relationship with your sources, to stand up and be counted, if the time comes when you’ve got to protect those people, well then I wouldn’t hire you.

Figure 8.15 indicates a farmer, one of the real life personalities the ARG planned to lead students towards. The students found him through their own research and approached him. This reflects that the ARG narrative successfully steered some of the students towards the story that was integrated in the game design. It must be pointed out that this farmer is a
public figure and was not a private source. However, his name has not been included to this discussion so that it does not break any confidentiality codes.

Fig. 8.15: Facebook post on a clue integrated into the alternate reality game (ARG).

Similarly, the thread above is by a group that worked on a story about contracts with Monsanto, with a special focus on Western Australia (Fig. 8.16). Monsanto is one of the key GM seed producers and was considered as an important part of the investigation by the puppet masters. The students were successfully led towards it through the game narrative. This group worked on the storyline the researcher developed originally, before expanding the topic for a diverse set of investigative stories. This group went on to find out about the farmers affected by GM seed trials. They researched a number of legal cases in process and laws around GM seed trials in depth.
First draft submission

Submission of a first draft was not included in the initial game or curriculum design. However, after reflecting on student progress and tutorial discussions, both Muller (2012, personal communication) and Bebawi (2012, personal communication) considered it to be an important step in their learning process. Thus, Schön’s theory of reflection-in-action (1991) was practiced, that is, reflexivity during the process. The students also considered submission of a draft of the story (and subsequent feedback) to be a useful step, as suggested in their focus group feedback, “I think if not for the first draft feedback, we would have received a lower grade for our assignment. The feedback helped our group in modifying information”.

Fig. 8.16: Facebook post on collecting information from a source.
One group updated information from one of their Western Australian farmer interviewees who mentioned attending a Monsanto seminar at Curtin University. They decided to make this their lead paragraph (Fig. 8.17).

Fig. 8.17: Facebook post on lead paragraph.

As Muller (2012, personal communication) recalls,

> The students were very excited about their story; however, their main source was just one farmer, and they did not have any formal reply from the university. After reading their first draft, we suggested that either interview more people about it, or change their lead. We thought it could be a problem if they didn’t get any official reply from the university.

Later, in week six, this group posted that they were disappointed that they were unable to get information about it from the university.

The iterative nature of the ARG not only makes it a good method for action research, but also as an educational tool. An ARG is flexible, and so can incorporate different elements or change its storyline, whereas action research requires development, testing, reflection and then changing a method or action. Hence, adding a draft submission not only became useful for student work, but also contributed to the research methodology and strengthened the rationale for selecting action research.
8.6 Summary

This chapter looked into the evolution of student investigative work facilitated by The Seed ARG. The above discussion implies that some of the elements, such as press releases delivered, the lecture on interviewing skills, editorial meetings, the press conference and activities around background research directly affected the process and outcomes of student work. The ARG enabled the investigative fieldwork to be aligned with both the unit objectives and a realistic context. Through the game narrative, academics ensured that students had to face some challenges when acquiring information through interviews. As it was a reality-based investigation, these encounters included a lack of willingness of resources to respond, hesitant interviewees, and agenda-laden provision of information by sources. In these instances, the students adapted their approach to gather information. This ability to adapt was also an important learning outcome of this project.

The data from Facebook and interviews with students and academics also reveal that, based on initial clues highlighting potential risks of GM seeds, the students initially approached the subject with a negative bias. They went through a learning curve to understand the importance of retaining objective impartiality. Additionally, Facebook posts show how the students encouraged each other and collaborated on the investigative story. These features were considered a positive affirmation of the value of this ARG for teaching investigative journalism. While the ethics requirements meant that the actual stories could not be documented, for the purposes of the ARG it was more important to document the process by which the stories were conceived and developed. The next chapter will review the process of planning, developing and testing The Seed ARG for this study and the lessons learnt.
Chapter 9

Developing an ARG for a journalism subject: lessons learnt
This chapter aims to provide a reflection-based discussion on the experience of developing and testing *The Seed* ARG for the current study. It also intends to address a gap in the literature of pedagogical ARGs, that is, a basic overview of how to plan and run an ARG for educational purposes. The insights and suggestions offered here are limited just to this one ARG, and projects with a different context might need a different approach. This limitation is not unprecedented for an action research study. As Efron and Ravid (2013, p. 49) point out, “for action researchers, the focus is most likely not on whether the inquiry’s finding can be generalised to other settings but rather on whether the findings can be useful for improving their own practice”. This ties neatly into Schön’s reflective practice (as discussed earlier, see Chapter 5) in that in educational action research “the researcher and participants engage in collective interpretation of the findings and contemplate what can be learned from the experiences” (Lau 1997, p. 52).

### 9.1 Reflection

Schön’s (1983) theory of reflective practice discusses two kinds of reflection. The first is ‘reflection-in-action’ (or reflection during action) and the second is ‘reflection-on-action’. Both of these reflections have been incorporated in earlier chapters; however, this chapter also attempts to cover ‘reflection for practice’, an expansion generated by Killion and Todnem (1991) that includes review of accomplishments and failures, and identification of constructive guidelines for future success.

It is important to note that action research was functioning at two levels in the present study. Firstly, on a holistic level, which involved planning, development, testing and reflection on the ARG as a pedagogical tool for investigative journalism. Secondly, on a smaller scale, based on each tutorial session, the tutors would modify the contents of the next session. In this way, this whole study was a cycle that included iterative cycles. The diagram in Fig. 9.1 depicts a classic action research cycle.
Fig. 9.1: Action research cycle (Kemmis & McTaggart 1988, p. 11).

However, O’Leary’s cycle (Fig. 9.2) may be considered more relevant to the present study, as it offers a more realistic perspective on how different cycles of action research occur. During the tutorials, the academics observed students and their responses to the lesson plan. This was reflected upon and a strategic plan was devised for future tutorials, which was implemented in the next session. Observations from that session were reflected upon and modifications were made to the subsequent tutorial. Hence, different iterations of cycles of the tutorials were processed.
The researcher was able to run the ARG successfully and evaluate it due to the cycles of diagnosis, planning, implementation and evaluation. Action research also encourages academics to study their own teaching style, critically analyse their work and identify factors to improve their classroom practice (Mills 2000). This is precisely what both the academics involved with the investigative journalism unit, Bebawi and Muller, did. The ARG assisted their course design and proved to be an interesting pedagogical tool to be used as a case study for action research.

As an action research project, *The Seed* ARG designed for this study was planned, developed and run in three phases:

1. Development phase
2. Running phase
3. Evaluation phase

It must be noted that, as action research is cyclic in nature, both phase 2 and phase 3 were continuously reviewed, reflected on and modified in an iterative cycle. Thus, the project did not follow a linear trajectory.
9.2 Development phase

Applying for ethics approval

As The Seed ARG was being tested for research purposes, and with the intent to publish results, ethical clearance with the relevant body, that is, Swinburne University Human Research Ethics Committee (SUHREC) was required. The ethics application required a detailed outline of the game design, technology to be used, and rationale for this method. The ethics approval took approximately two months. The SUHREC raised concerns regarding student confidentiality and game elements in their first response to the ethics application. Rather than being a hindrance, these queries assisted in improving the game narrative, and the alignment of the game design with unit objectives. Thus, the ethics approval process actually helped with conceptualising and formulating game elements as well as providing an external review of the whole project. The SUHREC wanted the students to have the option to not participate in the research study, so students who were not willing to participate could submit an investigative news story without playing the ARG. Only one student, who could not attend lectures and tutorials, did not participate. All the others signed the consent form and actively participated. It must be pointed out that if an ARG is to be used for teaching purposes only, ethical clearance should not be required, although faculty approval may be needed if certain elements of the ARG design modify aspects of the unit, for example, assessment or exams.

Project timeline

The project timeline outlined in Table 9.1 indicates the initial time expectations for development of The Seed ARG; however, this first draft was substantially modified as the time requirements were too great. Additionally, the time and cost required for development of a game website were deemed insurmountable, so Facebook was used as an alternate platform. Before the initial collaboration, several months of research were spent scoping the field of journalism and investigative journalism. The time spent interviewing investigative journalists and academics during the initial research stage has also been included here, as these formed much of the basis of the ARG. Furthermore, it took more
time than expected to plan and get approval from the SUHREC for testing of the game narrative in a unit.

**Table 9.1:** First draft of work schedule.

<table>
<thead>
<tr>
<th>Task</th>
<th>Purpose</th>
<th>Action/s</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>Understanding pre-requisites of investigative journalism</td>
<td>Literature review&lt;br&gt;In-depth interviews with journalists and academics</td>
<td>10 months</td>
</tr>
<tr>
<td>Initial collaboration</td>
<td>Discussions with course convener and program head</td>
<td>Processing the official requisites for use of ARGs in a classroom</td>
<td>2–3 meetings (~1 hour long)</td>
</tr>
<tr>
<td>Developing the ARG</td>
<td>Developing narrative</td>
<td>Developing a storyline&lt;br&gt;Developing problems, puzzles and clues&lt;br&gt;Using mind-mapping software: Inspiration&lt;br&gt;<a href="http://www.inspiration.com/">http://www.inspiration.com/</a></td>
<td>2 weeks (it took the researcher ~1 week to read about the issue; the narrative was close to reality, so it was important to get it right)</td>
</tr>
<tr>
<td>Arranging tools</td>
<td>Organising game assets and personnel</td>
<td>Developing tools in accordance with the narrative</td>
<td>2 days</td>
</tr>
<tr>
<td>Identifying and collaborating with targeted participants</td>
<td>Creating and managing player profiles and communities</td>
<td>Producing forms and planning meetings for engaging students&lt;br&gt;Collaborating with investigative journalism academics</td>
<td>1 day</td>
</tr>
<tr>
<td>Managing props</td>
<td>Managing multiple web presences and social media profiles</td>
<td>Developing content for website&lt;br&gt;Developing management cycle of the website users’ data&lt;br&gt;Developing a cost-effective method for the process</td>
<td>1 week</td>
</tr>
<tr>
<td>Creating content</td>
<td>Creating and deploying content on mobile devices</td>
<td>Developing content of text messages</td>
<td>Developing a cost-effective method for the process</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Distributing game materials</td>
<td>Creating and distributing physical artefacts and documents</td>
<td>Developing game materials in accordance with the narrative Multimodal information delivery from puppetmaster: websites, posters, fliers, previews, packages, payphones, meetings, and ‘player’ profiles, instant messaging, telephone</td>
<td>30 minutes per week</td>
</tr>
<tr>
<td>Evaluating ARG</td>
<td>Analysing participation and evaluation</td>
<td>Using Twitter or blogs to analyse individual participants Developing written and pictorial material Developing evaluation criteria Conducting focus group and survey questionnaires</td>
<td>3 weeks</td>
</tr>
<tr>
<td>Analysing data</td>
<td>Analysing feedback data collected</td>
<td>Transcribing focus group discussions Analysing data</td>
<td>2 months</td>
</tr>
</tbody>
</table>

**Alignment with learning objectives**

For the present project, the basic learning objectives of the investigative journalism unit were first clarified (Fig. 9.2) so the ARG design and game narrative could be aligned with them. The ARG goals were aligned with unit objectives to ensure that the ARG was contextualised within the unit and fulfilled the requisites. Academics and educational technologists agree a clear unit outline or subject design is important for efficient teaching
and learning (Beetham & Sharpe 2013; Laurillard 2012). Mayes and de Freitas (2013, p. 18) support that,

*the task of good pedagogical design as one of ensuring that there are absolutely no inconsistencies between the curriculums we teach, the teaching methods we use, the learning environment we choose and the assessment procedures we adopt. To achieve complete consistency, we need to examine carefully what assumptions we are making at each stage and to align those.*

![Fig. 9.3: The initial map of learning objectives for the investigative journalism unit to be addressed by *The Seed* alternate reality game (ARG).](image)

Table 9.2 indicates how the learning objectives – practical and ethical considerations, digital research and technologies, cultivating contact relationships, interview technique, data analysis, writing, and critical argument – for the investigative journalism unit were covered by *The Seed* ARG. A game design was contextualised within the unit design. Largely, these objectives were taught via various forms of field experience and/or lectures and tutorial discussions. The design for tutorial and lecture activities for this unit is provided later in this chapter. It was impossible to take all the feedback from interviews into account during the construction of the ARG. Some of the philosophical issues about the nature of
journalism were beyond the practical scope of the unit. However, these were incorporated in terms of the overall positioning of the ARG in the curriculum.

**Table 9.2:** Alignment of alternate reality game (ARG) design with learning objectives.

<table>
<thead>
<tr>
<th>S. no</th>
<th>Learning objectives</th>
<th>ARG design</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Understand the practical and ethical issues involved in investigative journalism</td>
<td>Field experience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discussions in lectures and tutorials</td>
</tr>
<tr>
<td>2</td>
<td>Know how to use Internet-based social networking tools, corporate searches and press releases to find and develop investigative journalism stories</td>
<td>Use of Facebook</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecture on corporate searches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tutorial discussion about online research</td>
</tr>
<tr>
<td>3</td>
<td>Understand how to cultivate contacts and sources</td>
<td>Field experience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discussions in lectures and tutorials</td>
</tr>
<tr>
<td>4</td>
<td>Develop interview techniques</td>
<td>Field experience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discussions in lectures and tutorials</td>
</tr>
<tr>
<td>5</td>
<td>Develop skills for analysis of financial and statistical data</td>
<td>Discussions in lectures and tutorials</td>
</tr>
<tr>
<td>6</td>
<td>Develop skills in writing stories</td>
<td>Submission of draft and final story</td>
</tr>
<tr>
<td>7</td>
<td>Develop critical arguments relating to investigative reporting as a form of journalism</td>
<td>Discussions in lectures and tutorials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Field experience</td>
</tr>
</tbody>
</table>

**Game design**

For the present project, an initial flowchart of intended game and narrative elements and activities was compiled (Fig. 9.4). This was developed with the help of mind-mapping software (Inspiration; http://www.inspiration.com/). Although an initial game design was roughly outlined on paper, mind-mapping software offered a dynamic, visual representation of the whole project. It should be noted that this was modified and Fig. 6.1 in Chapter 6 was used as the main game design document. In keeping with the action methodology utilised here, several ideas were proposed and then discarded as the project developed. These ideas were brainstormed during planning meetings with the academics involved. For example, one of the early ideas was to include several online resources to mislead the students and help them understand the difference between real and hoax information. This idea was rejected due to the time and cost required to develop online resources.
**Fig. 9.4:** Initial flowchart for game design.
Game narrative

One of the most important elements of an ARG is its narrative. Bonsignore et al. (2014, p. 947) argue that,

*Any overarching narrative sketched out by designers at a game’s outset is subject to change, because players have a central role in assembling the story world as they collect, connect, and make sense of its distributed bits. As players weave their own hypotheses, interpretations, and extensions into gaps they perceive in the unfolding storyline, the ARG effectively becomes a collective narrative.*

Jenkins (2006) identifies alternate reality games as a genre of transmedia story-telling; hence, if the narrative is engaging, student motivation will be enhanced. A good ARG blurs the line between the game and reality (Edery & Mollick 2009, p. 89).

In the present case, the ARG was situated in a realistic context to best mimic real journalism. The game narrative was thus derived from a real issue. However, this would be different for a different subject depending on the objectives. In *The Seed* ARG the game narrative was based on controversy surrounding GM seeds, and, in particular, a farmer concerned about contamination of his non-GM crops. This was done because the topic was considered ‘newsworthy’ at that time due to recent approval of testing of GM seeds in Australia. Also, there was an ongoing case of a farmer who sued his neighbour due to GM contamination during a flood, which was getting media recognition. The researcher also had a personal interest in this topic due to prior journalistic work on it. The academics involved considered it ordinary enough to be practicable, but not boring for the students.

Although any topic could have been chosen to frame the game narrative, background knowledge about the issue helped develop a smooth game narrative for *The Seed* ARG. Before finalising the GM topic, several other topics were considered, for example, investment by Australian insurance and pension funds into companies or projects. This was inspired by an investigative story by a New Zealand postgraduate student journalist, Karen Abplanalp, who discovered investments by a New Zealand superannuation fund in a US-owned company in a war-zone area of West Papua (Abplanalp 2012). Although interesting, this topic was rejected due to confidentiality around superannuation
investment funds and expected difficulty approaching contacts within the six-week time frame. Another topic considered was alternative sustainable energy options for the Victorian Government. This was rejected due to the number of government officials involved, who are often unwilling to comment for student projects. Another topic, hygiene practice of local restaurants, was considered unsuitable due to potential bias and conflict of interests of students. Thus, the topic of GM seeds was confirmed, and within this overarching story students had the flexibility to choose their own topic, researching their own angle on the story.

To introduce the story, real government press release (from the Office of Gene Technology Regulator of the Australian Government) were provided to students. The press release provided information about issuing of licences for testing of GM wheat and barley in the Australian Capital Territory (ACT). In addition, text messages from fictitious characters (a farmer and an agricultural company employee) were sent to students as tip-offs. This mix of real and fake resources was intended to engage students with the ARG by obscuring the reality–game boundary, as well as to provide them with an authentic journalistic experience. The data collected from in-depth interviews with investigative journalists and journalism academics had a recurring theme about emphasis on real journalistic context in education. Bacon (2012, personal communication), Hollings (2011, personal communication) and Simons (2011, personal communication) all emphasised the significance of developing students’ ability to differentiate between actual news, public relations information and propaganda.

Furthermore, the ARG provide the opportunity to develop characters suited to the particular purpose. It is important to have characters suited to the game narrative with realistic personalities. For an investigative journalism subject, the characters can be anonymous. This means that even if they do not exist, their story can be realistic. In The Seed ARG, the two fabricated characters sent text messages to students to steer them along the game narrative (see Fig 9.5 [This is similar to fig. 6.2] and Fig 9.6).
Fig. 9.5: The first text message – a ‘tip-off’ apparently sent by a farmer.

Fig. 9.6: The second text message – a ‘tip-off’ apparently sent by an anonymous employee of a company that sells genetically modified (GM) seed.
Clues (referred to as ‘tip-offs’ in The Seed ARG, a term used in journalism) can be a useful tool in ARGs and can enhance students’ curiosity about the topic, initiate or support the game narrative, stimulate student motivation, or provide missing links. Curiosity is a critical motivator for both journalists (Briggs 2012; Grundy et al. 2012; Rosental 2014) and students (D’Souza & Maheshwari 2010; Palmer 2007; Weinstein 2010; Williams & Williams 2011). Indeed, as discussed earlier (see page 189), inquisitiveness was highlighted as an essential attribute of a journalist by Baker (2011, personal communication) and Moore (2011, personal communication). Clues can be passed on to students in a variety of ways, such as in class, by email and/or text messages, or on flyers, posters or advertisements. Clues and puzzles have long been used in games to challenge players and inspire them to move forwards (Pincus & Traum 2014; Rouse 2005). Goh and Hooper (2007, p. 450) suggest that puzzles require “both lateral and longitudinal thinking to solve”. Indeed, puzzle-based games can enhance student engagement, foster problem-solving, and refine analytical and memory skills (Melero et al. 2013; Bottino, Ott & Tavella 2008; Huang, Cheng & Chan 2007).

Clues can be a good way of controlling the game without breaking the illusion of the narrative, and can even be created while the game is running (Fullerton 2014, p. 101). Information for clues can be fabricated or taken from legitimate sources. Most of the press releases provided during The Seed ARG were real. Only one was invented from scratch, a call for a press conference arranged as part of the ARG (details provided later in the chapter on the press conference with Bob Phelps). Although the text message tip-offs were invented, they were inspired by actual events. The realistic setting of the game added to the credibility of the text messages, although students generally guessed the texts were from the university. However, this was not considered a problem, as they had already been informed about the ARG elements and what to expect during the game.

In addition to fabricated characters, clues or narrative elements, information or people from real life can also be incorporated into the game design. For instance, in The Seed ARG real press releases were gleaned from government websites, and Bob Phelps, the director of Gene Ethics, was asked to deliver a realistic press conference to the students. Real people from different fields were suggested to students in tip-offs and during class for potential interviews.
Tutorial and lecture activities

The tutorial design for The Seed ARG evolved due to decision changes regarding use of resources; for example, the researcher initially wanted to incorporate actors in the ARG game narrative, to avoid people being harassed by large numbers of students for interviews. However, this idea was rejected in favour of a more realistic game plan. Instead of interviewing actors, students were required to talk to real people. The game narrative was designed so each group worked on different aspects of the topic, to avoid too many students annoying the same potential interviewees. It took four drafts to finalise the tutorial and lecture activities for The Seed ARG. The final draft, discussed in Chapter 6, demonstrates how the tutorial activities complemented the lectures (Table 6.1).

Consulting with stakeholders

After the basic game design was tentatively developed, the relevant stakeholders, such as tutors, were consulted for development of a final game design. Furthermore, these stakeholders were continuously consulted about the ARG that was being modified throughout the development and running phases, based on their feedback. Tony Miniaty (2012, personal communication), a game designer of an ARG called WARCO (see page 85), suggests,

*It is of vital importance to talk to people who will be involved with your project. The game design team, financial advisors, teachers who will facilitate the game. These are the people who can give you the most realistic evaluation and feedback and know what may or may not work.*

Without the input of these stakeholders, the game design may not be practical. For instance, one of the early ideas the researcher had was developing an online game as a part of the ARG. Different ideas were discussed with game studies academics (for example, the researcher’s main supervisor, Dr Mark Finn), academics involved in running the course (the researcher’s associate supervisor, Dr Andrew Dodd), convener of the journalism course (Dr Saba Bebawi), the unit convener for investigative journalism unit (Dr Denis Muller), a tutor for the investigative journalism unit, and the IT team at Swinburne University. The research office was also approached for availability of funds. However, the
time involved and the cost required to develop an online digital game from scratch was considered unsuitable and impractical. Evans and Nation (2000, p. 171) argue that in the contemporary university education context, more time will be spent on preparation and team work for academics to run their courses, “the substantial and sophisticated use of technology requires teachers and those supporting them in the production of teaching material; to extend preparation time, to engage in team work, and to use centralized infrastructure”. The involvement of stakeholders in this project ensured that the game design was workable, and necessary technologies were available for the ARG.

On further reflection, the time required to plan and design an ARG may increase if the number of stakeholders and/or participants increases. For example, if the IT team at Swinburne or educational technologists were officially included in this project, additional time would have been required for discussion of ideas. Furthermore, development of any additional component would have taken extra time.

**Resources**

An ARG can be adapted to a limited budget or a generous one. The Seed ARG was developed for this study on a very small budget. This was intentionally kept low so that academics anywhere could potentially recreate a similar program without having to spend a lot of money. Within the budget, handouts for lectures and tutorials were printed and three SIM cards were purchased for sending tip-offs and information about press conferences. The budget had been a key factor for planning the resources incorporated in the game. It was considered practical to use suitable resources that were already available rather than developing novel resources (such as new websites).

De Hei et al. (2014) argue that utilising group work maximises the use of available resources and encourages peer learning. Similarly, Mattingly and Ponsonby (2014) support the use of group work for enhancing students’ learning experiences. Indeed, group work is an important aspect of collaborative learning, one of the learning theories considered relevant to this project, since research suggests that collaborative learning develops cognitive skills including analysis, problem-solving, pro-social skills and emotional skills (Gillies, Ashman & Terwel 2008; Järvelä, Volet & Järvenoja 2010). According to Jagoda
commercial ARGs usually work well with a group or team approach, because players collaborate to solve the puzzles and move forwards at a fast pace. Hence, as stated in Chapter 7, students were put into groups of three or four as these numbers were considered manageable (Muller 2012, personal communication). The tutors also had an active role as news editors in the student group work for The Seed ARG.

Researchers such as Kreijns, Kirschner and Jochems (2003) and Koh et al. (2009) emphasise the importance of teacher facilitation in group work for effective learning outcomes. Without active participation from the tutors, the ARG wouldn’t have moved forwards and the students’ learning would have been negatively affected. The tutors often steered the students in the right direction. One example is a student group that had a pre-existing bias against GM seeds. Both Muller (2012, personal communication) and Bebawi (2012, personal communication) pointed out this prejudice to the students and helped them step back from their personal opinions to objectively review the information they had. The consequent result was a more balanced and impartial news story.

Figure 9.7 provides sketches demonstrating the students involved in group work in the classroom. Figure 9.8 demonstrates students in editorial meetings. Photos have been digitally altered to protect the identity of the participants. The classroom had a flexible seating arrangement for group work. When the tutors were communicating with them as editors, it was a round-table discussion. After the editorial meeting was finished, the student groups could move their table and chairs to sit and work in a more private arrangement. According to Bebawi (2012, personal communication), “this flexible arrangement helped them work on their investigations and discuss ideas without having to worry about being overheard. It was a good plan to have such a class work”.

Fig. 9.7: Students engaged in group work in the classroom.

Fig. 9.8: Students engaged in a classroom editorial meeting.

Technology

Due to its flexible nature, the technology requirements of an ARG can be adapted according to the subject being taught (Battles 2014; Raybourn 2014). For this unit on investigative journalism, a mobile phone for text messages, the Internet, and an audio recorder for feedback were utilised. The students used their phones for recording interviews and Microsoft Word for writing their stories on their own mobile devices, that is, laptops, tablets and phones. Most of these students bought their laptops or tablets into the classroom. They were not asked to do this in particular for this course; however, as third year journalism students they all had access to such personal devices. Given the students already owned these technologies, they did not need to be acquired for the ARG. Although these tools were satisfactory, it would have been useful to provide them with
digital recorders as well in case their personal devices failed. Although such an issue was not reported.

Furthermore, technologies provide students with “more flexibility in terms of being able to undertake learning anytime, anywhere” and so their “concept of both ‘time’ and ‘space’ are changing”, both in terms of expectation of information and results on demand (Conole et al. 2006, p. 522). This time flexibility element of technology was particularly useful for group work, allowing collaboration to occur at the most convenient time and place for each student. The students could use Facebook for their discussion even when they weren’t in the same physical location at the same time.

Conole et al. (2006, p. 521) suggests that students these days are incredibly “sophisticated at finding and managing information” and “see the computer as a central learning tool”. Tucker (2011, personal communication) mentioned that investigative journalism was,

*drudging and tiresome without the Internet and smart phone. One had to spend several hours inside a closed room looking for information from paper-based records. Imagine trying to find out information by skimming through piles of data. Digital technology has bought a much easier and quicker access to information. It has enabled us to work in much more efficient manner than it was ever possible.*

With the help of technology, journalists and students have access to a wide community of peers through the different communication tools they use, to share resources and ask for help. These factors of technology – access to information and an interactive style of facilitation and collaboration – represent an important aspect of 21st century learning and was taken into consideration when designing *The Seed* ARG. That is why finding information online, providing clues through text messages and online collaboration through Facebook were added to the game design. It was intended to assist students learn the tactics of investigating a story they would use in a real work environment. As discussed earlier, this goal was considered largely achieved.
Online platform

An online platform can be beneficial in an academic ARG to facilitate student participation, engagement and interaction, particularly within small working groups. There are a variety of online platforms that could be used for interaction outside class time – such as discussion boards, social network websites, wikis or blogs – each with advantages and disadvantages (Alexander & Levine 2008; Gao et al. 2010; Junco 2012). For The Seed ARG, social network service Facebook was used because it is free and most of the students already knew how to use it. It is important to have an in-depth knowledge about the online platform utilised. In The Seed ARG, despite the researcher’s prior experience with Facebook, there were significant problems that were identified during the running of the ARG. For instance, Facebook group pages automatically updated themselves if someone commented on a thread. The old thread would appear on the top of the group page due to addition of new comments. Other recent threads would appear below the old thread. This resulted in the researcher missing some comments, which affected the point system (see Chapter 6). This issue was mentioned by a student during a tutorial while discussing the usability of Facebook. On the basis of this feedback, it was resolved by reviewing all the threads carefully. Despite this minor issue, Facebook was deemed suitable for this project, as custom-designed software would have been more expensive and might have had its own limitations. Additionally, this identification of challenge and modification on the run was a good example of iteration in action research and arguably strengthened the project.

9.3 Running phase

After the ARG has been designed, ethics approval had been granted and logistics had been organised, the game could run its course.

Initiation

At the initiation of the ARG, academics revealed to students that they were participating in an ARG. As the students were part of a research study they were required to complete consent forms. If this was not a research study, the academics would not have had to
explain the ARG to them and could instead maximise elements of surprise or mystery, like a commercial ARG, of which the motto is “this is not a game” (McGonigal 2003). The game design document in Fig. 6.1 (Chapter 6) shows how The Seed ARG was run over a period of seven weeks.

In the first week of the ARG, the students were provided with an information statement about the research project. They were requested to participate in the study and sign the forms if they were willing to play the game. Once the form had been signed, the students were asked join Facebook as an online platform for The Seed ARG. The game itself started in week 2 and the students were provided with the first press release. When the students were encouraged by the tutors to research the clues provided in the press release, they started exploring the issue on their own. During this particular time, typing ‘GM seeds in Australia’ into Google search showed a result for a real interview with a farmer. This farmer had sued his neighbour due to pollution of GM seeds on his land during a flood. Similarly, more Internet searches led students to discover the presence of GM seeds and the lifting of a moratorium in Victoria, all included in the results shown by Google search. The students were encouraged to visit farmers’ markets to interview farmers in general. During the focus group discussion, seven students out of 18 mentioned visiting different farmers’ markets for basic information. Additionally, the name of the company selling these seeds was revealed in a real news item and the students proceeded to conduct background research on the company. The students were also provided with leads, that is, text messages, and press releases in class. These leads directed them to environmental, financial and health related issues of GM technology more broadly.

The students were encouraged to attend a class seminar on gene technology and its effects on the environment. They also researched scientific evidence and interviewed scientists expressing their concern over this issue. There was a mid-semester break after week five, during which there was no contact with the participants, which gave students time to work on their final draft of the story.
Maintaining momentum

Ensuring that the dynamic momentum is maintained was a crucial element of The Seed ARG, as it effectively relied on the players to keep it moving forwards. One way of ensuring momentum is to use an engaging game narrative and characters. Furthermore, an educational ARG should steer a story towards a meaningful conclusion. The amount of information provided should be enough to allow participants to understand what is happening, but also minimal enough to stimulate intrigue. The Seed ARG offered minimal information to the students in an attempt to promote in-depth research on the issue of GM seeds. Each group submitted a news story on an aspects of GM seeds that had caught their attention.

Another way to keep students engaged is through gamification (Domínguez et al. 2013; Muntean 2011). Simões, Redondo and Vilas (2013, p. 3) developed a framework for gamification that aids academics with “a set of powerful and engaging educational tools to improve students’ motivation and learning outcomes”. Research scholars (Deterding et al. 2011; Gåsland 2011; Nicholson 2012) have stated the importance of gamification in student engagement and collaboration. The present study drew on elements from other game genres to enhance engagement. Initially, this ran the risk of undermining the illusion of reality, which did not happen, and it was deemed better than losing player interest. One element of gamification used in The Seed was reward points, allocated according to Facebook participation and actions undertaken outside class time; for instance, attempting to contact an interviewee, receiving a response for their attempt, interviewing someone, or providing a suggestion (Fig. 9.9). Further points were given when students provided a weekly summary of their actions. Points were even promised for additional achievements to encourage students (Fig. 9.10).
Another element of gamification utilised was clues, or tip-offs, from fictional characters (see Chapter 7). In retrospect, the characters created for The Seed could have been better designed and could have interacted more frequently with the students to make the ARG more engaging.

One of the most useful attributes of an ARG is its flexibility. It can be modified for any context and modified as it is being run. Flexibility is a strength of ARGs that lends itself
well to pedagogical use (Chess & Booth 2014; Whitton & Hollins 2008). In the present study, *The Seed* ARG was built for an investigative journalism subject. Hence, the game design was developed in such a manner that it was directly aligned with the course objectives and goals. However, it had to be adjusted during the running phase of the game to meet the needs of both teachers and students. The content was continuously modified with the on-going guidance of the academics responsible for handling the unit.

Furthermore, Hakulinen (2013, p. 48) states, “the flexible design of ARGs enables game creators to include all kind of puzzles to the game while still having the overall motivational elements”. Thus, if momentum seems to be flagging, the game can be modified while it runs. For example, clues or other materials can be developed prior to the running time and released as needed during the game, or created or altered during the game if deemed necessary. Thus, the puppetmaster (or unit convener or relevant academic) can help steer the storyline or help students notice angles or contacts they may have missed. For example, Bebawai (2012, personal communication) stated that a discussion on planning and approaching people for interview was added to a tutorial, as three student groups reported this as a challenging aspect. Modifying content on the run makes the ARG more dynamic and interactive; however, it requires more engagement and time spent by the academic. This was one the challenges with this project. The academics did not have enough time to make this ARG more in-depth and complicated. Swinburne academics were not given any additional workload allowance for this project as it was a part of their approved work. More input from them could have yielded more engagement and perhaps a more engaging project.

It is likely that some problems will arise regardless of how well planned an ARG is. As ARGs are flexible, most problems can be resolved if anticipated or detected early enough. Unfortunately, in *The Seed* ARG the issues of the automatic updating system of Facebook, as mentioned above, and failures in the text message delivery were not detected until late in the semester. Such situations could be detected earlier with increased feedback from participants; however, this was not allowed by the ethics committee in this case. In situations like these it was sometimes noticed that the ability to iterate in response to in-game developments was limited by the ethics clearance. In a way, this actually prevented the ARG and action research from running their natural course. For instance, the addition
of a survey in the middle of the ARG was contemplated; however, by the time it would have been cleared by ethics committee, it would have been too late. Hence, only observation of student and academic interaction during class and data collected from survey and focus groups could be utilised. Although these data collection methods provided interesting insight, it would have been beneficial to adjust the plan at the vital moments. The main element ARGs and action research have in common is that they are designed to be adapted as they go and, to some extent, this dynamic quality was hindered in *The Seed*.

### 9.4 Evaluation phase

Assessment and grades are important motivational aspects of any subject (Boud & Falchikov 2007; Hibbard 2014). Although, students are often engaged with elements of a subject that are tied to assessment and formal grades, the development, and evaluation of assessment is not straightforward (Baartman, Gulikers & Dijkstra 2013).

#### Assessment

There were many possible assessment regimes for the unit, for example, assessing students on different smaller tasks, like conducting interviews or finding out information online. The one chosen for *The Seed* ARG was submission of a final news feature after six weeks. As assessing one final assignment requires less engagement and feedback from academics throughout, it is less time-consuming. The progress on the news story was monitored through the online platform. Students tended to participate more on the online platform as they were aware they were being watched by the academics.

The students also responded to the reward system initiated for online participation, despite there being no actual correlation between Facebook activity and grades. Student grades could not be tied to the ARG due to ethical restrictions. These points were calculated and the highest score for the week was declared. This action attracted mixed reactions from students. Some found the points system motivating and participated more actively on Facebook, while others felt the points caused unnecessary competition within the groups. A common leader board for all the groups could have been a better alternative, to create competition between groups, rather than within groups. An idea that was discussed earlier
but rejected as grades had to be kept confidential. If an educational ARG is only being run for the class, rather than being tested for an external project like this one, gamification elements could actually be aligned with grades.

Peer review can also be added as a form of formal feedback and would potentially enhance learning experience, as it was already informally taking place during group work. There is much empirical research on the benefits of peer review, including variety of feedback, non-directive feedback, sensitisation of students towards different perspective of readers and, most importantly, closing the gap between feedback and its implementation (Cho, Cho & Hacker 2010; Cho & MacArthur 2010; Falchikov 2005; Nicol 2011; Nicol, Thomson & Breslin 2014). On Facebook groups, students provided informal feedback to their own group members, suggesting additional insight and modifications, which improve the final assignment. The students were mostly kind and polite to their group members (Fig. 9.11). Three students who complained during the focus groups about their group members lagging behind in work had not stated anything negative on their Facebook group pages. One of the main weakness of peer-review highlighted in the literature is students’ lack of confidence of their own capabilities (Ballantyne, Hughes & Mylonas 2002; Smith, Cooper & Lancaster 2002). This could be one of the reasons why students did not mention their problems to other members on Facebook.
Fig. 9.11: Student feedback on news feature draft.

Collecting feedback: reflection

Reflection on an assignment experience should be an important part of any journalism subject. Several learning theories, such as transformative learning theory and experiential learning, consider reflection as essential part of learning, as discussed earlier (see Chapter 6). The theory of the reflective practitioner is based on learning by reflecting on and analysing one’s action (Schön 1983). Furthermore, different researchers have studied the benefits of making students work on a reflective journal (Burrows et al. 2002; Pavlovich 2007; Samkin & Francis 2008). This reflection helps promote critical thinking about their actions and enhances the chances of long-term practical implementation of their learning. The participants in The Seed were also asked to use Facebook as a journal for recording their weekly activities. However, some students did not regularly or actively participate. Perhaps this could be seen as a weakness of the project, as some students did not reflect
directly on the experience while they were doing it. Ideally, both students and academics would maintain a formal journal for such a study.

According to Bisman (2011, p. 316) “by enriching students’ meta-cognitive skills and understanding of content, helping students to develop improved techniques for learning and enlivening an otherwise conventional assessment regimen”. The time spent on reflective discussion on the ARG should be covered while the game is being planned. Surveys should be conducted where possible to get an idea of student experience and modify the ARG accordingly, if convenient. For the present study, ethics clearance regarding one survey was allowed. Hence, a final survey was done towards the end of the ARG. A focus group was also conducted to supplement the findings of the survey. This was done primarily to check the feedback for the purpose of action research and may not be required for a normal classroom exercise.

**Future iterations**

One benefit of pedagogical ARGs is that they can be repeated in subsequent semesters with new groups of students. A second iteration of an ARG would presumably be easier to run, although it would not necessarily play out in exactly the same way, for instance, in *The Seed* ARG students may investigate different angles. However, the basic game design and running material can be reused with little or no modification. In addition, academics would have a better understanding of running the ARG due to accumulated experience. Thus, ideas for better use of technology or introduction of new tasks, characters or other game elements could arise. Suggestions from participant feedback are also likely to help make the second iteration a better teaching tool. (For further suggestions, see the Conclusion chapter of this study.) In each specific case, academics conducting the unit have considerable flexibility to add or remove different elements. It must be noted that different subject areas would have different requirements for an ARG. For instance, an ARG for a history-based unit may use actors and costumes to role-play characters, an element avoided in the current case due to its realistic context.
9.5 Summary

This discussion presents the process of developing and testing an ARG for an investigative journalism unit. *The Seed* ARG was based on a set of theoretical and practical issues which were uncovered in a review of the current literature on journalism education. Suggestions from interviews with academics and professionals were also incorporated in the development of the ARG. This was done by including elements that investigative journalists considered important. Students were encouraged to research a topic, interview people, verify their facts and information from authority sources, be sceptical about their sources, and write an investigative feature. *The Seed* ARG was developed with these objectives and was carefully planned to cover them all with continuous insights and help from the academics running the unit. Furthermore, as a part of the game design, Facebook was incorporated as an online platform for student collaboration within their groups as well as so group work could be monitored throughout.

As this study has been contextualised within the framework of action research, this chapter has attempted to reflect back on the decisions made throughout the project. This chapter offered suggestions for development and testing of a pedagogical ARG. Based on the above discussion, it is clear that an ARG can be successfully aligned with investigative journalism subject objectives, although there were some challenges. It is also an interesting case study for action research due to its systematic development and modifications on reflection.
Conclusions
In this study an ARG was designed, developed, tested and analysed for an investigative journalism unit. This was achieved by understanding the current challenges and debates surrounding investigative journalism, as well as the current educational techniques in the field. After the running of The Seed ARG in an actual investigative journalism subject, in-depth interviews, survey questionnaires and focus groups were used to evaluate the game. This study explored the following three research questions:

Q1: What are the current challenges that investigative journalism academics face in preparing students for the field?

Q2: How have digital games been used for teaching investigative journalism?

Q3: How can an alternate reality game be used for teaching investigative journalism?

The main findings from the data have been discussed and analysed in chapters 1, 2, 6, 7, 8 and 9. This section synthesises the results and findings to answer the study’s three research questions.

Q1: What are the current challenges that investigative journalism academics face in preparing students for the field?

To explore this research question, journalism academics and investigative journalists in Australia and New Zealand were interviewed. An in-depth literature review was also undertaken to understand the background and existing debates in the field. One of the main reasons that the journalism industry is suffering today is its lack of timely adoption of digital technology. The advancement in digital technology has been rapid and, despite the gradual rise of new business models structured around digital technology, much of the journalism community is still overwhelmed by the transformation. Traditional print and electronic media are now tightly converged, due to written, audio and visual journalistic pieces now being broadcast from a single platform. In addition to basic reporting and investigative skills, a journalist is now often required to have skills in photography, audio and video recording as well as knowledge about the latest technology.
Just over half (54 per cent) of academics say a journalism degree is very to extremely important when it comes to finding employment, and only 38 per cent of professionals say the same (Finberg 2012). In the interviews conducted for the present study, eight out of twenty journalists and journalism academics thought that a university degree was important, but not necessarily a journalism degree. It is thus the first and foremost responsibility of journalism educators and their departments to ensure that the quality of journalism graduates is more relevant to the industry than other social sciences graduates.

However, due to rapidly changing trends in the industry, journalism academics are finding it difficult to prepare students for the field. There are a number of experimental projects worldwide attempting to make the educational experience as realistic as possible and provide hands-on experience for students of investigative journalism. Skills that are hard to teach in a classroom include the art of building trust, and developing sources and networks. Compounding these issues is the fact that journalism courses must teach students according to a rigid timeline, with some semesters being as short as 12 weeks. This is especially problematic for investigative journalism, which requires an investment in time often far in excess of the normal semester.

An additional issue with the education of journalism involves research. Academic research adheres to a set of rules and regulations that require confidentiality and consent of the research participants. In contrast, journalism participants are often exposed to the public. This inherently conflicted stance makes it difficult to carry out research in journalism. Australian journalism academics such as Romano and Davies are working with higher education research committees to justify the journalism point of view and make research ethics easier and more suitable for the field.

Q2: How have digital games been used for teaching investigative journalism?

Both newsgames and journalism games were identified here as being not currently suitable for training investigative journalism. The cost and time required to produce a good digital game are often prohibitive for education. However, through collaborative networks between university faculties and professional organisations, digital games could potentially be used for teaching some elements of journalism, such as crisis reporting.
These are probably better at exposing students to ethical issues as opposed to teaching practices.

It was also deduced from the existing literature that there is little information available about developing educational games. Therefore, academics with no background in game development would find it very difficult to understand how these newsgames and journalism games are developed. For instance, the developers of WARCO (Maniaty, University of Technology, Sydney) collaborated with game developers to convert the idea into a game. This is also a major problem for journalism academics who would like to experiment with gaming technology for journalism education. A guide for ARG design for education would be very useful and could be at least partially developed out of the findings of this research.

It must also be highlighted that the stigma about games being non-serious, and leisure time activity was mentioned by only two journalism academics. When the scope of the study was described, they generally showed great interest and offered tips and suggestions. Most of these were incorporated in the ARG developed for this study while keeping it aligned to the curriculum goals.

Q3: How can an alternate reality game be used for teaching investigative journalism?

Neither the practical (newsroom) model nor a purely academic one is ideal for either the aspiring or the working journalist. What is needed is a more dynamic fusion of the two models and one that is more flexible to the needs of particular individuals. Practical experience and intellectual knowledge both count toward excellence – along with curiosity, imagination and courage (Scheuer 2007).

In the present study, an ARG, The Seed, was created to practically apply a constructive theoretical approach to an investigative journalism class. Constructive methods of learning were adopted, that is, active and experiential learning tasks, collaborative efforts, and a problem-based approach towards investigation. The project represented an important extension of traditional scenario-based approaches. This was used to explore a new and
innovative method for teaching investigative journalism. Action research, also a practical projection of Schön’s theory, was carried out to produce a novel understanding of the way investigative journalism can be taught.

In accordance with the transformative learning theory, The Seed ARG attempted to help the learner “transform his or her frame of reference to fully understand the experience” (Mezirow 1997, p. 10). Through The Seed ARG, the students were provided with clues and a basic narrative framework, but they then investigated the topic themselves, delving into their choice of story angle. By adopting the role of an investigator they not only gained a new perspective about the topic, but were also transformed from a learner into an investigative journalist.

The ARG developed for the present study and trialled in an investigative journalism unit attempted to create a real-world environment for an investigative news report. The Seed ARG was developed on the basis of suggestions offered by investigative journalists and journalism academics about current challenges in the industry and academia. In addition, the class conveners and tutors were consulted to align the game design with the unit goals and map out detailed weekly activities. The students were split into groups of four and provided with a press release, tip-offs and supplementary material about GM seeds, and had to attend lectures, tutorials and a press conference. The students were required to contact relevant professionals and gather as much data as they could. Successful submission of a news story was the final result. As stated earlier, this game included several iterative cycles relevant to the content, which was continually evaluated and modified on the run. As a part of action research, this was one of the strength of using an ARG for this training journalism.

As it was carried out for research purposes, The Seed ARG was somewhat different from commercial ARGs. For instance, the need to adhere to ethical guidelines meant that The Seed ARG could not be run with the same level of mystery as commercial ARGs. To be allowed to test this game for this study, the students had to be informed about it prior to engaging with it. This meant that the students already knew they would be contacted by the puppet masters through a clue or a hint. The first contact in an ARG is often termed a ‘rabbit hole’ or ‘trialhead’ (Connolly, Stansfield & Hainey 2011, p. 1391) and is supposed to
be a surprise for the participants, such as a message that engages their curiosity. Unfortunately, in the case of *The Seed* ARG, the rabbit hole was a provision of information statement and explanation of the ARG in week one of the unit. This certainly had an impact on the way students experienced this game.

The students approached this whole project with an assessment-oriented focus. Their main purpose was to get a good grade. For instance, they did not act on the lead delivered to them close to the date of submission. Although the students did not necessarily ‘believe’ they were actual journalists, the reality-based content of this ARG is still considered one of its main strengths. Although the students may not have approached the investigation in exactly the same manner as a journalist would, they were operating in the real world, reporting on a real topic and interacting with real contacts. In this regard, the students did actually experience elements of ‘real-world journalism’. Furthermore, many of the students stated that it did not feel like they were playing a game. The fact that they could not separate the game from the unit suggests that the game was closely assimilated with the course curriculum.

Additionally, if future iterations of this game were carried out not as a study, but in the subject design, the level of intrigue of the game could be enhanced. Without being bound by the ethical obligations of research, course conveners could choose not to inform students about the game. Consequently, the realism of the situation could be retained. Of course, in such a scenario students may still view the project as an assignment, but the puppet master may be able to manipulate them more effectively. Although there could be some benefits of students being unaware they are participating in a game, they may actually fail to experience the intrinsic motivating factors that characterise gameplay.

The present study was a blend of motivational and reinforcement paradigms, identified by Ritterfeld and Weber (2006) as explained in Chapter 3. The educational goals of this ARG were implicit and learning was both planned and incidental, such as learning interviewing techniques by modifying interview questions for the interviewee without prior planning. Furthermore, three main area of ‘expansion’ were a part of *The Seed* ARG as identified by Montola, Stenros and Waern (2009), and discussed in Chapter 4. ‘Spatial expansion’, that is the whole world was part of the game play. In this particular context, students remained
inside Australia, mainly in the state of Victoria. However, they could have involved information and evidence from other places in their investigation as well. ‘Temporal expansion’ took the power away from students in terms of different occurrences in the game. Text messages sent, media releases sent, lecture and tutorials discussions planned were all out of their control. Lastly, ‘social expansion’ included their interaction with people from real world that they approached and/or interviewed.

One of the major hypotheses of the present thesis was that use of games in education could improve student motivation, interest and engagement. One of the transparent gamification elements used in The Seed ARG was a reward point system based on the actions students posted on Facebook. Interestingly, many students were motivated by the points system, despite it not being tied to their overall grades. Although students did appear to be more engaged by elements of the ARG they perceived to be part of the game (even though it was all ‘part of the game’), they were not as enthusiastic about the anonymous tip-offs they received.

One important part of the game was group work. This feature was considered important as collaborative learning is a major tenet of constructivism and other relevant learning theories. Additionally, teamwork was considered an integral skill for investigative journalists by both academics and practitioners (Bachelard 2011, personal communication; Simons 2011, personal communication; Tucker 2011, personal communication), and is also an important feature of ARGs. In this study, many of the students found the group work challenging, particularly when writing up the report. The academics considered this challenge to be an important learning experience for the students.

The social media platform Facebook was utilised in the present study to assist with group communication, add to the multimodality of the ARG, and also to “play to the strengths” of current students’ knowledge and interest (Bachelard 2011, personal communication). From an academic perspective, Facebook allowed monitoring of individual effort and group progress. An added benefit of this was that students felt more compelled to participate on Facebook as they knew they were being monitored by the teachers. There were a few issues with Facebook, however, including confusion caused by conversation thread updates, the academic workload of the monitoring, and ethical considerations of teachers being
Facebook ‘friends’ with students. Nevertheless, the students appeared to engage quite strongly with the mode of communication, especially with the added gamification technique of the point system. Ultimately, the use of Facebook as an online platform was considered successful as a facilitator of group communication and as a motivator for student participation. Facebook could provide an appropriate online platform for student learning in other contexts, and warrants further research to better understand the ways in which this social media platform could be adopted in teaching.

As digital technology becomes an integral component of modern journalism, the industry is struggling to keep abreast with the ever-expanding digital world. Poignantly, many of today’s students probably have the know-how to combine digital capabilities and journalistic practice. Consequently, current students have great potential to forge the way in the industry with their fundamental understanding and competency in digital technologies. Educational models need to find ways of integrating these new media into the curriculum and perhaps even exploiting the pre-existing capabilities of the current generation of students.

In addition to games enhancing student motivation, pedagogical games were also hypothesised to develop cognitive and analytical skills, strengthen decision-making powers and encourage persistence. The skills students needed in order to submit a news feature on their investigative stories included interview techniques (Bacon 2012, personal communication; Moore 2011, personal communication; Bossio 2011, personal communication), contacting relevant people (Moynihan 2011, personal communication) and deciding which information was most relevant and which leads to follow (Hollings 2011, personal communication). All these are important technical skills and attributes of investigative journalists. Several students stated that with the help of the ARG they became more confident speakers, both in class and in interviews. Other students approached certain contacts again and again until they managed to interview them, demonstrating considerable persistence. Persistence has been considered as an extremely important attribute of a journalist by several investigative journalists and journalism academics. (Bachelard 2011, personal communication; Baker 2011, personal communication; Tucker 2011; Tully 2011, personal communication). In addition, the quality of the submissions (i.e. the story assignment) was quite high. These kinds of actions carried out by students and
tangible results help to establish the effectiveness of this ARG in regards to its educational outcomes.

Feedback was collected from the students about their feelings and experiences of the game. Overall, the students found the ARG to be a unique and interactive learning experience. Many thought Facebook was a good way of collaborating and sharing information with others. Several thought it was a creative way to investigate an issue and compile a news report. This is quite useful as investigative journalism is mainly about exploring the unknown, and discovering the truth. Overall, the academics thought that the ARG was a good method of running a unit on investigative journalism. It helped in regular monitoring of student work and allowed editorial interference from the tutors. It also helped in arranging groups and encouraging collaboration which is an important part of journalism.

**Alternate reality games as an artefact: limitations**

This ARG had a limited scope in the sense that it was an external project tested by a researcher who was not the convener of the unit. There were ethical concerns raised by the research committee that the researcher had to abide by while planning and developing the ARG. It should also be noted that there is a lack of guidelines available on the topic of presenting an ARG as a research artefact. The literature review provided in-depth analysis and studies on some ARGs but these did not cover presentation as an artefact.

An ARG is transient in nature; hence, once played it is gone. Consalvo (2013) discussed this point with respect to online games, many of which only exist in the form of names. She encourages archiving online games through snapshots and keeping a record of the discussion boards around them. However, it is more complicated to archive an ARG. The online or virtual element can be archived as was done in this case by taking snapshots of the Facebook group activities, developing sketches of classroom activities, as well as taking snapshots of text messages sent to students. However, the classroom discussion, the actual activities and tasks performed by student while approaching people to interview or group discussion could not be archived due to ethical restrictions and practical limitations. One suggestion for future use of documenting an ARG for a course would be to collect images
of all the activities carried out. These would include images taken in class and during fieldwork, but it would require extensive and potentially difficult ethics clearance.

Additionally, there were limitations regarding the types and quantities of digital technologies that could be used. There was a gap between the level of knowledge about digital technologies of the researcher and that of the tutors who were handling the unit. It was considered impractical to train the tutors before the teaching period. Therefore, while developing the game design, the digital knowledge and experience of the tutors had to be taken into consideration. Both of these limitations can be easily removed if the ARG is being designed by the course conveners or the tutors themselves, or if more training is provided.

**Future iterations of this alternate reality game for investigative journalism subjects**

*The Seed* ARG was used to structure and steer student work and to allow for academics to monitor student progress. It was intended to run the ARG again in the same unit, but since the completion of the project several changes have occurred that have left the future of the project uncertain. Several of the key staff (including the researcher) have left the university and the journalism program itself has been extensively reviewed, partially in response to the very issues outlined in Chapter 2. As a prototype, this game had its weaknesses. One of the major weaknesses appears to be unclear instructions at the initiation of the ARG about using the online platform, the reward system and the anonymous tip-offs. However, improved communication would be relatively straightforward to implement in future iterations of this game. Following are further suggestions for making a more efficient beta-version of this prototype ARG.

Many of the students appreciated the reward system, but not necessarily how it was implemented. Some improvements might include:

- Providing a clear instruction about how points will be allocated and deducted.
- Clearly distinguish experience points from bonus points.
- Increase the level of difficulty for gaining points.
• Consider the quality of participation rather than just the quantity; hence, more points for a summary of an article compared with just a link.

• Provide points for qualitative discussion threads among students to engage them and increase online participation.

• If ethics allow, add a competitive leader board with scores for all students and/or groups. If this is not allowed, possibly add a score board informing the rank of each group, without actual scores.

One of the main issues experienced in this iteration of the ARG was around the tip-offs. The following suggestions are provided to improve this:

• The students should be taught the difference between a tip-off and a confidential source.

• Add more tip-offs and/or more anonymous characters.

• Ensure every student receives each tip-off.

• Send different tip-offs to different groups. This would increase the workload of academics, and so would require additional planning.

• Use email tip-offs as well.

More innovative elements could be added depending on the tutors’ capability and willingness to apply digital technologies.

• Research tools and databases that journalists use, for example, land title search.

• Software for fast, accurate note-taking and fast, accurate net research can be trained within the ARG.

**Future research**

Future researchers working in the field might consider using an ARG for training investigative journalism students in different universities around the world. As journalism education is specific and particular to a local context, it would be interesting to get students in different countries to investigate the same issue in their own locality. For example, students could investigate a topic on genetically modified crops in their own region. A website could then allow students to share information. Using an ARG for such a global project would also reflect the increasingly global nature of journalism.
Similarly, collaboration through ARGs could be established across several different subjects within a university. For example, journalism and information technology units could be combined to work on computer assisted reporting, as has taken place in the Gum Shoe Project, at the College of New Jersey. This could be an interesting way to connect diverse subjects to gain vast student skill-sharing and networking.

News organisations can work closely with universities to provide suggestions regarding the required skill sets as well as provide feedback on the effectiveness of this resource. An example of such work discussed earlier is News 21, a venture between different US journalism schools and Carnegie-Knight Initiative (News21 2013). Although more research is required to investigate if such an integrated working environment could be useful, attempts should be made to incorporate such a cutting edge resource in the journalism curriculum.

There is a knowledge gap in the study of the emerging business models in the journalism industry. A comparative analysis of these models and their efficiency would be an interesting area to work on. This study can be explored within a particular regional context or it can be explored as a global phenomenon with a cross-regional comparison.

There needs to be more research into how social media can be used in journalism education, and indeed in education more broadly. In addition to Facebook and Twitter, social networks such as Storify, Scoop.it and Instagram should all be looked into at a broader scale.

There are some other broad areas that could be looked into. Research on data journalism, its emerging trends, challenges, and issues with privacy is required. The current use of convergence and its existing practice on a global scale is a valuable topic as well. And lastly, the consolidated study of the use of educational technology for investigative journalism education in UK, Europe, Asia, Africa and South America is required. There are some research articles available on this topic but a comprehensive review of literature and emerging practices is missing.
Summary

This study investigated the possibility of using alternate reality games for teaching an investigative journalism unit. Several digital games were identified as being potentially useful for journalism education; however, these were rendered problematic due to their current high cost and substantial time requirements. Thus, another genre of digital games, ARGs, was considered suitable for this research. An ARG has a flexible design module, the potential to engage people, and provide them with a real-life experience, which is what a journalism student requires. Therefore, it was considered practical to design an ARG for this study. An ARG has the potential to make a unit in investigative journalism more practical, real, interactive and engaging while training the skills required.

The Seed ARG developed for the present study allowed the students to complete an investigative report by working within a series of parameters. Most of the students did not feel that they were playing a game, perhaps a credit to the careful blending of game elements with the curriculum. The real-life investigation enabled students to gain experience and practise their journalistic skills including interviewing, research and writing. The academics accredited the ARG for supporting the course design in a structured manner. As a prototype, The Seed ARG was found to be a very useful and successful tool for this investigative journalism course.

The field of investigative journalism is rapidly changing. Teachers of journalism are trying to respond to these changes in their methods. Harnessing the power of games by amalgamating game elements into the curriculum (Annetta 2008), as this study has attempted may be one option. As well as incorporating digital technology into journalism education to mirror changes in the industry and prepare students, games can provide a semi-realistic environment in which students are motivated to practise journalistic skills.

While there are still many issues to resolve, it is hoped that this study can offer a practical starting point for such innovative educational tools, and a positive contribution to the field of investigative journalism pedagogy.
List of References


Althaus, SL & Tewksbury, D 2002, ‘Agenda setting and the “new” news patterns of issue
importance among readers of the paper and online versions of the New York Times’,

Altmeppen, KD 2010, ‘The gradual disappearance of foreign news on German television’,


Andersen, M 2013, “The Optimist” ARG Draws Focus to Disney History, ARGNet, viewed 15

Andersen, M 2008, World Without Oil Nominated for SXSW Web Award, ARGNet, viewed 2
February 2012,
<http://www.argn.com/2008/02/world_without_oil_nominated_for_sxsw_web_award />

Anderson, D & Benjaminson, P 1976, Investigative Reporting, Indiana University Press,
Bloomington.


Anderson, JA & Adams, M 1992, ‘Acknowledging the learning styles of diverse student
populations: Implications for instructional design’, in N Chismand & L Border (eds),

Project, Pew Internet, viewed 21 August 2012,


Annetta, LA 2008, ‘Video games in education: Why they should be used and how they are being used’, *Theory Into Practice*, vol. 47, no. 3, pp. 229-239.


Barab, SA, Gresalfi, M & Arici, A 2009, ‘Why educators should care about games’, 
Educational Leadership, vol. 67, no. 1, viewed 20 April 2011, 


Barrows, HS 2000, Problem-based Learning Applied to Medical Education, Southern Illinois University, Springfield.


Belzile, JA & Öberg, G 2012, ‘Where to begin? Grappling with how to use participant interaction in focus group design’, *Qualitative Research*, vol. 12, no. 4, pp. 459-472.


Bossio, D 2010, ‘Defining professionalism within higher education journalism studies’, *Australian and New Zealand Communications Association Conference*, July 6-9, Canberra,
Australia, viewed 29 August 2011,
<http://www.anzca.net/component/docman/search_result.html>.


Broeckelman-Post, MA 2008, ‘Faculty and student classroom influences on academic dishonesty’, *Education, IEEE Transactions on*, vol. 51, no. 2, pp. 206-211.


Butnik, SM 2005, ‘Neurofeedback in adolescents and adults with attention deficit hyperactivity disorder’, *Journal of Clinical Psychology*, vol. 61, no. 5, pp. 621-625.


Consalvo, M 2013, ‘Public Lecture: Being social in online games – five research elements to consider’, Melbourne, 8 July 2013.


Fullerton, T 2014, Game Design Workshop: A Playcentric Approach to Creating Innovative Games, CRC Press, Florida, US.


Games for Change 2013, ‘About’, viewed 9 March 2013,
<http://www.gamesforchange.org/about/>.

Gamasutra 2007, Road to the IGF: Global Conflicts: Palestine’s Egenfeldt-Nielsen, viewed 8


Gao, Q, Dia, Y, Fan, Z & Kang, R 2010, ‘Understanding factors affecting perceived

Online News and the Public, pp. 3-46, Lawrence Erlbaum, Mahwah.

Gåsland, M 2011, ‘Game mechanic based e-learning, a case study’, Master’s thesis,
Norwegian University of Science and Technology, Trondheim, Norway.

Gaunt, P 1992, Making the Newsmakers: International Handbook on Journalism Training,
Greenwood Press, Westport.

Gee, JP 2003, What Video Games Have to Teach us About Learning and Literacy, Palgrave
Macmillan, New York.

no. 1, pp. 59-64.

Gikandi, JW, Morrow, D & Davis, NE 2011, ‘Online formative assessment in higher

Gillies, RM, Ashman, AM & Terwel, J 2007, The Teacher’s Role in Implementing Cooperative

Gilmore, T, Krantz, J & Ramirez, R 1986, ‘Action based modes of inquiry and the host-
‘Collaborative conundrum: Do wikis have a place in the newsroom’, Online
Journalism Review, viewed 28 February 2013,


Half the sky movement: The Game 2012,
<https://apps.facebook.com/halftheskymovement/?fb_source=bookmark_apps&ref=bookmarks&count=0&fb_bmpos=4_0>.

Half the sky movement 2013, Movement, viewed 26 November 2013,

Halliday, J 2010, Investigative journalism ‘dying a death’, The Guardian, viewed 2 June 2011,
<http://www.theguardian.com/media/2010/nov/04/investigative‐reporting‐sheffield‐docfest>.


Hammersley, M 2013, What is Qualitative Research?, Blomsbury, London.

Handy, A 2005, The buzzmakers, East Bay Express, viewed 17 July 2011,


Hickson, M 2011, ‘Counting to one: The qualitative researcher’s magic’, *Journal of Occupational and Organizational Psychology*, vol. 84, no. 1, pp. 651-655.


Interview with B Birnbauer, Monash University, Senior Lecturer, 20 July 2011.

Interview with D Bossio, Swinburne University of Technology, Senior Lecturer, 18 July 2011.

Interview with D Muller, Swinburne University of Technology, Tutor, 31 May 2012.

Interview with D Robie, Auckland University of Technology Senior Lecturer, 3 December 2011.

Interview with G Treadwell, Auckland University of Technology Senior Lecturer, 2 December 2011.

Interview with H Sisson, Auckland University of Technology Senior Lecturer, 28 August 2012.

Interview with J Hollings, Massey University, Senior Lecturer, 16 November 2011.

Interview with J Tucker, Whitireia Journalism School, Programme Leader, 1 December 2011.

Interview with S Bebawi, Swinburne University of Technology, Lecturer, 25 May 2012.

Interview with S Tanner, University of Wollongong, Head of journalism and creative writing, 4 December 2012.

Interview with J Tully, University of Canterbury, Associate Professor, 2 December 2011.

Interview with K Moore, The Herald Sun, Insight Editor, 1 November 2011.

Interview with L Zion, LaTrobe University, Associate Professor, 16 September 2011.

Interview with M Bachelard, The Age, Investigative Reporter, 26 July 2011.

Interview with M Fletcher, New Zealand Journals, Training Organisation, 1 December 2011.

Interview with M Mitchell, Monash University, Lecturer, 20 September 2011.

Interview with M Ricketson, Australian National University, Professor of Journalism, 21 February 2012.

Interview with M Simons, Swinburne University of Technology, Senior Lecturer, 5 August 2011.
Interview with N Richardson, Leader Community Newspaper, journalism trainer, 13 December 2011.

Interview with P Chubb, Monash University, Deputy Head School of Journalism, 20 July 2011.


Interview with R Moynihan, Freelance investigative journalist/academic, 7 November 2011.

Interview with W Bacon, Freelance investigative journalist/academic, Melbourne, 10 December 2012.


Iuppa, NV & Borst, T 2006, Story and simulations for serious games: tales from the trenches, Focal Press, NY.


Jakobsen, H 2012, ‘Focus groups and methodological rigour outside the minority world: making the method work to its strengths in Tanzania’, Qualitative Research, vol. 12, no. 2, pp. 111-130.


Jarvis, P 1987, Adult Learning in the Social Context, Croom Helm, Beckenham.


Kitzinger, J 1994, ‘The methodology of focus groups: The importance of interaction between research participants’, *Sociology of Health and Illness*, vol. 16, no. 1, pp. 103-121.


Kolb, DA 1984, Experiential learning: Experience as the source of learning and development, Prentice-Hall, New Jersey.


Maniaty, T, Connolly, R & Jeffit, M 2011, WARCO, not released for public yet.


McEntire, A 2013, ‘Pakistani journalists: Risking it all


McLeod, J 2001, Qualitative Research in Counselling and Psychotherapy, Sage, London.


Rice, PL & Ezzy, D 1999, Qualitative Research Methods: A Health Focus, Oxford University Press, Melbourne.


Selwyn, N 2007b, ‘Screw Blackboard … do it on Facebook!: An investigation of students’ educational use of Facebook’, Poke 1.0 – Facebook social research symposium, November 15, University of London, viewed 22 February 2013, <http://doczine.com/bigdata/2/1366965979_bdb749d3e1/2g19b89ezl6ursp6e749.pdf>.


Singer, JB 2003a, ‘Who are these guys? The online challenge to the notion of journalistic professionalism’, *Journalism*, vol. 4, no. 2, pp. 139-63.


Solomon, DL 2000, ‘Philosophical inquiry in instructional technology: The forgotten pathway to learning’, *The National Convention of the Association for Educational*
Communications and Technology, the Research and Theory Division, viewed at 12 June 2010,


Speakman, B 2011, ‘Print Vs. Online Journalism: Are Believability and Accuracy Affected by Where Readers Find Information?’, MA thesis, University of Nebraska-Lincoln, Lincoln, viewed 3 August 2011,
<http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1022&context=journalismdiss>.


Stern, D & Huber, GL (eds) 1997, Active learning for students and teachers. Reports from eight countries, OECD, Peter Lang, Frankfurt am Main.


Strand, D 1998, Research in the Creative Arts, DETYA, Canberra.


Swinburne University 2014, *Bachelor of Arts (Journalism)*, viewed 30 August 2014,


Talak-Kiryk, A 2010, ‘Using Games In A Foreign Language Classroom’, MA thesis, SIT Graduate Institute, viewed 20 February 2011,
<http://digitalcollections.sit.edu/ipp_collection/484>.


The Economist 2013, *Battle of the Boxes*, viewed 27 December 2013,

The Pizza Code Mystery 2012, Wiki, viewed 3 April 2013,


TransmediaLab 2012, *A transmedia marketing campaign- case study*,
<http://www.dailymotion.com/video/xqq84q_white-so-serious-a-marketing-
transmedia-campaign-case-study_shortfilms>.

Treanor, M & Mateas, M 2009, ‘Newsgames: Procedural rhetoric meets political cartoons’,
The *Digital Games Research Association 2009*, September 1-4, Brunel University,
London, UK, viewed 20 October 2010, <

Trost, M 2010, ‘Gaming can make a better world: Jane McGonigal on TED.com’, *TED Blog*,

Tsvetkova, N, Stoimenova, B, Tsvetanova, S, Connolly, T, Stansfield, M, Hainey, T,
motivation in Web 2.0: the teacher training perspective’, 3rd *European conference on
games-based learning (ECGBL)*, Graz, Austria, viewed 2 June 2010,
<http://connection.ebscohost.com/c/articles/48947177/arguing-multilingual-
motivation-web-2-0-teacher-training-perspective>.

Tumber, H & Prentoulis, M 2005, ‘Journalism and the making of a profession’, in H de

Turner, CC 2005, ‘A new honesty for a new game: Distinguishing cheating from learning in
a beb-based testing environment’, *Journal of Political Science Education*, vol. 1, no. 2, pp.
163-174.

Turner, G 2000, ‘Media wars: Journalism, cultural and media studies in Australia’,

of the *Second Australasian Conference on Interactive Entertainment*, November 23-25,
Sydney, Australia, viewed 7 March 2011,
turner.pdf?ip=136.186.1.81&acc=ACTIVE%20SERVICE&CFID=64528223&CFTOKEN=
64275601&__acm__=1330036854_1c37a68749f273d7faa64af356d89>.  


Van Eck, R 2006, ‘Digital game-based learning: It’s not just the digital natives who are restless’, *EDUCAUSE*, vol. 41, no. 2, pp. 16-30.


Entertainment Computing (ICEC 2003), 8-10 May, Carnegie Melon University, Pittsburgh, USA.


Wilkinson, MB 1996, Action Research for People and Organizational Change, Queensland University of Technology, Brisbane.


Appendices
Appendix i: Declaration of statement

I, Wajeehah Aayeshah, hereby declare that all conditions pertaining to the clearance were properly met, and annual/final reports have been submitted.

Signed:
Appendix ii: Consent information statement

Project title
Playing with journalism: Gaming Technology in Investigative Journalism education

Investigator
Wajeehah Aayeshah

Introduction to project and invitation to participate
This project is a part of PhD study, which is an attempt to explore the potential of the sub-genre of digital games, that is, ARG as a powerful supplementary tool for journalism education. This research will serve as a foundation study for transition of digital games in the journalism curriculum.

What this project is about and why it is being undertaken
This particular project involves interviews. These are being conducted to explore the current issues faced by both, journalists and journalism academics and to find out their opinion about the effective shape of journalism education so that it can contribute to resolution of these issues. An overview of the journalism institutes around the world tells us that most of the contemporary Journalism education is addressing the issues and concerns faced by the journalist community. “Early results from the World Journalism Education Census show that universities are struggling to keep up with changes in journalism” (CIMA Report 2007, p.9). This is inconsistent with the past patterns of journalism education, where there have been two different schools of thought regarding journalism education. The first one supports inclusion of social sciences and liberal arts in the curriculum, in order to give students an analytical perspective and the holistic view. The second one advocates training technical skills and hands on experience that would be utilized in the news room (Reese 1999; Skinner et al 2001). There are institutions which have adapted the new media courses in an attempt to include both, a broader area of the academic reasoning as well as the practical training required for journalism. Hence, it is important to get feedback from journalists and academics about the current trends and the ways to increase effectiveness of journalism education.

References:

Project and researcher interests
This interview session shall partly satisfy the requirements for a PhD study. It is being undertaken as an individual and is not affiliated with any external organization.

What participation will involve – time, effort, resources, costs, compensatory payments, etc.
The participants will be providing their time and personal opinions, independent of the organizations they are affiliated with. The participants will not be kept confidential and their names shall be mentioned.

Participant rights and interests – risks and benefits/contingencies/back-up support
The line of questioning shall be provided to the participants, before starting the interview. There are no risks that can be predicted for the participants. None of the issues explored include any sensitive information. The data from this project will only be used for academic publication.

Participant rights and interests – free consent/withdrawal from participation
None of the information shared will be confidential. The participants will be acknowledged for their comments. The participants will have the opportunity to say no and/or alter any ascribed comments. The participants will have a right to withdraw their participation anytime before the study is published. This data from this project will only be used for academic publication.
The participants have been selected on the basis of their relevant expertise. The participants have been identified due to their publicly visible presence via research articles, websites, weblogs, journalistic writings, lectures, seminars or workshops.

The participants are requested to sign the attached consent form.

**Participant rights and interests – privacy and confidentiality**

Data will be stored on an electronic voice recorder and in a password-protected disk drive. The recorded information is confidential and no-one will have access to the recorded information or the disk drive or informed consent forms except for the researcher. The notes taken during the interview will also be kept in the locked filling cabinet, for five years. After which, the data will be destroyed.

The participants shall be provided with the copy of the draft including their names. A period of two weeks shall be given to all the participants, before officially submitting the draft for any sort of publication.

**Research output**

The data from the interview shall be incorporated in research papers, conference papers, or academic thesis. It will highlight the issues discussed by the participants and shall attempt to contribute to the resolution of some issues.

If you would like further information about the project, please do not hesitate to contact:

Dr Mark Finn  
Senior Lecturer in Games and Media  
Faculty of Life and Social Sciences  
Swinburne University of Technology  
PO Box 218, Hawthorn  
Melbourne, Victoria, 3122  
Ph: +61 3 9214 5254  
Fax: + 61 3 9819 0574

This project has been approved by or on behalf of Swinburne’s Human Research Ethics Committee (SUHREC) in line with the National Statement on Ethical Conduct in Human Research. If you have any concerns or complaints about the conduct of this project, you can contact:

Research Ethics Officer, Swinburne Research (H68),  
Swinburne University of Technology, P O Box 218, HAWTHORN VIC 3122.  
Tel (03) 9214 5218 or +61 3 9214 5218 or resethics@swin.edu.au
Appendix iii: Consent form

Project title
Playing with journalism: Gaming Technology in Investigative Journalism education.

Principal investigator
Wajeehah Aayeshah

1. I consent to participate in the project named above. I have been provided a copy of the project consent information statement to which this consent form relates and any questions I asked have been answered to my satisfaction.

2. In relation to this project, please circle your response to the following:

   - I agree to be interviewed by the researcher Yes No
   - I agree to allow the interview to be recorded by electronic device Yes No
   - I agree to make myself available for further information if required Yes No

3. I acknowledge that:

   (a) My participation is voluntary and that I am free to withdraw from the project at any time before the publication of research findings without explanation;

   (b) This Swinburne project is for the purpose of research and not for profit;

   (c) Any identifiable information about me which is gathered in the course of and as the result of my participating in this project will be (i) collected and retained for the purpose of this project and (ii) accessed and analysed by the researcher for the purpose of conducting this project;

   (d) My name will be mentioned and published in research findings of this project.

By signing this document I agree to participate in this project.

Name of participant: …………………………………………………………………………………………………

Signature and date: …………………………………………………………………………………………………
Appendix iv: Line of questioning: Journalism academics

1) From an academic’s point of view, what are current issues faced by the journalists due to the rise of digital and social media?

2) Are the journalism academics attempting to successfully address these concerns in the curricula?

3) How important is the use of digital technology, like iPad and web 2.0, in journalism education?

4) What kind of modern innovative educational resources are you using for training journalism?

5) What kind of other educational resources are you using?

6) How useful is scenario-based learning in journalism?

7) What are the main learning objectives of an investigative journalism class?

8) Can you make suggestions about elements that an Investigative Journalism class should cover?

9) In your suggestion, how should an investigative journalism class operate?

10) Should a PhD be a necessary requirement for teaching a journalism course? Why?
Appendix v: Line of questioning: Investigative journalists

1) What are current issues faced by journalists due to the rise of digital media?

2) How has social media affected mainstream journalism?

3) What sort of qualities do you look for while recruiting a fresh university graduate?

4) What sort of attributes and skillsets are required for investigative journalism?

5) Is there enough investigative reporting?

6) What impact does it have?

7) What do you suggest would ensure that investigative journalism becomes/continues being a fundamental part of mainstream journalism?

8) What recommendations do you have for journalism academics for training investigative journalism?
Appendix vi: First ethics clearance

SUHREC Project 2011/015 Playing with journalism: gaming technology in investigative journalism education

Dr Mark Finn, FLSS/Ms Wajeehah Aayeshah

Approved Duration: 05/07/2011 To 29/02/2012 [Adjusted]

I refer to the ethical review of the above project protocol undertaken on behalf of Swinburne's Human Research Ethics Committee (SUHREC) by SUHREC Subcommittee (SHESC2) at a meeting held on 4 March 2011. Your responses to the review as e-mailed on 1, 15 April, 8 June and 10 July were put to a nominated SHESC2 delegate for review.

I am pleased to advise that, as submitted to date, the project has approval to proceed in line with standard on-going ethics clearance conditions here outlined.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the National Statement on Ethical Conduct in Human Research and with respect to secure data use, retention and disposal.

- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator/supervisor requires timely notification and SUHREC endorsement.

- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants and any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.

- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project.

- A duly authorised external or internal audit of the project may be undertaken at any time.

Please contact me if you have any queries about on-going ethics clearance. The SUHREC project number should be quoted in communication. Chief Investigators/Supervisors and Student Researchers should retain a copy of this e-mail as part of project record-keeping.

Best wishes for the project.

Yours sincerely,
Kaye Goldenberg  
Secretary, SHESC2  
Administrative Officer (Research Ethics)  
Swinburne Research (H68)  
Swinburne University of Technology  
P O Box 218  
HAWTHORN VIC 3122  
Tel +61 3 9214 8468
Appendix vii: First ethics clearance (extension 1)

SUHREC Project 2011/015 Playing with journalism: gaming technology in investigative journalism education

Dr Mark Finn, FLSS/Ms Wajeehah Aayeshah

Approved Duration: 05/07/2011 To 29/02/2012 [Adjusted]

Project Modification: October 2011, November 2011

I refer to your e-mail of 7 November 2011 in which you requested a modification to the protocol by the inclusion of Skype for interviewing purposes. The request was put to a delegate of the relevant SUHREC Subcommittee (SHESC2) for consideration.

I am pleased to advise that, as submitted to date, the further modified project/protocol may continue in line with standard ethics clearance conditions previously communicated and reprinted below.

Please contact me if you have any queries about on-going ethics clearance, citing the SUHREC project number. Copies of clearance emails should be retained as part of project record-keeping.

As before, best wishes for the project.

Regards

Kaye Goldenberg

Secretary, SHESC2
Administrative Officer (Research Ethics)
Swinburne Research (H68)
Swinburne University of Technology
P O Box 218
HAWTHORN VIC 3122
Tel +61 3 9214 8468
Appendix viii: First ethics clearance (extension 2)

SUHREC Project 2011/015 Playing with journalism: gaming technology in investigative journalism education

Dr Mark Finn, FLSS/Ms Wajeehah Aayeshah

Approved Duration: 05/07/2011 To 29/02/2012 [Adjusted], [Duration reactivated from: 15/10/2012 to 28/02/2013]

Project Modification: October 2011, November 2011, October 2012

I refer to your two e-mails of 23 August 2011 with Annual Report attached, in which you requested to have the project reactivated in order to interview more participants. Your request was forwarded to a SHESC2 delegate for review. The delegate approved your request however, asked that you amend the statement in the Annual Report regarding the location for storage of the CDs from your private home to the supervising staff member. You agreed to make this amendment in your e-mail of 28 August 2012 and the revised documentation was received today (15 October) by e-mail.

You were separately asked to clarify the duration of the project (there seemed to be some inconsistencies with regard to the duration across the two previous modification requests). This was clarified in an e-mail of 4 October in which you also advised that no research activity took place beyond the clearance date of 29 February 2012.

I am pleased to advise that, as submitted to date, the further modified and extended project/protocol may continue in line with standard ethics clearance conditions previously communicated and reprinted below.

Please contact me if you have any queries about on-going ethics clearance, citing the SUHREC project number. Copies of clearance emails should be retained as part of project record-keeping.

As before, best wishes for the project.

Regards

Kaye Goldenberg

Secretary, SHESC2

Administrative Officer (Research Ethics)

Swinburne Research (H68)

Swinburne University of Technology

P O Box 218

HAWTHORN VIC 3122

Tel +61 3 9214 8468
Appendix ix: Consent information statement for students

“Playing with Journalism: Gaming Technology in Investigative Journalism Education”

Dear Sir/Madam,

My name is Wajeehah Aayeshah and I am currently undertaking a PhD in Life and Social Sciences at Swinburne University of Technology. I would like to invite your participation in my research project, “Playing with journalism: Gaming Technology in Investigative Journalism education”. The aim of this project is to evaluate whether Alternate Reality Games (ARGs) are appropriate educational resources.

In an ARG a gameplay is initiated through a certain platform (website, poster, pamphlet, or cell phone) and players play the game in real life. Collaboratively, they solve mysteries and puzzles through hints and clues gathered within the game play. I am trying to find out if we can use ARG to train students for investigative journalism.

The study involves two segments.
1) Participation in Post-ARG Focus Group:
This would require answering some general questions about yourself, followed by a series of questions/discussion regarding the ARG played in your tutorials. The Focus Group may take 60 - 90 minutes to complete. Although some questions may seem repetitive, please try to answer as honestly as possible. The interview will be audio recorded for the sake of record keeping. Handwritten notes shall be made during the proceedings. This Focus Group will be conducted outside the allocated tutorial time.

2) Participation in online discussion board:
This would require discussion and sharing of opinions about the tutorial activities. The participants will discuss the strengths and weaknesses of these activities, provide their feedback and suggestions. This will be an internal discussion board, accessible by the participants and the project-related personals only. Pseudonym will be used to maintain the anonymity of the participants.
The participants will remain completely anonymous and all information provided will remain confidential. No personal information will be identifiable through the results of this study or any subsequent publications. Your participation in this study is completely voluntary.

By completing the attached consent form, you are giving your consent to participate in this study. However, you can withdraw from this at any time before the publication of results.

If you would like further information about the project, please do not hesitate to contact:

Dr Mark Finn  
Senior Lecturer in Games and Media  
Faculty of Life and Social Sciences  
Swinburne University of Technology  
PO Box 218, Hawthorn  
Melbourne, Victoria, 3122  
Ph: +61 3 9214 5254  
Fax: + 61 3 9819 0574
Appendix x: Consent form for students

“Playing with Journalism: Gaming Technology in Investigative Journalism Education”

Principal Investigator: Wajeeah Aayeshah

1. I consent to participate in the project named above. I have been provided a copy of the project consent information statement to which this consent form relates and any questions I asked have been answered to my satisfaction.

2. In relation to this project, please circle your response to the following:

- I agree to participate in the online discussion forum Yes No
- I agree to participate in the focus Group Yes No
- I agree to allow the proceedings from focus group to be recorded by electronic device Yes No
- I agree to allow the data from Focus group to be used for this project Yes No
- I agree to allow my posts/comments in the online discussion group to be used for this project Yes No

3. I acknowledge that:

(a) My participation is voluntarily and can be withdrawn any time before or during the tutorial activities.

(b) This Swinburne project is for the purpose of research and not for profit.

(c) Any identifiable information about me that is gathered in the course of and as the result of my participating in this project will be kept confidential.

(d) My name will not be mentioned and published in research findings of this project.

By signing this document I agree to participate in this project.

Name of Participant: .................................................................

Signature & Date: .................................................................
Appendix xi: Consent information statement for academics

Playing with Journalism: Gaming Technology in Investigative Journalism Education”

Principal Investigator: Wajeehah Aayeshah

Dear Sir/Madam,

My name is Wajeehah Aayeshah and I am currently undertaking a PhD in Life and Social Sciences at Swinburne University of Technology. I would like to invite your participation in my research project, “Playing with Journalism: Gaming Technology in Investigative Journalism Education”. The aim of this project is to evaluate whether Alternate Reality Games (ARGs) are appropriate educational resources.

In an ARG a gameplay is initiated through a certain platform (website, poster, pamphlet, or cell phone) and players play the game in real life. Collaboratively, they solve mysteries and puzzles through hints and clues gathered with-in the game play. I am trying to find out if we can use ARG to train students for investigative journalism.

This interview involves answering some general questions about yourself, followed by a series of questions regarding the ARG played in your tutorials. The interview may take 30-45 minutes to complete. Although some questions may seem repetitive, please try to answer as honestly as possible. The interview will be audio recorded for the sake of record keeping. Handwritten notes shall also be taken during the interview.

The participants will remain completely anonymous and all information provided will remain confidential. No personal information will be identifiable through the results of this study or any subsequent publications. Your participation in this study is completely voluntary. By signing the attached consent information form, you are giving your consent to participate in this study. However, you can withdraw from completion of this interview at any time.

If you would like further information about the project, please do not hesitate to contact:

Dr Mark Finn
Senior Lecturer in Games and Media
Faculty of Life and Social Sciences
Swinburne University of Technology
PO Box 218, Hawthorn
Melbourne, Victoria, 3122
Ph: +61 3 9214 5254
Fax: + 61 3 9819 057
Appendix xii: Consent form for academics

“Playing with Journalism: Gaming Technology in Investigative Journalism Education”

Principal Investigator: Wajeehah Aayeshah

1. I consent to participate in this project as an interviewee. I have been provided a copy of the project consent information statement to which this consent form relates and any questions I asked have been answered to my satisfaction.

2. I acknowledge that:

   (a) My participation is voluntarily and can be withdrawn any time before or during the tutorial activities.

   (b) This Swinburne project is for the purpose of research and not for profit

   (c) Any identifiable information about me that is gathered in the course of and as the result of my participating in this project will be kept confidential

   (d) My name will not be mentioned and published in research findings of this project.

By signing this document I agree to participate in this project.

Name of Participant: ……………………………………………………………………………………………

Signature & Date: ……………………………………………………………………………………………
Appendix xiii: Survey: Feedback on the ARG

Age:  
Gender:  
Profession:  

1) How did you find this learning experience as compare to others?
2) What were the strengths of this ARG?
3) What were the weaknesses of this ARG?
4) Which was the least useful aspect of this ARG?
5) What was the most interesting aspect of this ARG?
6) Do you think this ARG assisted in the overall outcomes of this course on Investigative Journalism? How?
7) Were the text messages useful in gauging your attention to the topic?
8) Was the online component useful to your group work? If no why not, if yes how?
9) Did the ‘bonus points’ and ‘experience points’ increase your participation on the online platform? If yes why? If no, why not?
10) Any suggestions to make ARG more interesting?
11) Any suggestions to make ARG more useful for the course?
12) Any additional comments, suggestions, feedback?
Appendix xiv: Questionnaire for focus group on feedback of the ARG

1) How did you find this learning experience as compare to others?

2) What were the strengths of this ARG?

3) What were the weaknesses of this ARG?

4) Which was the least useful aspect of this ARG?

5) What was the most interesting aspect of this ARG?

6) Do you think this ARG assisted in the overall outcomes of this course on Investigative Journalism? How?

7) Were the text messages useful in gauging your attention to the topic?

8) Was the online component useful to your group work? If no why not, if yes how?

9) Did the ‘bonus points’ and ‘experience points’ increase your participation on the online platform? If yes why? If no, why not?

10) Any suggestions to make ARG more interesting?

11) Any suggestions to make ARG more useful for the course?

12) Any additional comments, suggestions, feedback?
Appendix xv: Tentative questionnaire for post-ARG interview (academics)

Age: Gender: Teaching experience: Professional background:

1) Is this the first time you have taught this course?

2) How has the experience been?

3) What do you think about the ARG?

4) What were the strengths of this ARG?

5) What were the weaknesses of this ARG?

6) Which was the least engaging of this game?

7) What challenges did you face as an academic while running this ARG?

8) How did you overcome them?

9) Which activity did you find the students to be most engaged in?

10) Which activity did you find to be non-productive in terms of both student engagement and learning outcome?

11) Do you think this ARG assisted in the overall outcomes of this course? How?

12) Suggestions to make this game more interesting?

13) Suggestions to make this game more useful for the course

14) Would you like to add anything to this overall discussion?
Appendix xvi: Second ethics clearance

SUHREC Project 2011/153 Playing with journalism: Gaming Technology in Investigative Journalism education

Dr Mark Finn, FLSS/Ms Wajeehah Aayeshah
Approved Duration: 20/02/12 To 31/07/12 [Adjusted]

I refer to the ethical review of the above project protocol undertaken on behalf of Swinburne's Human Research Ethics Committee (SUHREC) by SUHREC Subcommittee (SHESC2) at a meeting held on 29 July 2011. Your responses to the review as e-mailed on 23 and 29 September 2011 were reviewed by a SHESC2 delegate.

I am pleased to advise that, as submitted to date, the project has approval to proceed in line with standard on-going ethics clearance conditions here outlined.
- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the National Statement on Ethical Conduct in Human Research and with respect to secure data use, retention and disposal.
- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator/supervisor requires timely notification and SUHREC endorsement.
- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants and any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.
- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project.
- A duly authorised external or internal audit of the project may be undertaken at any time.

Please contact me if you have any queries about on-going ethics clearance. The SUHREC project number should be quoted in communication. Chief Investigators/Supervisors and Student Researchers should retain a copy of this e-mail as part of project record-keeping.

Best wishes for the project.

Yours sincerely

Kaye Goldenberg

Secretary, SHESC2
Administrative Officer (Research Ethics)
Swinburne Research (H68)
Swinburne University of Technology
P O Box 218
HAWTHORN VIC 3122
Tel +61 3 9214 8468
## Appendix xvii: List of interviewees

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Institute</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Bill Birnbauer</td>
<td>Monash University</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>2.</td>
<td>David Robie</td>
<td>AUT/ Pacific Media Centre</td>
<td>Auckland, New Zealand</td>
</tr>
<tr>
<td>3.</td>
<td>Denis Muller</td>
<td>University of Melbourne</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>4.</td>
<td>Diana Bossio</td>
<td>Swinburne University of Technology</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>5.</td>
<td>Helen Sisson</td>
<td>AUT</td>
<td>Auckland, New Zealand</td>
</tr>
<tr>
<td>6.</td>
<td>Greg Treadwell</td>
<td>AUT</td>
<td>Auckland, New Zealand</td>
</tr>
<tr>
<td>7.</td>
<td>James Hollings</td>
<td>Massey University</td>
<td>Wellington, New Zealand</td>
</tr>
<tr>
<td>8.</td>
<td>Jim Tucker</td>
<td>Whitireia Community Polytechnic (now retired)</td>
<td>Wellington, New Zealand</td>
</tr>
<tr>
<td>9.</td>
<td>Jim Tully</td>
<td>University of Canterbury (now retired)</td>
<td>Christchurch, New Zealand</td>
</tr>
<tr>
<td>10.</td>
<td>Keith Moore</td>
<td>The Herald Sun</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>11.</td>
<td>Lawrie Zion</td>
<td>LaTrobe University</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>12.</td>
<td>Margaret Simons</td>
<td>University of Melbourne</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>13.</td>
<td>Matt Mitchell</td>
<td>Monash University</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>14.</td>
<td>Matthew Ricketson</td>
<td>Australian National University</td>
<td>Canberra, Australia</td>
</tr>
<tr>
<td>15.</td>
<td>Michael Bachelard</td>
<td>The Age</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>16.</td>
<td>Mike Fletcher</td>
<td>New Zealand Journalism Training Organisation (NZJTO)</td>
<td>Wellington, New Zealand</td>
</tr>
<tr>
<td>17.</td>
<td>Nick Richardson</td>
<td>Leader Community Newspapers</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>18.</td>
<td>Philip Chubs</td>
<td>Monash University</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>19.</td>
<td>Ray Moynihan</td>
<td>Freelance investigative journalist/academic researcher</td>
<td>Byron Bay, Australia</td>
</tr>
<tr>
<td>20.</td>
<td>Richard Baker</td>
<td>The Age</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>21.</td>
<td>Saba Bebawi</td>
<td>Swinburne University of Technology</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>22.</td>
<td>Stephen Tanner</td>
<td>University of Wollongong</td>
<td>Wollongong, Australia</td>
</tr>
<tr>
<td>23.</td>
<td>Wendy Bacon</td>
<td>Freelance investigative journalist/academic</td>
<td>Melbourne, Australia</td>
</tr>
</tbody>
</table>
Appendix xviii: Unit outline

Faculty of Life and Social Sciences, Higher Education Division

Unit of Study Outline: HAJM 301: Investigative Journalism, Semester One, 2012

Unit of study outline

<table>
<thead>
<tr>
<th>Unit of study code</th>
<th>HAJM 301</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit of study name</td>
<td>Investigative Journalism</td>
</tr>
<tr>
<td>Teaching term/semester &amp; year</td>
<td>Semester One 2012</td>
</tr>
<tr>
<td>Contact hours (hrs/wk) or total contact hours</td>
<td>3 hours/week</td>
</tr>
<tr>
<td>Credit points</td>
<td>12.5</td>
</tr>
</tbody>
</table>

Learning outcomes
After successfully completing this unit, students should:

1. Understand the practical and ethical issues involved in investigative journalism.
2. Know how to use Internet-based social networking tools, corporate searches and press releases to find and develop investigative journalism stories.
3. Understand how to cultivate contacts and sources for investigative journalism.
4. Develop interview techniques for investigative journalism skills.
5. Develop skills for analysis of financial and statistical data.
6. Have developed skills to write investigative journalism stories.
7. Develop critical arguments relating to investigative reporting as a form of journalism.

Content
Students will learn investigative reporting skills through various research techniques where they learn to cultivate contacts and sources, analyse statistical data, and conduct corporate searches. Students will also learn how to use crowd sourcing and social media as investigative tools. This course will introduce students how to deal with media trained people through developing skills in interview techniques for investigative work. Students will produce investigative journalism stories and develop critical arguments in regards to the range of issues relating to investigative reporting as a form of journalism.

Key generic skills for this unit of study
You will be provided with feedback during the assessment for this unit of study on your progress in attaining the following generic skills:

- analysis skills,
- problem-solving skills,
- communications skills,
- ability to tackle unfamiliar problems
- ability to work independently
Learning and teaching structure
1 hours lecture and 2 hour tutorial per week.

In a Semester, you should normally expect to spend, on average, twelve and a half hours of total time (formal contact time plus independent study time) a week on a 12.5 credit point unit of study.

Course schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lecture topic</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28 February 2012</td>
<td>What is Investigative Journalism?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>6 March 2012</td>
<td>Forensic analysis of press releases</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>13 March 2012</td>
<td>Cultivating contacts and sources</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>20 March 2012</td>
<td>Using FOI</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>27 March 2012</td>
<td>Corporate searches</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>3 April 2012</td>
<td>Reviewing the GM food scenario and setting up the first assignment</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>17 April 2012</td>
<td>Doing a basic financial analysis</td>
<td>Assignment 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Due: Friday 20th April 2012</td>
</tr>
<tr>
<td>8</td>
<td>24 April 2012</td>
<td>Crowd sourcing and social media as investigative tools</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>1 May 2012</td>
<td>Dealing with media-trained people: interview techniques for investigative work</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>8 May 2012</td>
<td>Analysing poll and statistical data</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>15 May 2012</td>
<td>Identifying legal risks and getting copy legalled</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>22 May 2012</td>
<td>Doing it: Industry speaker</td>
<td>Assignment 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Due: Friday 25th May 2012</td>
</tr>
</tbody>
</table>
Teaching staff

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Campus and room no.</th>
<th>Email address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Saba Bebawi</td>
<td>Lecturer and Course Convenor</td>
<td>Hawthorn AS 423</td>
<td><a href="mailto:sbebawi@swin.edu.au">sbebawi@swin.edu.au</a></td>
</tr>
<tr>
<td>Dr Denis Muller</td>
<td>Lecturer</td>
<td>Hawthorn AS 423</td>
<td><a href="mailto:dmuller@swin.edu.au">dmuller@swin.edu.au</a></td>
</tr>
<tr>
<td>Dr Andrew Dodd</td>
<td>Lecturer</td>
<td>Hawthorn AS 426</td>
<td><a href="mailto:adodd@swin.edu.au">adodd@swin.edu.au</a></td>
</tr>
<tr>
<td>Wajeehah Aayeshah</td>
<td>Tutor</td>
<td>Hawthorn</td>
<td><a href="mailto:waayeshah@groupwsie.swin.edu.au">waayeshah@groupwsie.swin.edu.au</a></td>
</tr>
</tbody>
</table>

Assessment

a. Assessment task details:

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Individual/group task</th>
<th>Related learning outcome(s)</th>
<th>Weighting</th>
<th>Due dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1: GM Scenario</td>
<td>Individual/group task</td>
<td>1, 2, 3, 4, 5, 6</td>
<td>40 per cent</td>
<td>20th April 2012</td>
</tr>
<tr>
<td>Assignment 2: Bushfire Project</td>
<td>Individual</td>
<td>1, 3, 6, 7</td>
<td>50 per cent</td>
<td>25th May 2012</td>
</tr>
<tr>
<td>Participation</td>
<td>Individual</td>
<td></td>
<td>10 per cent</td>
<td></td>
</tr>
</tbody>
</table>

b. Participation requirements

You are required to attend lectures and tutorials. Due to key skills being taught in classes, less than 80 per cent of tutorial attendance will result in failing the subject.

c. Minimum requirements to pass this unit of study:

i) Obtain an overall mark of above 50 per cent
ii) Attend 80 per cent or more of tutorial sessions

d. Assessment criteria and details:

Assignment 1 – GM scenario

Students will work on a real life scenario for genetically modified foods. Students will be working in groups and are expected to produce a news story of around 600 words in length. This process will be conducted in the first five weeks of the semester and will include the analysis of press releases and conducting interviews.

Further details will be provided in tutorials.
Online participation

An online forum will be set up for the GM Scenario during the first five weeks. Accordingly, students are required to write about the following on a weekly basis:

1) Summary of their actions
2) Observations
3) Issues or problem
4) Achievement
5) Comments

Further details will be provided in tutorials.

Assignment 2 – Bushfire project

Assignment Two looks into the implementation of the Black Saturday Bushfires Royal Commission recommendations. This is an individual project where students need to produce a story about 600 words in length. Students will select some recommendations from the Royal Commission that they need to research. Students will need to see if these recommendations have been implemented, look for evidence of where they have and/or haven't been implemented and to investigate why/why not. Additionally students need to identify what the issues are, what the effects are, what needs to be done, and who is affected, etc. The story MUST include new information that has not been reported elsewhere, MUST contain news, and MUST be up to date. The investigative imperative is to dig deeper, make extra calls, talk to more people and read deeper into the topic so that students are really up to speed on the recommendation they're reporting on. Ultimately students need to break real news. Evidence of the digging is a major criteria in the assessment.

Further details will be provided in tutorials.

e. Submission of assignments:

Assignments are to printed and submitted (with completed cover sheet attached) by 5pm in the Assignment Box that is located on the ground level of 400 Burwood Road.

All written research assignments are required to be submitted as follows:

- All written assignments are to include a completed and signed Assignment Cover Sheet which is to be attached to the front of the essay. This can be downloaded from Blackboard.
- All students are strongly advised to keep photocopies and electronic back-up copies of all work submitted.
- All students are also strongly advised to always keep an independent backup of electronic work. This applies to work in progress as well as submitted work. You should regularly back up electronic material onto a zip disk or CD. Do not keep all of your assignments and other important material only on a single medium.

f. Extensions and late submissions:

The ability to meet tight deadlines is fundamental in all occupations concerned with the publication of information. Extensions will only be granted by the course convener by email in cases of illness
or personal trauma with supporting documentation. Extensions must be applied for before the due date. A penalty of 3 per cent a day will apply to late assignments. Assignments submitted later than one week without an extension will not be marked.

g. Assessment results and retention of assessed materials:

Assessed material will be returned to you, but you must retain all assessed material that contributes to the final grade up until such time as the final grades are published. The assessed material must, after a reasonable time, be produced on demand for review by the Convenor. Non-compliance with this requirement may result in loss of all credit for the assessed material not so produced.

h. Groupwork guidelines:

A group project is the collective responsibility of the entire group, and if one member is temporarily unable to contribute, the group should be able to reallocate responsibilities to keep to schedule. In the event of longer-term illness or other serious problems involving a member of a project group, it is the responsibility of the other members to make the project supervisor aware of the situation straight away.

Group project reports must be submitted with the project cover sheet, signed by all members of the group. All group members must be satisfied that the work has been correctly submitted. Any penalties for late submission will apply to all group members, not just the person who submitted.

i. Plagiarism:

Plagiarism is the action or practice of taking and submitting or presenting the thoughts, writings or other work of someone else as though it is your own work. Plagiarism includes any of the following, without full and appropriate acknowledgment to the original source(s):

(i) The use of the whole or part of a computer program written by another person;

(ii) The use, in essays or other assessable work, of the whole or part of a written work from any source including but not limited to a book, journal, newspaper article, set of lecture notes, current or past student’s work, any other person’s work, a website or database;

(iii) The paraphrasing of another’s work;

(iv) The use of musical composition, audio, visual, graphic and photographic models;

(v) The use of realic, that is objects, artefacts, costumes, models and the like.

Plagiarism also includes the preparation or production and submission or presentation of assignments or other work in conjunction with another person or other people when that work should be your own independent work. This remains plagiarism whether or not it is with the knowledge or consent of the other person or people. It should be noted that Swinburne encourages its students to talk to staff, fellow students and other people who may be able to contribute to a student’s academic work but that where independent assignment is required, submitted or presented work must be the student’s own.

Enabling plagiarism contributes to plagiarism and therefore will be treated as a form of plagiarism by the University. Enabling plagiarism means allowing or otherwise assisting another student to copy or otherwise plagiarise work by, for example, allowing access to a draft or completed assignment or other work.
j. Assessment and Appeals Policy and Procedure

The information outlined in the Assessment sections above is covered in more detail in Swinburne’s Assessment and Appeals Policy and Procedure. Students must be familiar with the Policy and Procedure, found at

http://ppd.swin.edu.au/stuinf/AssessmentAndAppealsHigherEducation.htm

The policy and procedure provides details about:

i) Results
ii) Examinations
iii) Students with disabilities and special needs
iv) Re-assessment of student work
v) Special consideration/examination issues
vi) Examination and assessment discipline including cheating and plagiarism
vii) Last to complete
viii) Progress review
ix) At-risk
x) Appeals

Students should make themselves familiar with all aspects of the Policy and Procedure, as failure to do so is not grounds for appeal.

Students are advised to seek advice from the staff at the Swinburne Student Amenities Association SSAA (http://www.swinburne.edu.au/ssaa/) if they require assistance with advocacy for Sections 12 (At-Risk and Progress Review) and 13 (Appeals) of the Policy and Procedure.

Student feedback:
Swinburne seeks student feedback in a number of ways, including through periodic “Student Feedback on Units” and “Student Feedback on Teaching” surveys, as part of the university’s approach to quality assurance and improvement. Possible improvement based on both student and staff feedback is considered by Unit Convenors, Unit Panels made up of relevant teaching staff, Program Panels, Faculty Academic Committees, and the Academic Programs Quality Committee, as appropriate.

Swinburne Graduate Attributes:
Swinburne graduate attributes signify that the university intends that its teaching programs assist all its graduates to be:

i. capable in their chosen professional, vocational or study areas;
ii. entrepreneurial in contributing to innovation and development within their business, workplace or community;
iii. effective and ethical in work and community situations;
iv. adaptable and able to manage change; and
v. aware of local and international environments in which they will be contributing (eg socio-cultural, economic, natural).

Safety standards and conduct requirements:
The University executes safety drills without warning. Be prepared to follow instructions from staff and/or wardens to evacuate the building in a safe and orderly manner.
All students are expected to respect the rights and sensibilities of their fellow students and teaching staff. This also applies in respect of the content of video and audio work submitted for assessment. The University had implemented anti-discrimination and harassment policies and procedures to promote a discrimination and harassment free work and study environment for all staff and students


Safety procedures in laboratories must be followed. Open-toed shoes are not permitted in certain laboratories. Drink or food is not permitted in teaching spaces. The supervisor is authorised to exclude students for dangerous or disruptive behaviour which would result in forfeiture of all marks for the laboratory activity. The playing of computer games is not allowed in the computer labs.

Special needs
If you have special needs you should advise your Faculty and the Unit of Study Convenor by the end of the second week of the teaching period. In addition, you are recommended to notify the Equity Office if you have not already done so.

See also the “Students with Disabilities and Special Needs” Section of the Assessment and Appeals Policy & Procedure, at http://ppd.swin.edu.au/stuinf/AssessmentAndAppealsHigherEducation.htm

Course outline and reading
Journalism is a fast-changing field. The below is only a guide, and there are almost certain to be changes. For up to date information and reading for each week, see under Learning Material on the Blackboard site for this unit.

Resources and reference material
Core reading:

Hugo de Burgh (2008) *Investigative Journalism*, Routledge (available as an ebook at Swinburne library)

Additional reading:


Recommended reading:

Arena
Australian Broadcasting Authority (http://www.aba.gov.au/)
Australian Communications Authority (http://www.aca.gov.au)
Australian Government Information Management Office (http://www.agimo.gov.au/)
Australian Humanities Review
Australian Journal of Communications
The Bulletin
Communications Law Centre (http://www.comslaw.org.au/)
Communications Update
Continuum
InterMedia (http://www.iicom.org)
International Journal of Communications Law & Policy
Media & Arts Law Review
Media Information Australia
Media International Australia incorporating Culture and Policy