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Providing Feedback on Collaboration and Teamwork Amongst Off-Campus Students

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Abstract:
While the importance of developing and giving feedback on generic skills is widely recognised for on-campus students, this is still largely ignored for off-campus students, primarily due to the practical difficulties involved. This paper reports on 2 phases of the implementation of a compulsory group work project into an off-campus unit, delivered through Open Universities Australia. Wikis were used as the technical tool to facilitate the project, which was successful for students, albeit requiring more support than anticipated from staff. While all participating students successfully completed group projects, few groups demonstrated high levels of collaboration during the process. At the completion of the second trial, students were provided with feedback on their teamwork skills, meeting the initial objective of the project.

Keywords: Online collaboration, Wikis, Open learning

Introduction
As with most other higher education institutions, Swinburne University intends that our graduates will develop strong generic skills in several areas, including teamwork. The University makes the following claims:

“In order to assist students in developing these graduate attributes ...Swinburne assesses their mastery of discipline-based knowledge and also provides feedback on their progress in attaining key generic skills such as:

- teamwork skills;
- analysis skills;
- problem solving skills;
- communications skills;
- ability to tackle unfamiliar problems; and
- ability to work independently.”

(Source: http://www.swinburne.edu.au/corporate/registrar/ppd/docs/SwinburneGraduateAttributesandKeyGenericSkills.pdf)

While a great deal of focus has been placed on how to help students practice these skills, and how to give useful feedback on their progress, this has largely been concentrated on our on-campus students. Fostering teamwork skills for off-campus students is often ignored, or considered too difficult to manage, especially since one of the major advantages of off-campus study is the opportunity for students to work at their own pace. Off-campus students are often working full-time or have full-time family responsibilities, and, especially for those enrolled through Open Universities Australia (OUA), are at widely different academic levels and with diverse motivations for undertaking individual units of study. Nevertheless, many of these students intend to graduate with a degree from one of the contributing universities, and are therefore expected to have attained the required key generic skills as claimed by that institution. We can no longer afford to ignore the needs of these students for opportunities and feedback in developing these skills.
This paper reports on two consecutive phases of a trial project introducing a compulsory group work project into a unit delivered through OUA. It was hoped that the project would not only require students to develop their theoretical understanding of a chosen topic, but that students would also have the opportunity to develop their teamwork skills through collaboration. To encourage this, a proportion of the total marks for the project (15 of 55%) were awarded for evidence of an individual student’s enhanced engagement in the teamwork process that had the potential to demonstrate or lead to greater collaboration. A major objective of the trial was to investigate means of assessing the relative teamwork skills of individual students within the teams, and for staff to ultimately provide feedback to students on their progress in developing these skills.

Wiki Trial

Wikis were chosen as the collaboration platform, following on from success reported by others who have used these for on-campus students. The outstanding strength of the Wiki format is that it provides the opportunity for collaboration and is ‘designed to facilitate exchange of information within and between teams’ (Goodnoe 2005, cited in Minocha & Thomas, 2007). Wikis have already been used successfully in the higher education context: to enable hundreds of students to participate in a collaborative icebreaker exercise at Deakin University (Augar et al, 2004); and for students to work together on a problem-solving exercise in Biomedical Science at Monash University (Brack et al, 2007), amongst others (for example, Raman, Ryan & Olfman, 2005). This made them ideal for our purposes. Early shortcomings of Wikis identified by Minocha & Thomas (2007) have now been rectified in most commercially-available Wikis.

Wikis now provide an easy-to-use online facility for students to develop a web-site, where all members of the group have full access to view and edit pages within the site, and to create new pages as required. All members are able to view the history of each web page (showing any alterations made and by whom). This feature allows staff to easily view those who have contributed and compare the extent of their contribution. Each page also has an associated discussion forum, where group members can comment on work done, suggest changes, or ask questions of each other. This facility also allows staff to assess who is providing leadership in the group (e.g. acknowledging work by fellow team members, suggesting additional content, setting up online meetings etc). An added feature, which both staff and students utilised a great deal, was the ability to easily send email messages to the entire team. Additionally, group members are able to request notification (via email) of any changes to their Wiki, so students can easily keep up-to-date with how their team is progressing.

The opportunities for real collaboration between students, rather than a combination of individual pieces of work, is the feature of Wikis that is particularly appealing. In addition, since Wikis begin as essentially a ‘blank page’, more control (and hence responsibility) is afforded to the student:

“Teaching models that integrate technologies such as blogs or wikis may afford more learner control, and thus may be more effective at delivering instructional strategies that support knowledge construction. Today’s learners demand more control of the learning experience when they need it; how they need it. This puts added pressure on distance educators to change outdated practices that no longer serve the needs of highly mobile students” (Beldarrain, 2006, p 142-3).

Since no institutional Wiki was available, a 12-month private license was purchased from Wikispaces (http://www.wikispaces.com/) which allowed us to control the level of access permission. For example, Wikispaces allow three levels of access:

- Public: Anyone can view and edit pages (for example, Wikipedia);
- Protected: Anyone can view the Wiki, but only members of that Wiki can edit the pages; and
- Private: Only members of that Wiki group can view or edit the content of the Wiki.

The private license arrangement allowed us to create unlimited ‘private’ Wikis, where only invited group members could view the content of the Wikis.

The major disadvantage of using an external Wiki provider was that all members of our Wikis (staff and students) were required to create their own free user accounts on the Wikispaces site. While this was not an onerous task for
any individual, trying to ensure all students read and responded to their email invitations, and more importantly, recorded their account details, proved to be an organisational nightmare. Setting up the Wikis, inviting students to join, and providing support in using the Wikis was a relatively easy task, compared with the management aspects of ensuring access and of creating student groups!

The Group Project

SSK 13 (Learning and Communication Behaviour) is a study skills unit offered to students who are beginning a degree course through OUA, with average enrolments each study period of 50-100 students. The unit is offered every study period (OUA offers four study periods per year), as such it is taught throughout the year to different cohorts of students. This paper describes our experiences over two consecutive study periods in 2008.

Students were asked initially to complete individual research on a given topic in the form of an essay. The topic provided was “The History of Globalisation” and was chosen as it allowed students sufficient scope to explore areas of individual interest under this broad area. This topic was then used as a basis for developing an understanding of the modern manifestation of globalization, to be developed further in the group project. This individual essay then formed the basis of their source material for the subsequent group assignment, completed using the Wiki tool. A number of areas of research were suggested to the students to explore the expression of globalization in the world (e.g. celebrity, sport, popular movements such as Live Aid, Make Poverty History, etc).

We hoped that this group process would provide the opportunity for students to produce a genuinely collaborative piece of work through participation in the research and writing process, by editing their peers’ initial contributions, and collectively exploring a number of the expressions of globalization. The final collaborative stage was the preparation of a conclusion, linking different aspects together.

The project extended over six weeks, with other course work continuing at the same time. All students were encouraged to participate in weekly online chat sessions with their tutors and reminders about the group project were frequently provided at these sessions. All Wiki groups were ‘private’ to start with (where only the group members and teaching staff had any access) but were opened up as ‘protected’ sites after the due date for the assignment passed. This meant that other groups were then given read-only access to each other’s finished product.

Group allocation was performed in week 7 of the study period, by which time we hoped that all late enrolments had been processed, and (incorrectly as it turned out) that any likely withdrawals would have been completed. Students were assigned into groups of six or seven, with an expectation that through attrition most groups would reduce in size by an average of two, making them more workable (group sizes ended up in a range from 3 to 7). The geographical location of students was used as the initial divider – since most students were only available for real-time meetings in the evening, we tried to organize groups around time-zones to help cater for this. There was a small element of self-selection based on participation in regular weekly online chat sessions where regular participants in these sessions built a rapport with each other and hence requested to work together.

Scaffolding team work

Despite our positive expectations of the level of engagement of our OUA students, we were aware that a number of problems could arise from working in teams in the online environment. In particular, Dirkx and Smith (2004) argue that students resist this form of collaborative learning for a couple of key reasons, including the threat of a loss of individuality within a group environment, leading to ‘fears of isolation, alienation and estrangement from the group, associated with the asserting of one’s individuality’ (p. 134). In anticipation of these potential difficulties, these issues were addressed in the course material for our students, in an attempt to scaffold the team work processes.

Caspersz, Skene and Wu (2006) have shown that the teaching of team work at universities has historically been subject to a one-size-fits-all approach, adopted from a very old (1965) business model that they argue does not work in a university environment. They claim that this model of team development of “Forming, Storming, Norming &
Performing”, developed by Tuckman (1965), has run its course and is not applicable to the student experience of teamwork, yet it still figures in university curricula. In response to their research findings, we provided students with their four-stage model, detailed below:

1. **Pre-Team Forming Phase (weeks 1 – 4)**
   This phase is characterised by a “getting to know you” period, where the group begins the process of interaction with a view to establishing relationships and determining each individual’s capabilities. The tutor or lecturer still has a role at this stage, to encourage negotiation of team roles and project content, to remind teams of the passage of time, to move them to the next phase and to make them aware of looming deadlines.

2. **Mid-Term Progress Phase (weeks 4 – 8)**
   This phase may see the group dividing into individual or smaller units (in the case of a larger group) to undertake the task. This is a phase of rapid progress which curtails but deepens the team progress and bonding phase, but may also expose those team members who are loafing as well. This time is when team members realise the magnitude of their task and all processes quicken. This phase will require some direction from team members, building on the Pre-Team Forming Stage. There may be an indicative leader or an indication that the team formation process has worked effectively and there is an implicit harmony apparent in the team. It may also be the case that a substantial amount of work is completed by this phase.

3. **Completion Phase**
   This phase may be the most urgent and requires a particular set of skills on the part of the team to know when there is enough information and how to bring the process to a conclusion. Submission of the final Wiki is the key focus and requires a new level and type of management, and this phase is characterised by the potential for rising tensions within the team.

4. **Celebrate & Disband Phase**
   In a good team experience, each member emerges with an enhanced sense of the positive contribution they made and the role their peers played as well.

Caspersz, Skene and Wu stress that there is a need for management through these last three phases to facilitate and consolidate the process. This may occur internally but it is likely that the role is provided externally (by the tutor) depending on the nature of the group and the overarching organization.

**Student Support**

An introductory lecture (with live demonstration) on using Wikis was recorded and made available as an online lecture in the unit’s BlackBoard site. This was supported by a step-by-step manual covering the key technical steps of Wikis, available online as a pdf document. Additional support was provided via scheduled online chat sessions with key staff – one at the start of the project (mostly covering access issues and getting started) with a follow-up session about half way through the project, when students were beginning to explore the capabilities of the technology. Participation in these sessions was optional. Ongoing and personalized support was also provided on demand, both via the unit’s Blackboard site, and via email and phone contact with the project managers (the Unit Convener and the Academic Developer).

**Assessment**

As we discussed above, there was an expectation that students would engage in the construction of the Wiki pages in a truly collaborative spirit. Initial discussions involving the teaching team agreed that an outstanding assignment was one which engaged with the topic in an academic and technological way, with evidence of group collaboration being an essential element. The writing was expected to be academically-based, i.e. claims were to be correctly referenced with students making use of peer-reviewed sources (despite the use of Wikis in the project, Wikipedia was not considered appropriate reference material!). In this context, an average assignment contained few quality references to peer-reviewed journals. This was considered to be the first hurdle that an assignment needed to pass in order to achieve a higher mark. The other main criteria (especially in the first phase of the trial), was avoiding the overuse of multimedia as a substitute for written discussion. The displacement of written material appeared to be the result of
having IT-skilled students in a group, but was possibly also the result of a lack of clear direction by the teaching staff, who did not foresee the extent to which this displacement would occur.

The group Wikis were assessed by a panel of the teaching staff (considered necessary since this was our first experience in assessing Wikis) The panel collectively agreed on criteria and standards after viewing all Wikis in the first phase of the trial, and used the same criteria for the second phase. The group project was allocated 40% (of a possible 55%) of the semester marks with the additional 15% allocated for individual efforts in relation to the group work. Criteria for this aspect included evidence of leadership, organisation, editing colleagues’ work, etc. A simple assessment rubric was developed (see Table 1).

<table>
<thead>
<tr>
<th>Marks awarded (out of 15)</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Evidence of collaboration with fellow group members Integrates individual contributions into a cohesive whole Attempts to include group members at all stages Acknowledges and welcomes contributions from fellow group members</td>
</tr>
<tr>
<td>12</td>
<td>Evidence of collaboration with fellow group members Attempts at integrating individual contributions</td>
</tr>
<tr>
<td>10</td>
<td>Evidence of solid individual contribution, but little attempt at integrating work of others into a cohesive whole Minimal attempt at collaboration or involvement with fellow group members</td>
</tr>
<tr>
<td>8</td>
<td>Late (“last minute”) individual contribution No evidence of collaboration with fellow group members</td>
</tr>
<tr>
<td>6</td>
<td>Late joining into Wiki, contribution too late to allow fellow group members to attempt integration or editing No evidence of collaboration</td>
</tr>
<tr>
<td>3</td>
<td>Minimal individual contribution, and contribution of poor standard</td>
</tr>
<tr>
<td>0</td>
<td>No attempt to participate in group project</td>
</tr>
</tbody>
</table>

Table 1: Assessment rubric for individual teamwork component

*Note: These marks and criteria are a guide only – markers may award additional marks in some circumstances (for example where an individual has had no opportunity to collaborate with others) or subtract marks (for example, where an individual has had a disruptive or negative impact on the functioning of a group).*

**Results of Wiki Trial – Phase 1**

**Feedback from Staff**

Uptake by students was mixed until the middle of the study period with only about half the cohort actively accessing their group Wikis by mid-project. Early indications were that students had a surprisingly poor understanding of how a Wiki could be used (or at least how we expected it should be used). Many students were using the home page as a discussion area rather than making use of the inbuilt discussion forum available for each page. As the study period progressed, students discovered the features available and how to incorporate different online elements into their web pages so the final products showed good usage of hyperlinks, images and multimedia files. Not surprisingly, as the due date for the project drew near there was a late rush of activity with much of the content and extra features being added in the last few days. We believe that copyright infringements were rife (in the use of images and multimedia animations without source attribution), so we were relieved that we had chosen the private licence.

Most groups completed their projects on time and to a satisfactory academic standard, but disappointingly displayed a low level of teamwork. Only one group appeared to have been truly collaborative in all aspects of their assignment – most groups were very strategic in their organisation with each student contributing a page on a separate topic and minimal effort made to read each other’s work or to link the disparate elements effectively. The
single collaborative group appeared to do two things well: firstly, the group worked as a team in both the writing and
the editing phases, evidenced in their posts to each other and in the history found in their Wiki pages which
demonstrated the complex collaborative nature of the construction of their group work. The second aspect of their
work that was impressive was their effective use of peer-reviewed journals. This was an important aspect of the
course which a number of groups did well but not in combination with the collaborative approach used by this
group. Many students did demonstrate good project management skills (although this was certainly not consistent
across the cohort) and the discussion forums showed strong evidence that they built relationships with each other
(McIntosh & Weaver, 2008).

Feedback from Students

No formal feedback was sought from students, however many students did provide unsolicited feedback as part of a
reflective essay and via email or via the unit’s Blackboard site. All feedback was broadly positive. Students saw the
value of the exercise and felt that the Wiki approach was innovative and up-to-date. They felt that the skills acquired
through the Wiki process widened their skill-base in ways that they did not expect. Students reported expected
reservations about the division of labour within the groups and some consternation about “silent” members. These
students are a particular OUA phenomenon: some students remain enrolled despite having made a decision to no
longer participate. Since the teaching staff are usually unaware of this decision these students are allocated into
groups, but of course are not active members.

Students did indicate that they shared similar pride in their finished Wiki (similar to that reported by Brack et al,
2008) and that the supportive interaction with peers was a valued aspect of the project:

“… I really enjoyed participating in Group 14’s Wiki. It was good reading the other members of the
group’s essays and then discussing the strengths and weaknesses of each. Knowing their marks also
put into perspective where I can improve my future essays. …. The group was very supportive of each
other with some having to travel interstate several times with work and also covering for me ….
Ultimately I believe that we produced a very good product.” (Student comment in a reflective essay)

Results of Wiki Trial – Phase 2

In response to results from the trial in the first study period, a number of minor changes were made to facilitate the
project. Clearer instructions on creating accounts and getting started were provided in the recorded lecture and
examples of similar group Wikis were provided so that students could visualise what a completed Wiki might look
like. More information on correct citation methods was provided and our expectations about citations and
referencing were highlighted.

Several groups were formed by students themselves – students who were regular active participants in the weekly
online tutorials early in semester arranged to form groups among themselves. Remaining students were organised
into groups by the teaching team.

Feedback from Staff

Staff reported that student groups were quicker to get started in the second study period, possibly due to the
improved instructions and better articulation from the staff. Students displayed improved familiarity with Wikis,
more than likely due to accessing the examples provided. Similarly, there was a marked improvement observed in
the use of citations and in referencing, again probably due to the stronger emphasis on this from the teaching team.
Most Wikis exhibited a greater concentration on the written content and less on the technological gimmicks
observed in the Wikis from the previous cohort.
In addition staff reported an improved level of collaboration, but again, only in some teams. It appeared that building online relationships prior to beginning the group project made an enormous difference to the level of interaction between students.

Evaluation of individual students’ teamwork skills was conducted using the assessment rubric previously developed (see Table 1 above) and feedback was provided to students on their marks for this component of the project as well as on the content of the overall Wiki (the same mark for the Wiki content was awarded to all active members in the group). This feedback was provided at the completion of the assessment process, although in future we would like to give students some formative feedback on their progress towards these marks during the project.

Feedback from Students

Informal feedback was sought from students via a series of questions posted in their BlackBoard discussion area. While all responses to these questions were highly positive it must be acknowledged that all these responses were from more active and engaged students. Possibly a completely different perspective would emerge if less-motivated students had responded.

Those students who did respond reported high levels of enjoyment, a great deal of pride in their finished work and the observation that they liked the variety of communication tools available.

In response to a question about the community-building nature of the Wikis (“Have you felt part of a team?”) student responses included:

“Yes. It has been good to get together with the other members of the group. We not only discuss the Wiki but also have a bit of fun, which makes the whole process of making a team more fun. I think the chat room is an integral part of the process. We even have a bit of fun on the Wiki pages but also contribute in what way we can.”

“My experience with the Wiki was very positive & enjoyable. I’m a little sad that this portion of our unit is over, actually. Did I feel part of a team? Most certainly! Our group was very pro-active and I feel that each member made the most of the tools that we were given.”

Responses to a question in relation to whether students experienced any technical difficulties included:

“...I also had trouble wrapping my text around a video...but you were there to help at a moments notice and I was very impressed by your quick response (thank you again for that).”

“I have found it easy to edit and add to other people’s pages.”

“I personally found it quite intuitive and very basic, and some others in the group that are good with technology have spelled it out for those in the group who perhaps struggle a bit more, but overall it's not that complicated.”

Students were informed that their responses to this discussion forum might be used in a paper written by the teaching team, and several students followed up with unsolicited emails after the end of their study in this unit enquiring about outcomes of this paper. All these students have again expressed how much they enjoyed the project, and have asked to be kept informed of any published outcomes from the project. This level of continued interest is something the authors have not experienced before!

Discussion

Despite initial reservations and student fears, the student response has been generally positive. The outcome for students from the collaboration has been beneficial (as reported in unsolicited student feedback and supported by
staff perceptions) but the process has been difficult, particularly in the first study period (Phase 1 of the trial). These difficulties arose from two key sources: the use of an external Wiki provider; and the difficulty in communicating with our students. The nature of the private Wiki required that students be “invited” to join through an email sent to their student accounts. The invitations were pre-empted by an official announcement placed on the BlackBoard front page. This methodology of contact revealed a hitherto unexpected state of affairs: that a significant percentage of students did not engage with these basic and essential portals of communication. This was a surprise to the teaching staff who felt that their experience of OUA students over the last five years was that they were highly engaged and responsive to the communicated material.

We had hoped that students would collaborate in the writing of the Wiki but most students took a strategic approach preparing individual pages and cobbled these together at the end of the process, although the level of collaboration did improve from the second study period (Phase 2 of the trial). Our experience supports the findings of Mindel & Verma (2006), who reported that:

“Unless strongly guided to do otherwise, students tended to accumulate or aggregate content on wiki pages rather than truly collaborate. ...The distinction between aggregating and collaborating is that collaborating requires one student to modify the content posted by another student (i.e. rework earlier writings by others), whereas aggregating is simply adding content to an existing wiki page.” (Mindel & Verma, 2006, p.24).

While it was difficult to get a definitive sense of the students’ strategy, many indicated that the difficulties of distance and perceived variable standards from other group members meant that the choice about whether to collaborate or not was rendered expedient to the necessity to finish in a timely manner. Some students thought that if they produced quality individual work this could be an argument for a better mark if the group project was inadequate or incomplete.

In general, across both study periods of this trial, both the academic standard of the group Wikis and the level of collaboration exhibited by students within the groups were markedly higher than that observed for an identical project undertaken by on-campus students.

**Future Plans:**

After reflecting on the project as a whole we intend to persist with the Wiki but are still hoping that we can use an in-house system, utilizing the students’ existing Blackboard accounts. The teaching team provided all technical support for this project, which, while not difficult, was certainly time-consuming and not sustainable in the long term. And with much of the early support being required just to ensure access to the Wikis, a system utilising existing user accounts, with access to the existing institutional help desk, would be an adequate solution to this problem.

There is still more to do to encourage students to work collaboratively. Elgort et al (2008) also found that “the use of Wikis was not enough to counteract some students' preference for working alone rather than as part of a team”. This observation confirmed that we need to continue to work on justifying to students the need to demonstrate their team-work skills. We also need to develop our processes for giving feedback to students on their progress with the development of these skills. In the future our considered preference would be to give feedback to students earlier in the project rather than after completion.

Interestingly, our students appeared to manage the technical aspects of creating and editing their Wikis quite well, once they comprehended what was required. This contrasts with the findings of Choy & Ng (2007), who found that technical expertise was a much larger factor in the uptake of Wiki use by their Open University students. However, we do strongly agree with their suggestions that the participants' roles in the collaborative work must be considered carefully.
Conclusions

Off-campus students were successfully given the opportunity to collaborate in a group project, although the level of genuine collaboration varied amongst the student groups. However the level of observed collaboration still exceeded that observed for on-campus students who were undertaking an identical project (also using Wikis).

A high level of support was required (both in technical and academic issues) but much of this was due to the use of an external provider that required all participants to create user accounts (and to remember their passwords!). At this stage we are still hoping to purchase a license for a BlackBoard Wiki plug-in which would mean existing Swinburne University user accounts and helpdesk facilities could be utilised.

A surprising outcome of this project was an increase in teaching staff collaboration. This was an outcome of forming a panel to assess the student Wikis (considered necessary since this was our first experience at assessing and providing feedback on teamwork skills). The process proved so effective and enjoyable that the teaching team now assess as a panel by choice.

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