Opening up the playground:
supporting library staff to learn through play

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Abstract
Technology is the backbone of our libraries. Keeping up with the pace of change in emerging technologies is the challenge. It's time to reassess how we spread emerging technologies throughout our workplaces. The success of the "Learning 2.0" programs around the world points to informal learning as being the way forward. Staff are increasingly being told to 'go and play' with emerging technology. This paper will explore the barriers and enablers of informal learning in libraries. Providing real-life examples of how to overcome barriers and create an environment conducive to spreading emerging technologies.

Introduction

Technology sandpits or sandboxes have started to spring up in libraries all over the world, with the expectation that library staff will come along and play with new gadgets and technology and, by doing so, learn about the world that is changing around us and the devices that now seem to have a ubiquitous hold over the hearts and minds of many. The assumption is often made that because many people have acquired skills using social media such as Facebook, Twitter and Flickr through informal learning, all we need to do is provide the technology and some time to play, and learning will magically occur. Jump in, experiment and play and you will understand. However that is only part of the equation. Workplace learning is complex, and although some people are comfortable with learning through play, others are not. What are the conditions and attitudes that make it possible for people to more readily adopt new technologies, try new things, and independently learn through play, and how can we enable and encourage others to experiment and develop new skills?

This paper will look at the importance of informal learning as a way to help staff learn in a rapidly changing environment where formal courses are not keeping up with demand. It will also examine barriers to informal training in the workplace and some of the ways that we at Swinburne University have found to break down these barriers and give staff permission to play.

Keeping up-to-date

The success of a library, including funding and relevance, relies on the library and the library staff keeping up with the changing demands of clients (Cunningham 2010, p.217). The majority of these changes are driven by technology, and staff are required to not only to keep up-to-date but also to scan ahead in an effort to help future-proof their careers and their workplaces (Berryman 2010, p.167). Finishing a library course is not the end of learning in this profession; all staff in libraries are required to learn continuously, and the majority of this learning will occur within the workplace. Broady-Preston and Bell paint a grim picture for those who choose not to keep learning, warning that there is a strong chance of mid-career stagnation occurring within two years for those who don't keep up with change (Broady-Preston & Bell 2001, p.372). Thus to remain relevant, viable and meet the changing expectations of our users, library staff constantly need to adapt and learn new skills. It is also necessary to develop attitudes and habits that allow for personal reinvention and reinvention of the information management profession (Bennett & Wiebrands 2010, p.2).

Shifting from formal to informal learning

It is too much to expect formal studies at a TAFE or University to equip an individual with all the necessary skills to deal with the situations they will encounter throughout

their working life. Workplace learning, that is learning or training that takes place at work, whether formal (structured) or informal (unstructured), is vital.

Current theories of learning see learning on a continuum with formal and informal at opposite ends. Formal learning is defined as training attended, often away from the workplace, facilitated by a teacher or perceived expert. Informal learning describes knowledge that is gained during a person's day-to-day work life. Both types of learning are important in the workplace.

Around 20% of what is learnt in the workplace is a result of formal training with the other 80% being learnt through informal learning opportunities such as consulting colleagues, reading, observing and being an active part of the work environment (Marsick & Watkins 1990, p.12). Conlon argues that informal learning continues to gain recognition and importance in the workplace, due to the high cost of formal training and the apparent low percentage of tasks learnt in this manner (Conlon 2004, p.284).

Gaining skills with emerging technologies is one area of workplace learning that will continue to see a shift away from formal training, due to the need for greater flexibility and the fast changing environment (Lukosch & de Vries 2009, p.40). Attending a day-long, off-site course does not suit many. Learning needs to be on the job, as it is needed (Hanley 2009, p.13).

Vries, Lukosch and Conlon all argue that it is necessary to have both formal and informal learning approaches in the workplace to be the most effective. Everyone has different learning styles and preferences for how they want to learn. Formal learning can provide direction and the basis for further informal learning in the workplace (Conlon 2004, p.289). Tynjälä cited a study by Slotte and colleagues, who also concluded that informal learning on its own was not enough. They state that informal learning often takes place without conscious effort and yields mainly tacit knowledge. Furthermore, bad habits and dysfunctional workplace practices can be passed on. They state that formal learning is needed to turn the tacit knowledge into explicit knowledge and integrate conceptual knowledge with on the job experience (Tynjälä 2008, p.140).

Informal learning in a workplace

Getting recognition and acceptance of informal learning can be difficult. How to define, implement and measure the outcomes is not always obvious. With more formal training and courses the outcomes are explicit.

Michael Eraut found three main issues:

1. Informal learning was largely invisible, and so in many cases was not recognized by employees as learning or they took the learning for granted
2. The knowledge that results from this learning is often regarded just as part of a person's capability rather than something they have formally gained knowledge in

3. Employees find it difficult to describe or quantify what they have learnt or the expertise they have gained, making it difficult to discuss and measure (Eraut 2004, p.249).

Unlike participation in formal training, where it is easy to measure whether a person participates or not, participation in informal learning is not so easily defined.

A number of informal learning models have been developed in the literature since the late 1990s. Livingstone (Sawchuk 2008, p.6) proposed a social/conflict theory of informal learning, highlighting the role of context, power and control in informal learning. Eraut (2004) and fellow researchers proposed a situated/cognitivist theory that included the many dimensions of informal learning, including memory, reflection, discussion, and engagement and planning. Knud Illeris and his associates (Sawchuk 2008, p.8) offered a further model, characterised as a mediational theory, which included the emotional dimensions involved in the learning process, with learning at work being a balance between the technical-organisational learning environment (division of labour, autonomy, opportunities for interaction), the social-cultural environmental factors (workplace culture, political dimensions of work, communities of interest) and the individual dimension (individual skills, knowledge, education and training, motivation, life history).

From these models, Sawchuk concluded that informal learning is the result of the interaction of a number of cognitive, socio-emotional factors as well as skill, knowledge and expertise that are all ultimately effected by the power and control of the environment in which the learning occurs (Sawchuk 2008, p.8).

Factors that influence workplace learning

Eraut (2004, p.269) studied the main factors that influenced learning at work. He concluded that there were both learning factors and contextual factors. Learning factors included such things as confidence and commitment, the challenge of the learning and the support and feedback received during and as a result of the learning. Eraut identified contextual factors as the allocation and structure of work, encounters and relationships with people at work and the expectation of a person's role, performance and progress.

Eraut and others highlight the importance of the manager in promoting and supporting learning, allocating and organising work and creating a climate that promotes informal learning. Successful workplace learning can only occur in an environment with a culture, structure, systems, technology and the people to support it, where the continuous updating of skills is the norm in the workplace rather than the exception (Matthews 1999, pp.23-25).

A survey of 297 professional librarians by Chan and Auster (2003) asked about their participation in formal and informal training over the previous year for formal training and previous month for informal training. The respondents then completed a 12-page questionnaire designed to measure dependent variables, such as participation in formal and informal activities; independent variables, such as motivation, age,

barriers to participation, professional commitment, updating climate, and managerial support; and demographic variables.

This study found that job status (full or part time employment), barriers to participation (lack of time) and managerial support all affected the level of participation in formal activities. The managers were seen as the gatekeepers to formal training opportunities (Chan & Auster 2003, pp.279-280).

In the case of informal training, participation was influenced by a greater range of variables, including job status, motivation, subjective age, barriers to participation, updating climate and managerial support. Motivation and managerial support both had a positive effect, whereas the other factors had a negative effect.

Their findings about updating climate having a negative impact on participation in informal learning are interesting. The four dimensions of an updating climate were updating support, minimal pressure, information exchange and innovative climate. The first two dimensions were not found to be significant; however, information exchange and innovative climate had a negative effect on participation. The authors explained that if information is shared willingly between colleagues, librarians do not need to consciously make an effort to learn from others, and the authors believe that this was not then reported as informal learning, it was a normal part of daily work. This is similar in the case of innovative climate. If a library is seen to be keeping up to date, librarians do not make a conscious effort to engage in informal learning and therefore report lower levels of participation. These perceptions highlight the difficulty of self-measuring of informal learning (Chan & Auster 2003, p.282).

Organisational and individual barriers

Managerial support and motivation were found to have similar effects on participation in informal learning activities. Being a supportive manager is crucial to promoting participation; however, simply providing opportunities for professional development is not enough; nurturing the motivations and confidence of staff is also important.

Views differ on what is the most important factor in determining the effectiveness of workplace learning. Tynjälä concluded that the most important contextual factor was how a person's work was organised (Tynjälä 2008, p.141). For some who have narrow job descriptions, repetitive tasks and highly controlled environments, there is little opportunity for learning through interaction with others or through individual means. At the other end of the scale, for workers who are rotated between jobs, with tasks carried out in self-managed and collaborative teams, who have a greater sense of autonomy and work in an environment that encourages the sharing of expertise, the opportunities for informal learning are greatly increased.

Others argue that the environment only offers the opportunity for learning to occur, but it is the nature of the individual's participation in the workplace that is central to learning (Billett 2004, p.109).

Fuller and Unwin (Vera-Cruz 2006, p.162) proposed three types of learning opportunities that were central to creating a workplace-learning environment:

1. chance to engage in a diverse community of practice within the workplace
2. organisation of jobs allowing employees to share their knowledge and expertise
3. chance to deal with theoretical knowledge in off-the-job courses leading to knowledge-based qualifications.

Organisational studies agree with the need for workplaces to provide the climate and prerequisites for individuals and groups to engage in collaboration and exchange to promote learning. The studies conclude that while individual factors are important in informal learning it is the organisational culture that shapes the learning process (Vera-Cruz 2006, p.162).

Learning and play in libraries

Studies of professional development and workplace learning in libraries compliment the findings above. They place importance on supportive management, encouraging environments, quality of development offered and employee's circumstances as factors influencing workplace learning (Stephens & Cheetham 2011, p.34)

While it is important for workplaces to facilitate and nurture an environment that fosters informal learning through such things as networks and communities of practice, it is also important to promote individual traits like self-directedness, experimentation, experience and reflection (Raelin 1997, p.573). According to Morton and Salisbury (2000) libraries also need to consider capitalising on the enthusiasm of learning-motivated librarians, focus on developing in-house informal learning opportunities that encourage autonomy and lifelong learning. Libraries are places that support the lifelong learning of the communities we serve; therefore it is imperative that that we also provide meaningful opportunities for staff to engage in workplace learning.

Learning about new and emerging technologies

The speed of change within the profession means that how librarians keep their skills and knowledge up-to-date has to change.

Helene Blowers, who developed the internationally successful "23 things" program, says that the reason she developed the program was out of frustration. In three months of using traditional face-to-face training sessions she only managed to train 60 of the 540 staff she needed to cover. She concluded that it was necessary to move away from instructor-led training and develop an individual-driven program that could be completed in the workplace. In an interview with Collegeonline.org, Helene goes on to stress that the greatest outcome of the program was not the learning of the technology per se, but that a person's learning was individually directed. Setting

up an environment that allowed employees to reflect on what they were learning was important, and staff were encouraged to articulate the changes that occurred in their own workplace due to emerging technology. Helene concludes by stating "These Web 2.0 technologies are new to almost everyone and at the rate they keep emerging, it's important to just encourage staff to play and explore" (Blowers n.d.).

The success of the "23 things" program has been studied by a number of researchers, in particular Stephens and Cheetham (2011). Their research found that the program resulted in personal benefits for staff with improved confidence and a willingness to continue to explore emerging technologies. The program also promoted the benefits of better sharing and communication within the workplace. Some of the roadblocks or barriers for the program's success included lack of time; lack of access to the appropriate technology and the lack of organisational participation following the program that meant that the sharing and collaboration that had started during the program stopped (Stephens & Cheetham 2011, p.55)

Research into the impact of the *New South Wales Public Library Learning 2.0* program highlighted the range of learning styles that exist across any workplace. The program was made available to 2344 public library staff in 363 local government libraries and 22 mobile library services. A survey of participants found that some really enjoyed the online learning environment that allowed them to work at their own pace, while others said they would have preferred a structured learning community around the program for support. Some participants found the course to be easy to follow and clear while others responded that they would have preferred more step-by-step instructions. At the completion of the 12-week course, 27% of people who completed the course said they would have liked more help, more detailed instructions or more support from within their workplaces. The authors of the research concluded that there was no consistency regarding what learning experience would have assisted all learners, as learning is such an individual experience (Forsyth et al. 2009, p.185). The researchers also state that, without having questioned those who did not complete the course, the main reasons for lack of completion include issues around learning styles and preferences; motivation, time and commitment to professional development; organisational support and the capacity of the of the organisation to adapt to an online training environment; all issues previously identified in other research as barriers to ongoing informal workplace learning.

Time spent accessing and learning new technologies is not always seen as a productive use of work time. Detractors of web 2.0 and presumably future technologies cite lost productivity, wasted time, opportunities for bullying and other cyber offenses (Fraser & Dutta 2009). Researchers are more and more highlighting the benefits that are being achieved through increased technology savvy in the workplace, the sharing of knowledge and collaborative learning environment so important for ongoing learning being just one (Zyl 2009, p.911).

Sustainable model for workplace learning in libraries

The literature provides us with many options for fostering the right environment to enable sustainable, self-directed learning in the workplace. The next section will briefly explore communities of practice (CoP) and personal learning networks (PLN).

Communities of Practice as a means of supporting informal learning and exploration

One way of promoting and supporting informal learning in workplaces is through the development of communities of practice. Lave and Wenger first defined communities of practice in the late twentieth century, although groups of work colleagues gathering to exchange expertise existed long before (Henrich & Attebury 2010, p.160). First developed as a way of creating and disseminating knowledge, they are also used in universities as a tool for collaborative research. Henrich and Attebury (2010, p. 161) offer the following definition of a community of practice as "a group of individuals which may be co-located or distributed, motivated by a common set of interests and willing to develop and share tacit and explicit knowledge".

The benefits of good working communities of practice include improved communication leading to greater efficiency, as well as individual benefits such as greater job satisfaction through developing problem solving ability, greater trust of colleagues, increased professional reputation and identification and access to more knowledgeable colleagues (Henrich & Attebury 2010, p.161).

Searching is yet to yield any research into the use of communities of practice to support the informal learning of emerging technology in libraries. Stephens and Cheetham (2011) noted that when the "23 things" program finished, sharing stopped. This supports the belief that viable communities of practice need some structure and direction to keep the momentum and commitment to the community going.

Personal Learning Networks

Another structure to support informal learning in the workplace is through the use of Personal Learning Networks. A personal learning network (PLN) is a social network of those people an individual has chosen who may be able to assist them with their work (Bozarth 2010, p.147). Personal networks are not new, but the way we engage with our PLNs is changing. Emerging and evolving technologies have made it easier for people today to access a wider network (Warlick 2009, p.13). PLNs are not just about taking information from others; they are also about adding knowledge, sharing ideas and engaging in reflective practices. This is a self-directed choice of informal learning that also requires support from an organisational standpoint as being part of the workplace culture. Building PLNs requires participation, time, commitment and considerable effort to grow and maintain networks (Warlick 2009, p.16).

The benefits of a PLN include being able to learn at a pace that suits the individual and allows them control over what skills and information they need at any given time in their career (Bennett & Wiebrands 2010, p.3). It is no longer possible for members of the library profession to be experts in the broad range of knowledge that is required of the profession. With PLNs you can draw other people's expertise and experience and tap into that knowledge when needed (Bitter-Rijpkema & Verjans 2010, p.4).

At Swinburne University Library

To create the right conditions for spreading emerging technology use throughout the library at Swinburne University, we work hard to:

1. provide a creative environment that offers opportunities for play and exploration
2. support the sharing of learning and expertise
3. recognise individual styles of learning new technologies including the need for goal-driven learning
4. provide time and the technology to allow exploration
5. combine formal and informal learning opportunities.

With lack of time often cited as a major barrier to participation, and staff not understanding what is expected of them when they do play, we have tried a number of different strategies to develop a supportive environment, motivate and explain the benefits of spreading emerging technology use.

23 things program

In 2007, 91 of our library staff participated in the "23 things" learning program. It was so successful that in 2008 Swinburne added five new technologies to keep the momentum going. Factors contributing to the success of the program included:

1. management participation and support
2. incentives and rewards
3. including participation and completion of the program in individual professional development plans
4. mentors and emerging technology enthusiasts informally sharing their skills.

During the 23 things program, it became clear that there are a number of staff within the library who are emerging technology enthusiasts, or as Cluett (2011) categorises them, "super infectors;" that is, people who are able to spread new ideas and technologies throughout their networks. These people regularly share ideas and connect others with emerging technology through their PLNs. They have helped keep the momentum and impetus to learn emerging technologies going, and combined with management support there is a willingness to adopt emerging technologies in the workplace. Below are other examples of emerging technology uptake through informal learning.

Licence to play

Swinburne University Library management actively supports and encourages staff to use emerging technology in their day-to-day work. In 2010, after several staff heard Howard and Ryan (2010) speak about the use of Yammer (enterprise microblogging application) at CPA Australia, library staff took the initiative to revitalise the University's use of the application. They began to use Yammer to communicate with each other and share resources. Before long and through word-of-mouth, others outside the Library also joined and began to actively use Yammer. As at October 2011 it boasts 451 members and growing. Special interest groups have been established and library staff remain some of the most active users. A fledging community of practice has started to develop around the application and use of educational technology. This includes staff from a range of faculties, schools, departments and library staff.

The Library's use of Yammer has allowed us to start and join meaningful conversations and connect with colleagues in other parts of the University. The Library is recognised as innovators in this area, as it spearheaded the enterprise-wide take-up.

There are also a number of initiatives where library staff are experimenting with social media and emerging technologies to determine whether they have wider application in the Library. These projects are supported by team leaders and managers and include using Facebook at two of our TAFE campuses, using Twitter and Yammer to support Endnote and other projects. Once the projects gain some traction and are evaluated, staff are encouraged to make business cases for implementing projects on a wider scale.

Facebook

In an attempt to engage students at the smaller campuses of Wantirna and Croydon, Facebook pages were established. These pages are campus-specific and tailored to the needs of the TAFE students studying on campus. As at October 2011 they have 55 and 73 followers respectively with some of these being library staff. Promotion for these pages is by word-of-mouth, as there are currently no links from the library homepage. Deakin University Library, which has over 1000 Facebook followers, like many other academic libraries links to all their social media sites from their homepage, giving them much higher visibility. It is the aim of the Swinburne Library Marketing and Communication group to do the same. Some people may see the lack of take up as a failure; however, it is through taking risks and playing with emerging technologies in contexts such as these that has enabled library staff to explore the potential of using social media to engage students and investigate other opportunities whilst learning.

Join.me

With staff spread across five campuses, the Library began making greater use of the web conferencing program Elluminate to conduct cross-campus meetings and thus allow staff at outer campuses to be more engaged in meetings and training workshops. Unfortunately our license expired, so we then needed to fill the gap. One of our Associate Directors started playing with join.me. He then held meetings and began inviting other staff to attend using join.me. Before long, the free software that allows the sharing of computer screens began to be combined more routinely with telephone conferencing to enhance the virtual meeting experience. The use of this software has resulted in more productive meetings, by allowing staff to be involved without having to travel long distances, and has given the library more capacity to work in cross-campus teams.

Performance and professional goals and planning

Individual staff development plans will often include objectives that directly relate to learning emerging technology. There is an expectation that library staff will keep their skills current; for example one of our staff had an objective to develop a learning object using Xtranormal software. This resulted in the creation of learning objects that are now embedded into online courses. Another objective, to investigate and recommend suitable tools for the scheduling of rooms, resulted in staff setting up shared Google calendars. It worked so well that shared calendars are being set up for other purposes. Plans are reviewed with direct supervisors after 6 months to evaluate progress and again at 12 months for review and planning for the next year. They embed learning about emerging technologies into professional development goals for the year, and provide the opportunity for staff to explore how emerging technology can be realistically applied in their work practices.

Big Day-in

Swinburne Library also holds an annual staff development day that covers a range of topics and speakers. Every year we endeavour to include a number of sessions focussing on emerging technology, whether it is an opportunity to play with new gadgets and learn about new apps, or exposure to new educational technology. This day gives staff time out from their day-to-day work to connect, learn, share and play.

Personal Learning networks

Library staff are actively encouraged and supported to attend conferences, and workshops, and to develop their networks through involvement with our professional association ALIA (Australian Library and Information Association) and other library-

related committees. Many staff maintain and grow their PLNs through Twitter, Yammer and Facebook as well as face-to-face or IRL (In Real Life) interactions. Building these PLNs is seen as a legitimate part of their working life. As mentioned earlier, the success of the library is contingent on staff of keeping their skills relevant, being agile and continuing to learn. Sharing and building knowledge through social networks enables staff to learn not only from people within the organisation and profession, but also from people from other spheres of knowledge who we have much to learn from, thus enriching our profession.

In the future

At Swinburne, we recognise that individuals have different learning styles and approaches to learning in the workplace. We have tried hard to create an environment that supports both formal and informal workplace learning. As the literature says, no one approach will guarantee success. However, through encouraging those who are who are keen to share their skills and thus spread their enthusiasm for emerging technology, and through providing some structure for those who want it through programs like 23 things, we are reaching many of our staff. We are perceived as a library with innovative approaches that does interesting work. Much of that is due to fostering an environment that gives staff licence to play and take risks.

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