Attempting to sustain professional development: Using a web-environment to support teachers’ action learning

by

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Abstract

Action learning involves a small group (6-8 people) who meet regularly to share reflections and discuss ideas that they try out in practice. Key to the process of action learning is the sharing of personally relevant issues or problems in relation to the action being attempted. In this study a web environment was designed to support the sharing of teaching strategies which also included a discussion space to provide feedback on the strategies attempted. One web environment was designed for a an action learning team in a high school and another for a group in a primary school. It was anticipated that the web environment would not only become a growing repository of teaching strategies but would also document feedback and reflection. However, both groups of teachers did not use the web site for a combination of reasons pertinent to professional learning in schools.

What is Action Learning?

Traditionally, teacher education courses are expected to produce teachers competent in knowledge, skills and performance to sustain their learning over the period of their teaching career. However, with the changing nature of modern education, the diverse range of knowledge and experience of teachers, and the variety of teacher education entry courses, it is now recognised that teachers’ professional development needs to be considered on a continuum, from initial undergraduate education, through school practicum, internship, induction to ongoing lifelong learning (DEST, 2003; Ramsey, 2000).

Over time, a wide variety of professional development strategies have been attempted. However, the value of these various formats of professional learning has been questioned by a number of educators. Feiman-Nemser (2001) suggests that traditional forms of professional development such as mentoring, one-off workshops, conferences and summer institutes do not provide a cohesive and planned approach, and are problematic in achieving desired outcomes. In addition, the content of many programs reflects the interests of outside presenters rather than allowing ownership of the issues faced by teachers in various stages of development.

Action learning (Revans, 1981; 1982) is a commonly used approach for professional learning in business organizations and focuses on the personal concerns or interests of the participants. It involves a small group of colleagues reflecting and sharing experiences about their personal issues and problems of their workplace on a regular basis (Cusins, 1995; McGill & Beaty, 1995; Miller, 2003; Pedler, 1991; Wade & Hammick, 1999; Zuber-Skerritt, 1993). This collaborative type of workplace learning has been explored by groups in various contexts: executives in a textile company (Lewis, 1991); managers in a private hospital (Miller, 2003); supervisors in an electronic firm (Boddy, 1991); doctors in a hospital (Winkless, 1991); university students in a Diploma of Religious Education (Robinson, 2001); insurance agents attempting to improve the quality of their service (Schlesinger, 1991); and university students in health care education (Wade & Hammick, 1999). Action learning is now increasingly being used in educational contexts such as schools to support the process of teacher learning (Yuen & Cheng, 2000).
Cusins (1995) views the process of action learning as the interaction of four sources for learning: (i) experiential learning; (ii) creative problem solving; (iii) acquisition of relevant knowledge; and (iv) co-learner group support. These four sources for learning are represented by Cusins (1995) as a linear cycle involving an event or activity, reflective observation, planning and application. In an educational sense, action learning is underpinned by three principles—reflection, community and action—which interrelate and enhance each other. Independently, these principles are not new, but structuring a program, which integrates all three principles together, provides a framework for establishing an ongoing cycle of learning.

The first principle, reflection, involves participants thinking about something problematic to make meaning of their experiences and helps them to cope with similar situations in the future. Originally proposed by Dewey (1933) as a particular form of thinking, reflection has been called “a cornerstone of learning and of personal and professional development” (Baird, 1992) and a vehicle for teacher change:

To achieve change, teachers need to discover that their existing frame for understanding what happens in their classes is only one of several possible ones, and this, according to Schön, is likely to be achieved only when the teachers themselves reflect critically upon what they do and its results. (Barnes, 1992, p. 17)

Teacher reflection is consistent with a constructivist view of learning and is an essential element of being a “reflective practitioner” (Schön, 1983, 1987). An feature of the action learning process is that each member of the team selects a personal issue or concern that they would like to improve upon.

The second principle, community, relates to group members sharing personal anecdotes to gain a deeper understanding of the meaning of their personal experiences. This social influence on learning was also highlighted by Dewey who defined the notion of community as “sharing in each other’s activities and in each other’s experiences because they have common ends and purposes” (1916, p. 75). More recently, the notion of sharing ideas in a community has been used in various educational settings such as school classrooms (Berieter & Scardamalia, 1993), professional development programs for teachers and teacher educators (Baird & Mitchell, 1987; Bell, 1993; Cochrane-Smith & Lytle, 1993) and for teacher training in professional development schools (Darling-Hammond, 1994). The third principle, action, means that participants try out ideas which have been generated by personal reflection and refined in community discussions. Learning by doing or experimenting with ideas is also not a new concept. It was one of the main tenets in Dewey’s (1938) theory of learning through experience and Kolb’s (1984) experiential learning cycle. The implication is that putting ideas into action gives them more meaning because of the understanding gained from knowing the consequences of the action. The result of this action then becomes the topic for subsequent reflection and discussion at the next action learning meeting. A problem for busy teachers in schools, however, is finding the time to regularly share ideas with team members.

In this paper the use of a web environment to support teachers sharing teaching strategies in their action learning teams will be discussed. This includes examples of two contexts, one high school and one primary school who were invited to trial use of the web environment in the second half of 2004. In both schools, teachers had been using the NSW Model of Pedagogy which consists of three dimensions of learning, each with six elements. The first dimension, “quality learning environment” contains the elements of explicit quality criteria, high expectations, social support, students’ self-regulation and student direction.
The second dimension, “intellectual quality” includes the elements of deep knowledge, deep understanding, problematic knowledge, higher-order thinking, substantive communication and metalanguage. The third dimension of “significance” includes background knowledge, inclusivity, cultural knowledge, knowledge integration, connectedness and narrative.

However, six months after the schools had access to the web sites that had been designed to support them documenting and sharing their teaching strategies, it was realised that teachers in neither school had regularly used the site. This paper documents what caused this disappointing outcome for both the primary school and a secondary school involved. It is hoped analysing why the sites were not used will provide insights into what could support teachers in using technology for professional development. A brief case study will be provided using data from key teachers in each school.

Using Technology to Support Professional Learning
Technology, and the internet in particular, is becoming a useful tool in teacher professional development. Bransford, Brown and Cocking (2000) in their summary of research into school learning noted ‘Opportunities for continued contact and support as teachers incorporate new ideas into their teaching are limited, yet the rapid spread of Internet access provides a ready means of maintaining such contact if appropriately designed tools and services are available’ (p. 27).

Accordingly, there has been a growing trend to utilise the internet to develop ‘communities of practice’ as a focus for professional development. The concept of communities of practice evolves from Lave and Wenger’s (1991) theory of situated learning where professionals learn through increasing contribution and participation within their community. Communities have developed to provide support and professional development for teachers generally, (e.g., Tapped In); within particular disciplines such as mathematics teachers (e.g., Herrington, Herrington & Omari, 2001) and in particular career stages such as beginning teachers (e.g., Novice Teachers Support Project). Generally, however, these communities are structured around particular themes, topics or events and lack the facility to engage in sustained research of an issue or problem specific to a particular school or teacher. Nevertheless, one can envisage the use of the internet to support such action research, especially for the process of identifying and sharing teaching strategies that are being developed and tested in the classroom.

Case 1: Attempting to Support Action Learning with Technology in a High School Setting
Conventionally, the pedagogy of high school teaching is usually driven by the content in each subject (Brookfield, 1986). For example, teachers usually think about the content or knowledge they want students to learn and then present the subject in sections accordingly. A different section of content is often presented each lesson or across several lessons and then it is sometimes demonstrated in a subsequent lesson. Ways of learning are considered, but these are usually a minor consideration in relation to the sequence of content presented in a busy school term.

A more comprehensive view of school pedagogy is to view it as a dynamic relationship between teaching and learning (Hoban, 2000). This means that teaching needs to be presented in a more flexible way, as some forms of instruction need to be adapted to the way in which students are best learning. However, when teachers develop their strategies, it often stays within their own classroom as there is little opportunity for teachers to share strategies in a busy school week. A web environment, however, can be developed to as a data base of teaching-learning ideas and is a medium to share these ideas with other teachers. When some teachers gain a deeper understanding of how students learn, they may modify their pedagogy
meaning that learning drives teaching rather than vice versa. For this shift in relationship to occur, a framework is needed that views teaching and learning as a dynamic relationship. A web site was designed to support teachers in participating in action learning to facilitate this process.

**Design of the website**

The conceptual framework of the web site is an adaptation of a university website that shares strategies for developing graduate attributes across different university faculties (Hoban, G., Lefoe, G., James, B., Curtis, S., Kaidonis, M., Hadi, M., Lipu, S., McHarg, C., Collins, R, 2004). A group of teachers in each school involved selected five elements or aspects of teaching for which they devised particular teaching strategies and documented these on the website. The five elements at the high school included:

1. developing a metalanguage for common meanings
2. developing explicit quality criteria for tasks
3. developing high expectations
4. developing knowledge integration across subjects
5. demonstrating “wow” or creative behaviour

The home page of the school-based project will be similar to the university project in that it will provide descriptions of the five elements or aspects of teaching as shown in Figure 1.

![Figure 1. Homepage of the High School Site](image)

**Teaching Strategies for Elements of the NSW Model of Pedagogy**

We are going to focus on four elements from the NSW Quality teaching model that cross the Dimensions. These elements complement the part of our School Management Plan that aims to help students learn to learn, assisting them in becoming life-long learners. [More details here...](#)

**Strategy Areas**

**Metalanguage**

Metalanguage is discussion about language and how texts work. Attention is drawn to particular aspects of texts (e.g. Words, images, symbols) either at a key point in the lesson, or when students are obviously have difficulties in interpretation.

**Explicit Quality Criteria**

Explicit Quality Criteria presents frequent, detailed and specific statements about the quality of work required by students. Explicit Quality Criteria provides reference points for the teacher and/or students to check, revise and develop their own or others work.

**High Expectations**

High Expectations communicate that all members of the class can learn important knowledge and skills that are challenging for them. High Expectations coverages...

When a teacher clicks on one of the elements, it will be linked to dialogue boxes to document a teaching strategy as shown in Figure 2. Table 1 provides an example of a strategy developed by a teacher for Personal Development, Health and Physical Education for the element of Metalanguage which assists students in understanding the meaning of terms.
Figure 2. Example of Dialogue Spaces for documenting Teaching Strategy on the Website

<table>
<thead>
<tr>
<th>Home</th>
<th>Strategies Information</th>
<th>About Contributing</th>
<th>Contribute a Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metalanguage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explicit Quality Criteria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Expectations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge Integration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WOW</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contribute a Strategy

Information about contributing a strategy.

Element: Select an Element...

Key Learning Area: Select a Key Learning Area...

Topic: 

Stage: 

Contributor(s): 

Rationale: 

Table 1. Example of teaching Strategy

<table>
<thead>
<tr>
<th>Quality Teaching Element: Metalanguage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Learning Area:</strong> PDHPE</td>
</tr>
<tr>
<td><strong>Stage:</strong> 4 or 5</td>
</tr>
<tr>
<td><strong>Topic:</strong> Contributor/s</td>
</tr>
<tr>
<td><strong>Date:</strong> 2/4/04</td>
</tr>
<tr>
<td><strong>Rationale:</strong> Introducing a new topic and specific vocabulary/language that will build to concepts. Want the students to work with new vocabulary/concepts moving from recounting in their own language to using new vocabulary/concepts accurately.</td>
</tr>
<tr>
<td><strong>Teaching Strategy:</strong></td>
</tr>
<tr>
<td>1. Select an appropriate overview passage, be conscious of the vocabulary/language that needs to be mastered and be ready with explanations.</td>
</tr>
<tr>
<td>2. Read the passage to the class.</td>
</tr>
<tr>
<td>3. Students re-read the passage in pairs and briefly discuss so that they can give a recount in their own words.</td>
</tr>
<tr>
<td>4. Teacher begins an oral recount of the passage using colloquial language. Students continue taking it in turns to recount in their own words the main ideas of the passage. They need to listen and follow on from one another.</td>
</tr>
<tr>
<td>5. Class discussion about the recount focusing on the language used by the students compared to the language of the passage.</td>
</tr>
<tr>
<td>6. Write own recount of the passage or complete a cloze passage using specific vocabulary/language.</td>
</tr>
<tr>
<td><strong>RELECTION:</strong> Ability within the web-site for reflection and discussion about the strategy.</td>
</tr>
</tbody>
</table>

A feature of the website is the last part of the table noted “Refection.” This will be hyperlinked for teachers to provide feedback on the trialling of different strategies.
This means that the web site could become an avenue for comment and feedback about the weaknesses of the strategy.

*Interview data re web site use at the high school*

The deputy principal (DP) of the high school was interviewed about why the site was not used very often by teachers at the end of 2004:

DP: In the high school, a small group of year seven teachers called a “year seven learning team” formed to help students in year 7 have a coherent transition into high school. The team has continued to function throughout the year and have focused on a linkages program for primary children which is a very good transition program for the school. So the team was there but they did not enter strategies and documented but I don’t know when you get time to do them.

DP: One reason why the site was not used is that the workload for teachers is getting higher and higher and higher. This is not a negative but just a reality and so anything else that comes along just doesn’t get a run, even if it only takes a few minutes. I would say that for most teachers, professional learning is not high on their agenda and I think they are in survival mode. They have given all their energies. There also could be some more need for training in terms of how to use the site, to open it up and how to get in there so it is more accessible and if everyone had a computer on their desk to address their own needs. If you had to go to the faculty computer then why would you bother? So it is systemic as well as individual. The individuals are worn out teaching well and the second one is that they just don’t have the facilities or the resources. There is probably only one computer in each classroom and it is choc-a-bloc with people entering outcome results in our reporting system. They have to take turns and every free period they are doing the reports. They have eight outcomes to measure and document as well as write comments. So the French teacher would have up to 300 reports to do. You also have some teachers who avoid computers like the plague, it is still foreign to them. They would only use word processes to write a title page or letter, they wouldn’t go into much depth.

DP: So we probably need a bit more time and give teachers more training so that at a staff meeting we would have a battery of computers there. You would need to explain it, let people try and then revisit it on staff development days. It hasn’t failed but it is just one of those thinks that hasn’t been a priority. Keep on going. It also needs a key driver and the three of us changed our role at the beginning of term 3. Adele was on long service leave and James was seconded into the deputy principal’s role and I went into the Principal’s position so we were all tied up with out new positions.

DP: As a principal I saw lots of strategies but it is just a matter of having someone write it down.

I: I wonder if the teacher saw a real purpose to using the website?

DP: That’s what we need to emphasise that professional learning is important. We were given money based on our professional learning plan and we have stacks of money left over at the end of this year. We have been saying for years that we don’t have enough and now we don’t know how to spend it. We have gotten use to not having the resources and we don’t follow it on. We go to a course, we do the course, we come home and that’s it.

DP: The web site is set up for long term professional learning but we have to use it. I think we work in isolation. We only have a wall between us but we don’t work together. I am a PE teacher and so I work outside in front of everyone. But as I was driving to work today I was thinking of what stops something great from being
great. I couldn’t work out why but now I know. There are a lot of factors in place here all at the same time that caused this to be the result now. I don’t think we should give up now because professional development is very important.

DP: Quality teaching is still on the agenda but not everyone is convinced. You change the name and people think it is something new and there is always a resistance but this breaks down but you have to let people stew over it. And then it is the person who delivers and it has to be. We need to lock the web site into a favourite so that we use it more often.

I: You have mentioned a whole lot of factors that worked against the use of the web site, hypothetically, what are the factors that could line up to support implementation?

DP: At the end of this year we have two days with no children and we are going to use that for professional development. This time we are going to do professional development in quality teaching and so the rest of the time is quality teaching work. We don’t have to race off to class and don’t have to plan for next week. So the priority is to get strategies for quality teaching from this plan. Once we are through I’d say about 80% of staff on side. There are usually three groups in our school. One group will run with anything, one group will come on board after they sus it out for a while and about 10% won’t do anything. They should have tried another profession, they are OK but just OK. The big group will be OK. They are so used to the department changing a policy after they have put a lot of effort in and it is rather disappointing.

In summary, the teacher identified 13 factors that inhibited teachers’ use of the web site to support teachers participation in action learning:

- Time
- Other Priorities
- Access to computers
- Onerous Reporting procedures
- Teachers who can’t use computers
- Key person/facilitator in the school (three key people changed)
- No Vision for long term professional learning
- Teachers working in isolation in a high school, not use to sharing
- Resistance to something new
- Criticism of teachers doing something “new”
- Three groups of teachers in the school
- Changing departmental policies
- Head teaches up to their eyeballs managing their faculties

**Case 2: Attempting to Support Action Learning with Technology in a Primary School Setting**

A web site was designed for the teachers at the primary school who decided to document teaching strategies for the following four elements of the Model of Pedagogy: engagement, connectedness, higher order thinking, social support, as well including their own preference for cooperative learning and WOW (any outstanding strategy that did not fit in to other elements). The hope page for the site is shown in Figure 3.
Figure 3. Home page for Primary School

Teaching Strategies for Elements of the NSW Model of Pedagogy

More details on specific elements...

Strategy Areas

Engagement

This element refers to how well students participate in activities. This can be monitored by how well they sustain their interest, the questions they ask and how they perform in specific tasks.

Connectedness

It is important for lessons to be relevant to the real life contexts or problems of students. This can be monitored by observing how students share their work with audiences beyond the classroom and school.

Higher Order Thinking

Students should be encouraged to engage in thinking that requires higher orders skills that need them to organise, reorganise, apply, analyse, synthesise and to evaluate knowledge and information.

Social Support

An example of the view when one of the elements is selected is shown below in Figure 4:

Figure 5 shows the dialogue boxes when attempting to enter a strategy:
Interview data re web site use at the primary school
A team in the school had been involved in action learning for two terms and at the beginning of term 2 2004, five mini action learning teams were formed across the school. The teacher (T) tells how the staff planned to work in teams but factors started to emerge:

T: People from the original team spilt up so that there was one member from the original team. So we planned to have staff meetings each fortnight and we had planned for when we would have meetings and causals booked. Unfortunately in the middle of the term I went on leave for the rest of the term. I came back at the beginning of term 3 and I know we got one meeting in but then other things happened. We had a major performance, a variety of different aspects, child protection, we had a CPR. So our fortnightly meetings were not able to continue and we did not have any more after your workshop. The elements matched what we wanted to do and we were keen to try it but it was a matter of timing and by when the web site was up we did not have any more of the team meetings and the whole thing stopped. Had we had our fortnightly meetings teachers would have talked about what they would have done and what they would like to try and then lets put this on the web site. So the web site has to become part of our learning process and put it down in a way that other people could use it.

I: So how would you envisage the site being used?

T: I think after we discussed teaching strategies the site could be used as more of an endpoint. We also have to realise that we have two distinct groups, the original group that had been going for two terms.

T: Also some people are more ready to use technology than others. So that is what happened, lots of other things got in the way. The performance was on in term 3 and other things happened. So the whole action learning thing faded away and so the web site faded as well.
T: We do intend to have a go at it next year and put it into our school plan and then we can give it a good evaluation.
I: You said that there were a combination of things that didn’t happen.

T: We were planning to alternate our weekly meetings from staff meetings to action learning meetings but in term three we had several staff meetings in a row about school matters and then we didn’t get back to the action learning meetings. Also I drive the technology in the school so when I am not there people don’t use it. By term 4 because we lost the momentum in term 3, we were coming into term 4 and there wasn’t the interest there in term four and then people were thinking end of school assessments, reports, several staff meeting with other things like a meeting with our local high school.

T: We hope to kick it off at the beginning of next year and some of us think that action learning doesn’t have to go all year, do it in short bursts for while, let people assimilate their information in terms of what has to be done and then give it a rest and do whole school things.

The teacher made a particular comment about use of technology by teachers
T: The staff at the school have come a long way in terms of using technology but some teachers are still reluctant to use new things in technology. And they need help and they wait for someone like me to get it organised in terms of training. They are very use to learning together, learning in groups and in pairs. So not all staff have computers at home and not all staff are comfortable with web sites and some don’t have the internet on their computer. So for it to work it will have to be school based rather than home and to get people really trialling the web site we will need some training and development so that people work together with support and have some time with friends and me so we work this through together so that people feel comfortable with it and then eventually the staff will have the confidence to work with it on their own but that will be an endpoint, not a beginning point.

T: for the web site to have a long term place for the school it will need to fit into what we are doing so that it becomes a part of our learning process rather than something that just records something at the end because teachers just don’t get time to get to. So if it is inbuilt part of the action learning process itself and utilised in this way, it becomes part of the process of the learning so it will help people clarify, help people think about what they are doing and how to explain it to other people. People will start to make suggestions to use it like this or adapt it like that and change it so that it might be in stage 3 or fit in stage 1. That will come through people working together.

In summary the key factors identified that inhibited teachers’ use of the web site at the primary school were:
Key facilitator of action learning on leave (who was also the technology person)
Other school priorities (school performance)
Department policy deadlines (child protection, CPR)
Fortnightly action learning meetings stopped
Time to talk
Different teacher readiness for using technology
After a break (term 3) teachers lost interest
Term 4 other things became a priority
Some teachers reluctant to use technology
Some teachers do not have a computer at home
Need ongoing training and development
Conclusion
Teachers are experimenting with strategies in their classroom all the time. Action learning is a process in which teachers share the preparation and implementation of these strategies on a regular basis with several colleagues at their school. However, schools are so busy that there is little time to reflect and share their strategies with colleagues. The use of web-based technology in assisting the documentation and sharing of strategies has the potential to realise successful and significant outcomes particularly when it complements already existing effective approaches such as action learning. A web site also acts as a “repository” of teaching strategies implemented in a school and gives teachers a real purpose for reflecting, testing and sharing their strategies.

However, as reported by the teachers in these two schools the web site innovation was not implemented. Interestingly, there were similar factors that inhibited the use of a new technology in the primary school and the high school. These included a lack of time, key facilitator leaving the school, different skills of teachers, no infrastructure to encourage use of the site, no ongoing professional development, lack of computers at home and other school priorities. Although the primary school designed an in-school structure to support action learning such as the development of new mini-action learning teams, as soon as the structure was not in place then the web site fell into disuse as well. A pertinent point for the high school was that they did not have a vision for long term professional learning as they have not have an appropriate “mindset” to use tools to complement long term learning.

Technology is now all around us and is increasingly becoming a part of our everyday home and work lives. For technology to also assist in the professional learning process for teachers, it needs to become infused into their work habits which means providing more time for this to occur and an infrastructure for ongoing workplace learning. As long as schools remain so busy with little time for professional learning, teacher learning will be minimised. The design of school organizations needs to be reconsidered so that they are also learning environments for the teachers as well as the students. Technology will not play a major role in teachers’ professional learning until such an environment is fostered.

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