The Road Less Travelled: Leadership and Engagement of Learners in a Collaborative Learning Environment

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Abstract

Historically at USQ we have taught information literacy classes in a very traditional instructional format. The training labs have rows of seating facing forward, and large computer monitors in front of participants. The trainer stands at the front with a whiteboard and projection screen. With innovations in teaching styles and developments in learning spaces, we are this year initiating a change to information literacy classes. Traditional training labs and teaching styles have been replaced by collaborative group learning spaces and a guided teaching style.

As part of a refurbishment project, one of our training labs and an office area of the library have been set up to support collaborative learning. Subsequently in Semester 1, 2009 we will begin using the new collaborative learning facilities for all generic information literacy classes, and some faculty classes.

In the past our training has focussed on the transmission of information and we have not fully engaged our students in the learning process. We have used PowerPoint's and the Library website to conduct classes. Whilst the basic information we want to impart to students will be the same, the way we do this and hopefully the learning outcomes will change significantly with the shift to a collaborative teaching style and environment.

Introduction:

The University of Southern Queensland is a regional University located in the city of Toowoomba, which is 1 ½ hour's drive west of Brisbane. USQ also has campuses in Springfield (Brisbane) and Fraser Coast. USQ has a diverse student population, and has international students from more than 100 countries currently enrolled. In 2008 we had 24,756 student enrolments of which 75% were external.

Why the road less travelled? Often in our work it is easier to keep on doing what we have always been doing – to take the safe road and do what is familiar. We have found this year that in looking at this new model of library training – we had to travel down a road that was not familiar to us, a road which we knew would have difficulties, but also a road that would bring with it a new sense of excitement and engagement with our students.

Background - Information Literacy classes at USQ

At USQ the Faculty Librarians prepare and run the integrated subject specific classes for the faculties, whereas the Library Officers plan and run the generic non-compulsory information literacy classes for students (normally at the beginning of each semester). Generally, these are new students – they can be young, mature, Australian or International. At USQ many of our new students are not necessarily school leavers.

Our generic information literacy classes are broken down into two segments:

1. Finding information for your assignments – Introduction (Navigating the library website; using the library catalogue, developing search strategies and finding help for referencing).
2. Finding information for your assignments – Advanced (Web evaluation; searching Google Scholar; using Library Databases and eBooks).

For many years at the USQ Library we have conducted Library training in a very traditional manner. That is, in our training labs, we have rows of seating facing forward, with computer

monitors in front of each participant. The trainer stands at the front with a whiteboard and projection screen. It can be very difficult to see all of the students and track whether they understand or are keeping up with the training. This type of training can be very restrictive and has not encouraged active learning.

Why the change to collaborative learning spaces?

There has been a lot of interest and research in recent years on collaborative learning facilities. Robyn Tweedale (the Principal Manager, Information Services at USQ) attended a forum run by the Carrick Institute called "Next Generation Learning Spaces Colloquium". This forum examined developments in learning spaces within Australia and overseas. Much of the evidence and research has shown the success of collaborative learning facilities to enhance student learning.

As a result of this in 2008 one of our training labs and an office area of the library were set up to support collaborative learning. Because this physical space that we taught Library classes in was changed – it supported a shift in our lesson plan and the presentation of the generic library classes.

At the beginning of 2009 the Principle Manager, Information Services ran two training sessions on collaborative learning. The first session consisted of a literature review and a discussion of effective uses of collaborative learning. After this session we were required to do further reading and then to prepare a lesson plan using collaborative learning techniques. This process was extremely beneficial and helped us to focus on what we needed to do in order to prepare our lesson plans to suit the new learning environments. In the second session we presented our lesson plans and gave feedback to each other (collaborative learning!!). The sharing of ideas and plans helped us to further develop and understand the collaborative learning approach for the generic classes.

As a group we came up with a list of 10 ideas and strategies for using the collaborative training rooms:

1. Must set tasks specifically for group learning – with outcomes and learning objectives

2. Encourage positive group dynamics

3. Use the process of identify skills; demonstrate the skills; model the skills; feedback and time to practice; reflection

4. Create flexible structures to the learning goals, to allow groups to interpret and adapt them to their own 'style'

5. Maintain awareness of cultural backgrounds of groups (not all cultures are comfortable with full-on collaborative learning) and apply activities appropriately

6. Use problem-based learning techniques – working in groups to break down an assignment 'problem' and work on strategies to solve the problem

7. Use different techniques from just PowerPoint or web/database-demonstration-practice teaching (such as butchers paper, whiteboards, mobile devices, etc)

8. Set activities for the groups to use the "writing for learning" and "discovery learning" techniques

9. Collate/generate lists of activities and icebreakers that are successful in this context

10. If it is not a large group, pairs may be more successful than small groups

My own research also reinforced that the collaborative learning approach was something that could help us to engage our students as we taught them basic information literacy skills.

Li Wang (2007) in her article called: *"Sociocultural learning theories and information literacy teaching activities in higher education"*, believes that the demonstration approach of training (which we had been doing) does not equip students with the skills and competencies to function in a rapidly changing world. She does however; endorse the collaborative learning approach based on sociocultural learning theories. This is where students engage in class activities and interact with others to solve problems and complete tasks. In this environment the teacher is more a guide and encourager.

This table, based on the work by Brown, Ash, Rutherford, Nakagawa, Gordon, and Campione (1993) in *Distributed expertise in the classroom*, compares the differences in a traditional library classroom to that of a community-of-learners (collaborative learning) environment.

Figure 1. Traditional Library Classroom vs. the Community-of-learners environment

Role/Content/ Environment	Traditional Library Classroom	Community-of-Learners Environment
Role of student	Listener, observer, note taker; to do what teacher/ librarian instructs	problem solver, contributor, discussant; to be responsible for their own learning
Role of lecturer/librarian	classroom manager, didactic teacher, authority	knowledgeable co-learner, guide to aid the student's learning, motivator and class activity designer
Content	focus on the library, highly constructed and transmitted	focus on information process, learn via collaborative activities
Environment	competition, formal, knowledge is transferred	democratic, informal, knowledge is created

As seen in this table the traditional library classroom is very formal and orderly. The role of the student is as a listener, observer, note taker, to do what the trainer instructs. The role

of the trainer is that of the classroom manager, didactic teacher, authority figure. The content focuses on the library, is highly constructed and transmitted. The environment is very formal. As previously mentioned, it is also often difficult to see what students are doing and if they are participating (as they would hide behind their computer screens).

Compare this to the Collaborative group training environment (or as listed in the table - the Community-of-Learners Environment). The student is the problem solver, contributor, discussant; they are responsible for their own learning. The trainer is a co-learner, guides the student's learning, is a motivator and class activity designer. The content focuses on the information process with learning done via collaborative activities. The environment is more democratic, informal, and knowledge is created.

Weller (2004) in the article, *Developing pedagogy for the Internet*, makes this statement which sums up the principles behind the shift to collaborative learning:

> "Education therefore is not simply a matter of information being transferred from the educator to the student, but rather the student constructing their own individual meaning through interaction with peers, experts and information. This places a much greater emphasis on the student as the centre of the learning experience. The educator's role in such an approach becomes that of offering guidance and creating situations and frameworks through which students can develop their own understanding of a topic. This is in contrast with the educator-centred approach of the traditional lecture model and has been termed a shift from 'the sage on the stage' to 'the guide on the side'."

As a combined result of our rooms being refurbished, and positive current research we were keen to take on the challenge of enthusiastically trialling collaborative learning in our generic classes.

Preparing a lesson plan for collaborative learning

In our lesson planning it is important to create early on, a sense of belonging to the group. At the beginning of the class we introduce the concept of roles. One person is assigned as

the PC operator, one person as the scribe and one person as the spokesperson for the group. In order to establish the groups we had to think of a way to quickly draw people together in a common purpose (i.e. an icebreaker). We chose a very simple jigsaw puzzle to do this using words like – catalogue, searching, information, etc. In groups of 2 or 3 they work together to complete the jigsaw puzzle. It only takes a matter of a minute – but breaks the ice for the students in terms of them working together as a team. This works really well in most situations – although there are situations where it isn't appropriate to use (e.g. in very small classes). Using the words in the jigsaw puzzles we then outline the lesson plan for the day. E.g. today we will show you how to find information, search the library catalogue, etc.

In our generic library training sessions there will always be an element of instruction – in order to show students how to find information. However, in line with the collaborative learning thinking we also developed a number of activities that students work on in their groups to reinforce the instruction. We created activity sheets that each group can work on during various stages of the library class. In their groups the teams are asked to do a number of activities. These are: finding items in the library catalogue, evaluation of assignment questions, creating a mind map, evaluating web sites and searching library databases. The activity sheets are critical in engaging students and getting them to work together in their teams. During this process the trainer can walk around to each group and participate, guiding them if necessary. At this point the trainer is able to pick up if there are any problems with the students understanding. If it became obvious that all groups are not understanding a particular issue you are then able to address it before continuing on with the lesson plan. Alternatively if it is just a problem that one group is having, you can address it with them alone.

New Technologies in our lesson plan

Whilst we were in the planning stages of this change to a collaborative learning format, we were also given the opportunity to trial a tablet PC in our classes. The tablet PC is on loan to us from Dr. Birgit Loch (Department of Mathematics and Computing) as part of a USQ Senior Learning & Teaching fellowship. For those not familiar with tablet PCs – they have some

additional functions compared to a normal laptop. The PC can of course be used in tablet form (that is the screen can be rotated and then folds down on top of the keyboard to provide a flat writing surface) and is equipped with a touch screen. You interact with the tablet PC with a stylus pen or your fingertip instead of a keyboard or mouse. The advantage for use in the library learning environment is that you are able to write on power points and use it in a similar way to a whiteboard. You could also save any notes you have written on the power points for future use. The tablet PC has been so successful in a variety of classes, including these generic classes that the Library is now investing in a tablet PC for each campus Library.

As well as the tablet PC, we have trialled software called TurningPoint. TurningPoint is an audience response system used in conjunction with PowerPoint. Probably most of you would be aware of similar software that is used in "Who wants to be a millionaire" for the "ask the audience question" or even in election campaigns – when they use the 'worm' to measure the audience response to a political debate. TurningPoint allows students to participate in presentations or lectures by submitting responses to interactive questions using a keypad or clickers. In our trial in Semester 1 we used the TurningPoint software as a survey tool to gauge the students' response to the training sessions. After the session you are able to run and save a report on the responses given during the class, which helps with your evaluation of the session. Other sessions run by the Faculty Librarian for Business and for Semester 2 orientation, have used the clickers for student participation throughout the class, as well as for evaluation. This has also been quite successful.

In addition to the change to a collaborative learning environment we were also incorporating these two new technologies into our lesson plans as well – it was quite a challenge and a huge learning curve. We had lots of issues along the way, especially with the tablet PC, including:

- The setting up of the tablet PC in the labs – connection issues with cables, having to use a wireless connection to access files and the internet.
- Issues with software on the tablet PC

- When you use the tablet pc in its tablet format – there is no keyboard – you have to use the stylus and click on individual letters, which took more time (I chose not to use the tablet pc this way – but my colleague did).

All of this combined made our 1st semester library training extremely busy and yes sometimes a bit stressful.

However, we persisted…… we began using the new collaborative learning facilities for all generic information literacy classes. We incorporated the use of the tablet PC and TurningPoint. When we were doing the classes we did notice a difference! The students were more engaged, more interested. Many of them got very enthusiastic when we used the new technology of the tablet PC and the clickers. Whilst we haven't yet done any formal surveying of students or followed up on how it has benefitted their information literacy skills (we would like to do this in the future) we do have the results of the Turning Point slides in relation to their feedback on the classes.

(Show on PowerPoint multiple graphs of students' evaluation of the classes).

On reflection, why do we think that students were more engaged?

Without formal evaluation, we do not know for certain why the students engage more, but we can make some assumptions based on our experience with the classes.

- The physical space was more open (because of the removal of the computers) – it was easier to see what students were doing.
- The students were more comfortable and relaxed in the open environment.
- Much easier to walk around and assist students and interact with them – to guide them if need be.
- The fact that they were talking through their own thought processes with others helped them to understand what was being taught.
- Perhaps psychologically – we were more excited, more engaged with the new learning approach. This made us feel more engaged with our students.

- Other lecturers and courses at USQ are designed around the principles of collaborative learning and other courses are trialling the same table PCs and clickers – so it may have been familiar to the students.
- Students were also able to come and interact with the tablet PC – which excited them.

What didn't work – or what could we do better:

- With the new room layout, one of the rows had to physically turn around to see the power points. This of course was only an issue when we had 13 or more in the class.
- Time issues – traditionally we only set aside 1 hour for these lessons. Because of the way that students engage and talk – it is very easy to lose track of time and sometimes go 10-15 minutes over time.
- The setting up of the tablet PC, TurningPoint, and collaborative learning tools takes a lot more time than the traditional environment.

The future – where to from here?

In Semester 2 we are running the same format again – although this time we are much more confident with the whole process. Most of the teething problems with the Tablet PC have been worked out, the software is working well. We also have another Library Officer on board which has meant an easing of workloads and in 2010 two more library officers will also participate.

In 2010 we would like to relook at our class plan. We would like to improve our activities and use the tablet PC and TurningPoint even more in our classes, not because they are available, but because we believe they can improve the learning process. We would also like to get feedback from students who have done the classes – so we need to formalise a survey and get permission from the University to do that.

One of our Faculty Librarians is also using the tablet PC and Camtasia Studio (which is a screen video capture program) to record his information literacy classes and to then host on the Library website or on the students' study desk - for them to watch. This has many possibilities for us in the Library and we are keen to investigate and trial their use in the coming months. Possibly recorded versions of the generic classes may be used to supplement the online tutorials the Library offers to our external students. Additionally, some Faculty Librarians have been using Wimba (which is collaborative learning software). This may also assist with teaching external students, and this too is under investigation at USQ Library.

Conclusion

As previously mentioned, there have been many positives with this change to the collaborative learning style at USQ for our generic information literacy classes. We are also hoping that our change in teaching style has made us more approachable in the Library, perhaps even changed students' perceptions of the Library and how it can help them to achieve success in their studies. This year I have been challenged to explore, research, learn and present a new style of learning, using new technologies. This process has had great benefits to me both professionally and personally and would never have happened if I had chosen to stay on the safe road, with all that is familiar to me in my job. With appropriate research, planning and the support of your managers don't be afraid to take the road less travelled.

Reference List

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