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**Information literacy courses – a shift from a teacher-centred to a collaborative learning environment**

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# **INFORMATION LITERACY COURSES – A SHIFT FROM A TEACHER-CENTRED TO A COLLABORATIVE LEARNING ENVIRONMENT**

## **ABSTRACT**

Collaborative learning improves student's learning and therefore enhances their lifelong learning skills. This paper describes how the generic information literacy courses, at the University of Auckland Library are being redesigned with a student-centred focus in a collaborative learning environment, based on sociocultural learning theories.

## **Introduction**

The University of Auckland (UoA), established in 1883, is the largest university in New Zealand. The University aims to “provide its graduates with key, high-level generic skills such as the capacity for lifelong critical, conceptual and reflective thinking, and attributes such as creativity and originality” (The University of Auckland, 2004, p.31). In the University Academic plan 2005-7, information literacy skills are stated as “vital to the student learning experience and will be an integral aspect of overall learning and teaching activities.” (The University of Auckland, 2004, p.32)

The University of Auckland Library consists of 13 subject specialist libraries and 4 Information Commons across five campuses. Multiple information literacy programmes based on the ANZIIL standards (ANZIIL, 2004) are offered in collaboration with librarians and academics, including extra-curriculum, inter-curriculum, intra-curriculum and stand-alone curricular courses. UoA librarians are heavily involved in information literacy teaching programmes.

Students are asked to fill in an evaluation form at the end of most library courses sessions and this provides valuable feedback on the programmes. This method of evaluation does not provide information on the longer term learning outcomes of the generic programme. In order to gather this information, two student focus group meetings were held in May 2005. The results clearly showed the limitations of traditional approach of these information literacy courses. The classes are highly constructed to transmit knowledge from teacher-librarians to students and dominated by ‘show and tell’. Students understand what have been taught in the class, but many do not remember the information after the class. Information literacy skills learnt in the class are not applied to their learning; therefore, the students’ lifelong learning skills are not well developed through these generic information literacy courses.

Information literacy forms the basis for lifelong learning (Association of College and Research Libraries, 2001) and is one of the five key elements of a lifelong learner (Candy, 1995). Research on learning theories identified learning models that could help us in redesigning the generic information literacy courses in order to improve students’

lifelong learning. The research suggests the benefits of collaborative learning approach supported by sociocultural learning theories. Therefore, the Library established course redesign project teams to redesign the generic information literacy courses based on sociocultural learning theories. Results to date have been very positive.

This paper presents an overview of sociocultural learning theories and our experience in applying them to the ongoing development of a collaborative learning approach to information literacy at the UoA Library.

## **SOCIOCULTURAL LEARNING THEORIES AND COLLABORATIVE LEARNING**

There are many different learning theories. The sociocultural learning theories provide a learner-centered approach and they take account of the important roles that social relations, community and culture play in cognition and learning. Sociocultural theories draw heavily on the work of Vygotsky (1978), a Russian psychologist, as well as later other theoreticians such as Lave (1988), Lemke (1990), Rogoff (1990; 2003) and Wertsch (1998). Vygotsky (1978) described learning as being embedded within social events and occurring as a learner interacts with other people, objects, and events in the environment. Nuthall (1997) states “the words used to talk about mental processes refer to nothing more than the things we do in interaction with others when we are engaged in ‘thought-related’ activities.” (p. 732)

### **Collaborative learning**

Sociocultural theories highlight the significance of the human social and cultural context in teaching and learning. In Vygotsky’s words: learning “appears twice: first on the social level, and later, on the individual level; first between people (interpsychology), and then inside the child (intrapsychology)” (Vygotsky, 1978, p.57). People interact with others through collaboration (participation between two or more people to achieve a common goal) in social and cultural context and then internalize to shape their consciousness, thinking and learning. Collaboration plays a significant role in thinking and learning and it is the key in the sociocultural theories.

Collaborative learning is defined as “a situation in which two or more people learn or attempt to learn something together” (Dillenbourg, 1999, p.2). Collaborative learning provides learners with an opportunity to interact with others and engage in solving problems or completing tasks, forces them to listen, think and talk about their thinking and to explore the answer to the problems or tasks. This collaborative learning environment helps learners develop or enhance their critical thinking and creative thinking (Jennings & Di, 1996) thus improving students’ independent and reflective thinking skills. Critical thinking was defined by Ennis (2001) as reasonable and reflective thinking focused on what to believe or think. The social and cultural interaction in collaborative groups forces students to strive to analyse arguments, look for valid evidence, and reach sound conclusion. Creative thinking, defined by Gallagher & Gallagher (1994) is a mental process in which an individual creates new and original

ideas or new and unique combinations of existing ideas. Creative thinking is enhanced as students in a collaborative group react to questions and solve problems that promote divergent responses among themselves.

### **Collaborative learning environment: a community-of-learners**

In the collaborative learning environment, a community-of-learners is created. A community-of-learners is described by Wells:

*Instead of the traditional model, in which knowledge and expertise are treated as vested in those with power and authority, whose responsibility it is to transmit them to those on lower levels in the hierarchy, I began to imagine a different model, based on communities of action and inquiry. Here, knowledge and expertise are a shared achievement, arising from joint engagement in challenging activities that are personally significant to the participants.*  
(Wells, 1993, p.9)

In the community of learners, the teacher's traditional role as authority and transmitter of knowledge is reframed as the mediator who designs and provides activities and resources and interacts and intervenes within student's cognitive social and cultural practices. The student's traditional role as a knowledge receiver and note taker also shifts to that of a more active problem solver, contributor, and discussant. The collaborative use of mediation allows teachers and learners to engage in exploratory talk and activity that assist them in the appropriation of skills, words, and knowledge as tools for reorganizing and understanding their experiences. In the community-of-learners, knowledge is created in the community instead of being transmitted.

### **Community-of-learners in information literacy context**

Table 1, based on the work by Brown *et al* (1993) and Imel (1991), applies these theories to the library/information literacy context. It outlines key differences between the traditional and community-of-learners approaches.

<b>Role / Content/ Environment</b>	<b>Traditional library classroom</b>	<b>Community-of-Learners</b>
Role of Student	Listener; observer, note taker, to do what lecturer/ 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 students' learning, motivator and class activity designer
Content	Focus on the library, highly constructed and being transmitted	Focus on information process, interacted via collaborative activities
Environment	Competition, formal, knowledge is transferred	Unthreatening and democratic, informal, knowledge is created

*Table 1: Traditional library classroom vs. the community-of-learners environment*

In the information literacy community-of-learners, students, lecturers and librarians are community members and play different roles compared with traditional library classroom. Lecturers and librarians are no longer seen as classroom managers or transmitters of knowledge, but guides to intervene if students ask questions or stray off the task. Students are not just recipients who follow instructions and do what lecturers / librarians say. In the information literacy community-of-learners, students are provided with opportunities to engage actively in class activities, to interact with other learners and lecturers/librarians to solve problems, to find the most appropriate solution to the question and to set up their own learning goals and to be responsible for their own learning in order to develop their lifelong learning skills. Academics, librarians, learning advisers, and IT specialists could work collaboratively in the information literacy community-of-learners to integrate information literacy into curriculum to develop student's problem solving, critical thinking and lifelong learning skills.

## **STUDENT CENTRED FOCUS APPROACH IN INFORMATION LITERACY COURSES - COLLABORATIVE ACTIVITIES**

Jesús Lau, the Chair of Information Literacy Section at the International Federation of Library Associations and Institutions (IFLA), stated in the International guidelines on information literacy (a draft proposal) that "A librarian not only needs to know what information literacy components to facilitate, but must be competent on how to facilitate knowledge (Pedagogy)" (Lau, 2004).

S. Markless, who has twenty years experience of teacher training for university and health librarians, points out that learning theories are not an additional option when designing courses, but the foundation on which all teaching and learning should rest (Markless, 2002). Sociocultural learning theories provide us with an ideal framework to analyse classroom interaction and to gain understanding of how students learn. These

theories suggest that learning is best facilitated when students interact with other people in activities in the socially and culturally structured world.

The literature suggests that an effective collaborative learning activity is critical to successful information literacy teaching and it needs to be carefully planned and designed. A well-planned collaborative activity should also make effective use of tools. Books, journals, online databases and the Internet can all be used as learning tools in information literacy teaching.

At the University of Auckland Library, generic information literacy courses are being redesigned with a student-centred focus, based on sociocultural learning theories. Below are examples of some generic courses that have been redesigned to facilitate student learning in a collaborative environment.

### **Background information- the UoA information literacy experience**

Most students at the UoA study on campus; therefore the UoA library offers many generic information literacy courses to help undergraduates, postgraduates and staff with their information literacy skills. These courses cover topics such as library overview, library catalogue, database search skills, e-books, e-journals, new publication alerts. Many of these generic courses are tailored and offered as inter- or intra-curricula components (Peacock, 2005).

These information literacy courses were mostly designed with a teacher-centred approach. The classes were highly constructed to transmit knowledge from teacher-librarians to students and were dominated by “show and tell”. In order to create a collaborative learning environment and to improve student learning in these information literacy classes, the UoA Library has proceeded to redesign generic information literacy courses since June 2005, based on sociocultural learning theories and with a student-centred focus. Project teams were established and assigned a specific course. Several methods were used to form the redesign process and to gain better understanding of student needs. Learning theories were studied and discussed. Students’ feedback from the library course evaluation database was analysed. Student focus groups were held to get first hand information.

Students are asked to fill in an evaluation form at the end of most library course sessions. The data is kept in the Library Evaluation and Online booking database (LEO). A variety of statistical reports, ranging from course / presenter specific to annual trends, can be generated from LEO. Course-specific feedback was analysed by each redesign project team to identify the students’ needs and their expectations.

Two student focus group meetings were held. Sixteen students and staff members who have attended at least three library courses were invited and attended the group interviews. Ten open-ended questions were asked, such as: how helpful the library courses are for their study; what they retain; and how the course handout and class activities help their learning. From these focus group meetings, the project team learned

that students understood what has been taught in the class, but many do not remember or use the information after the class. They prefer class interactions, using their own assignments for class exercises, and learning basic and transferable skills.

This valuable feedback was considered by the project teams when the courses were redesigned. Different collaborative learning models were considered in the course redesign. The reciprocal learning model was used in a few redesigned courses. In this learning model, the four pedagogic strategies are applied: questioning, feedback, summarising and reflecting. This helps students to develop general, transferable skills therefore to increase their lifelong learning skills.

### **The Library catalogue introduction course**

The teaching content in this course covers basic skills of how to use the library catalogue, including title search, author search, keyword search and the recall and renew functions.

In the new course redesign the class starts with a group activity in which students search the library catalogue and locate the items on a reading list. Students can use their own reading list or the reading list in the handout. This allows the teacher-librarian to observe how much students know about the Library catalogue and also provides a starting point from which students could find problems and develop their own learning. Through problem solving, the groups execute searches, discuss the results, try again and debate further. The teacher-librarian assists groups by asking questions such as why you can locate books but not journal articles or book chapters in the library catalogue. Each group reports back to the class with problems experienced or solutions found. The teacher-librarian analyses the common problems and summarises the key issues of searching the library catalogue for specific items.

All students are actively engaged in the class and are able to locate all the items on the reading list at the end of the session. This collaborative learning environment helps learners develop or enhance their critical and creative thinking; therefore the students' lifelong learning skills can be developed. By doing so, the teacher-librarians can also assess what existing knowledge students have and support them to build the new knowledge on top of it to enhance their learning.

### **The database search skills course**

The objectives of this course include how to analyse and understand assignment or research topics; how to choose appropriate databases and search databases effectively; how to limit or broaden searches; as well as how to evaluate and manage search results.

Students can use their own assignment or research topic or choose an assignment from the course handout. Ten basic steps of finding information for your assignment based on the ANZIIL standards (ANZIIL, 2004) are available in the handout. These ten steps are: understanding / analysing your topic and identifying the key concept; selecting the keywords or phrases for your topic and finding synonyms for them; constructing a search



strategy; accessing appropriate databases for your topic; conducting a search based on the constructed search strategy in one of these selected databases; analysing your search results and using them to refine your search; finding fulltext articles: evaluating your results; managing your results; referencing sources that you have used for your writing.

Students, in groups, are asked to analyse their assignment / research topics and to select keywords or phrases to be used in searching a database. A few questions are asked and discussed in the class. Students are encouraged to use the handout and work in groups to determine appropriate sources to find answers for their assignments or topics. Each group will report back to the class. The teacher-librarian then discusses the common questions or summarises important issues in the class. Students are asked to reflect on what they have learnt. It helps them to analyse the topic, convert the concepts to search terms, choose a database and search for related articles. Therefore, they learn and understand how to effectively find information for their assignment.

### **Our experiences**

This student-centred and activity-based approach reduces the time teacher-librarians spent delivering lectures and increases the time spent interacting with students whilst they are doing learning tasks. Therefore, the role of teacher-librarians shifts from an authority to a facilitator. In the community-of-learners environment, knowledge is created in the community instead of being transmitted. Students are encouraged to take initiative and to express themselves and they are responsible for their own learning. Their lifelong learning skills therefore are developed.

Two to three sessions of each redesigned course have been taught and the feedback from about 80 students is very positive. Below are some representative comments from students to the question on the evaluation form: “What I liked about this course?”

*“I liked the interactive nature of the course; I think this improves the amount I take in. Thanks.”*

*“Good database search techniques that will help me throughout the year.”*

*‘It will be a BIG help with my future research!!!’*

*”Using your own subject. Doing the searches ourselves not just listening or watching.”*

*“Lot of personal interaction and interest shown in individuals topics.”*

*“Very engaging for students, gives them good idea how to approach library catalogue.”*

Most students enjoyed the classes, but some feedback suggested that time is an issue: *“This should perhaps be a 2-hour course to allow time for more discussion”*; *“The time allocated can be little more so that the students have more time to practice.”*

According to sociocultural learning theories, a well designed group learning activity in an information literacy community-of-learners environment will enable learners to learn better and develop their critical thinking and lifelong learning skills. From the feedback

we can see that students enjoy learning in a community-of-learners environment. It appears to have improved the amount of information retained and the skills that they developed from the courses can be used in their learning. In designing an information literacy community-of-learners environment, the teacher-librarians initially need to spend a significant amount of time to develop teaching material and content with appropriate activities and resources in collaboration with academic. The teacher-librarians need to have both subject knowledge and pedagogical knowledge based on learning theories.

## **CONCLUSION**

Our experience in redesigning the generic information literacy courses shows the value of moving from the teacher-centered approach to the student centred approach. We recommend that when designing an information literacy course, teacher-librarians as well as academics might consider the importance of a soundly based pedagogical approach to information literacy teaching. Learning theories and information standards offer a foundation for information literacy design and activities.

According to sociocultural learning theories, a collaborative learning activity is critical in learning. A well-designed learning activity has the potential to engage and motivate students and develop their critical thinking and lifelong learning skills. Sociocultural learning theories provide us with excellent learning models to develop collaborative learning activities to actively engage students in the learning process. In an information literacy community-of-learners environment, students have the opportunity to interact with others and engage in solving problems or completing tasks. The literature and evaluation of the information literacy program at the UoA demonstrate that collaborative learning environment helps students “developing critical thinking, encourages divergent answers” (Jennings & Di, 1996, p.83) therefore improve students’ independent and reflective thinking skills.

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