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ABSTRACT

The adoption of the competency-based training (CBT) style of curriculum delivery in the TAFE (Technical and Further Education) program in Queensland, Australia is presenting libraries with the challenge of providing reader education services appropriate to this mode of education. Information competencies should be included in the recast curriculum. These competencies can be developed in everyday learning activities. Library staff should be active participants in the process, available to advise and assist teachers in ensuring that students achieve these competencies. To be active and effective participants in this process, librarians need to develop their knowledge and understanding of the elements of the learning process, such as individual learning styles and thinking skills. Library staff should also pursue membership in curriculum development groups and bring with them an awareness of the range of curriculum design and evaluation models and a sense of where and how library staff can contribute to the process. By having this knowledge and understanding, open communication between teaching staff and library staff will be facilitated, along with the increasing quality, relevance, and value of library services. A curriculum development model showing library input is appended. (Contains 16 references.) (KRN)

CURRICULUM DELIVERY IS CHANGING - RESPONDING TO THE CHANGE

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ABSTRACT

The adoption of the competency-based training style of curriculum delivery presents libraries with the challenge of providing reader education services appropriate to this mode of education.

This paper addresses:

- the adoption of competency based training
- the challenge to reader education
- desirable instructional competencies for library staff
- the use of open learning for the enhancement of their knowledge and skills.

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The challenge is to reform vocational education so that it remains a powerful form of preparation for employment in a period when skill demands are changing.

(Grubb 1991, p.24)

The beginning of the twentieth century saw the rise and consolidation of trade unionism in Australia. The close of the century sees an equally significant event occurring in the industrial arena.

In an attempt to regain Australia's competitive edge in the international economy, industrial awards are being restructured and trade callings are being reclassified. Employers and unions have recognised and agreed on the need for workers to achieve and maintain specific competencies.

Competency-Based Training

Competency-based training . . . places primary emphasis on what a person can do as a result of training (Commonwealth/State Advisory Committee 1990, p.iii). As such, the educative concern has moved from relative evaluation, i.e., are you a better sign writer than your peers, to the demonstration of attainment of a specific skill standard, i.e., can you perform certain sign writing tasks to a specified standard of performance that is accepted by industry?

I argue that the delivery method used for the training is not the specific focus of CBT. Rather, the focus of competency-based training is on terminal measurement. By this it is meant that the main interest of CBT is to prove that a student/worker can 'do something'. Usually, this capability will be generated through participation in and successful completion of a learning activity the outcome of which will be mastery of a skill performed to a specified standard under controlled conditions.

While terminal measurement may be either formative or summative, competency will usually be measured through formative evaluations. This is where a major skill is broken into smaller component skills. The student must master and display competence of each component skill, then by linking these, will be able to prove or demonstrate competence in the major skill.

A very simplistic example to illustrate this idea follows on the next page.

Major skill	Component skills
The student is able to brew tea	The student is able to: • identify the ingredients required for the brewing of tea • use an electric kettle to boil water, observing all occupational health and safety requirements • compute the mass of tea leaves required to brew enough tea for a given number of persons • pour a hot liquid from one container to another, observing all occupational health and safety requirements

Although this example is contrived and somewhat trivial, it does illustrate the idea of major skills being broken down into component skills. It also illustrates another concept associated with CBT - that of transfer of training. It is obvious that some of the skills, viz. the second and the fourth, could be components of other major skills (such as making instant coffee?!). Therefore, when this other skill is taught, it will not be necessary for the student to have to be taught the whole content. Only those skills in which competence has not been proven will need to be taught.

The point being stressed is that the major concern of competency-based training is the evaluative measurement of performance and the transferability of skills. Much of the confusion that exists around the introduction of competency-based training stems from attempts to devise learning materials and resources that are identifiable as competency-based training materials.

It is argued that any learning material has the potential to be used in competency-based training. The crucial link is that as a result of using that material, the student can provide evidence or demonstrate competence of a skill to a stated level of performance under specified conditions.

Competency-Based Training Implementation

In Queensland, all courses offered through TAFE are being recast using CBT genre. It has been suggested that this transition is to be completed and the renewed curriculum implemented before 1994.

This pressure to change has resulted in a less than satisfactory introduction of CBT'ed curriculum. One difficulty that has been observed is a lack of a formal, organised installation of the curriculum. This may be traced to a generalised uncertainty of what is encompassed by the term competency-based training and how it is to be implemented. Hopefully, this is a short term problem. With satisfactory in-service activities and clear definitions of what is meant by various terms this problem should be remedied.

Libraries have experienced difficulties in resourcing the curriculum due to this lack of installation and uncertainty. Most of the resources currently held are capable of being used in competency-based training styled curriculum. What is required is the redefinition of the learning resources aims so that the user can focus on the skills and competencies that are developed through that resource's use.

How common has this scenario been? The first time library staff are aware of the curriculum change is when a teacher comes to the inquiry desk and produces the *new* curriculum. The resource list that accompanies the curriculum is produced. Assistance is sought in locating the resources listed. This is, of course, about thirty minutes before the lesson, using these resources, is to be delivered.

In Queensland, curriculum redesign is being carried out through a variety of models. Three that have been identified to date are:

- teachers with a sound knowledge of the subject content are seconded to revise and recast curriculum into CBT terms
- colleges undertake to recast specific sections/years of a course, trial the work and then distribute the renewed curriculum to other colleges
- teachers with skills and knowledge of specific areas of the curriculum recast that area. A central person co-ordinates the activities and assembles the components into the renewed curriculum.

It would be appropriate for library staff to have input during these processes so that, as the curriculum are examined and modified, information processing competencies can be included with the performance objectives. Library staff would also be able to examine proposed resource lists and suggest where they may be modified. Unfortunately this level of involvement is not occurring to any great extent. Perhaps this may be evidence of the operation of the *informal covenant* - a concept discussed later in this paper.

From a general perspective, CBT-styled curriculum are having a definite impact on teaching styles and classroom organisational patterns.

- Teachers are being encouraged to allow students to progress through learning modules at their own rate rather than proceed as a class member through a lock/step approach.
- Courses do not have specific entry and exit points - rolling starts are available. At any time, the classroom may have students just beginning, some halfway through and others finalising the same course or skill module.
- Teachers are encouraged to be facilitators and encouragers of learning rather than learning dictators.
- Because of the nature of the learning modules, teaching is losing flexibility. Teachers are being provided with material that is very structured towards the achievement of specific competency-related goals. As a result, many follow the curriculum like a recipe and are loath to deviate from it less they spoil the final product. If the curriculum suggests that a certain approach will lead students to achieving competency, many teachers will follow it exactly.
- Similarly, if the learning package lists a resource, then it must be used as the inference is that the resource is critical to achievement of the competence. In these cases, library staff have reported difficulty in encouraging teachers to use parallel or higher quality resources.

Challenge to Reader Education

Libraries are high profile supporters of the concepts of life-long learning, independent learners and flexibility in the provision of information. In the CBT-styled curriculum these concepts are strongly supported.

Given this, the introduction of CBT-styled curriculum should not cause major dislocations to our concept of the need for and content of reader education. Rather, by capitalising on the impact of the renewed curriculum, the role and value of reader education services should become heightened and crucial to the successful achievement of competency.

What librarians need to consider is recasting reader education programs into the language of CBT. Clearly specified information literacy and research process competencies should be included with performance criteria in the curriculum. It will be through the students' mastery of these competencies that the ground work for their development as life long, individual learners can be laid.

It is suggested that the following competencies be included in recast curriculum. The student should be able to:

- formulate and analyse an information need
- identify and appraise the worth of likely information sources
- trace and locate individual resources
- examine, select and reject individual resources in the light of the information need
- interrogate resources to isolate required information
- record and store information
- interpret, analyse, synthesise and evaluate information gathered
- present and communicate findings
- evaluate the conduct of the process.

These competencies should be developed, in context, through everyday learning activities. College library staff should be active participants in the learning process. Wherever possible, they should be available to advise and assist teachers in ensuring that students achieve these competencies.

Mid-point Summary

The preceding sections of this paper have set the scene. They have provided an overview of this writer's interpretation of competency-based training, information on how curriculum are being modified and lastly the information competencies that students will need to have mastery of if they are to be come life-long independent learners.

Instructional Knowledge

For library staff to be active and effective participants in this process, development of their knowledge and understanding of specific elements of the instructional process is required.

Library staff should:

- have a knowledge of learning and information transfer modes - visual, aural, kinaesthetic and olfactory
- be able to identify a learner's preferred mode for learning and information transfer. By doing so, they will able to offer resources that match the individual's learning style thus increasing the potential for successful of information transfer.

- be able to recognise appropriate modes for delivery of information. For example, large group presentations may be reasonably effective for outlining library borrowing policies; however, small groups are more effective for instruction in research methods.
- be able to recommend the appropriate information presentation formats for particular circumstances, i.e., when to use overhead projectors, the disadvantages of using film rather than video and how to use media effectively.
- have a solid grasp of thinking skills. Thinking, or problem solving skills are the cornerstone for the development of individual, life-long learners.

Resnick (1987) provides these features that characterise thinking skills:

- there is often a need to find a structure in apparent disorder
- solutions considered tend to be multiple rather than unique
- thinking requires judgements to be made after weighing evidence
- there is often uncertainty in the solution because not everything is known
- the sequence of thinking does not tend to follow a defined path.

Consider the match between the information competencies listed earlier and these features.

In this example, the 'problem' being worked on is the location of information. By applying the competencies as listed, the student:

- creates a structure for organising the compilation of information,
- in many cases locates multiple sources of information - most of which will be the same information provided with different colour,
- evaluates the information obtained,
- is sometimes left with a gap where information is not available and therefore must create "new" information, and
- structures the information gathering activity to match the current information need.

Knowledge of Curriculum Processes

If library staff pursue membership of curriculum development groups, as is implied throughout this paper, it is important that they bring to the group prior understanding of the processes involved. They should be aware of a range of curriculum design and evaluation models. As part of this awareness they need to know where and how library staff can input. The appendix illustrates this point in depth.

Library staff would find that a basic understanding of curriculum dynamics would be beneficial to their work. Through this understanding, they would be able to provide timely advice to teaching staff by being able to anticipate where and how contributions may be made.

A difficulty library staff may face in being accepted as key personnel in the design process is the influence of the *informal covenant* (Krueger, J. and Parish, R. 1983). This covenant is a loose, yet powerful, set of rules that exists within schools, colleges and other educational institutions. These rules define where responsibilities begin and end, individual territories, and who is able to interact with whom.

The boundaries set-up through the covenant can be blurred by "externals" demonstrating knowledge and competence of the "internals" area. This blurring will enable library staff to be more easily accepted as members of curriculum design and implementation groups.

Content Delivery

It would be folly to suggest that these are universal developmental needs for library staff. Many librarians possess some or all these competencies and knowledge.

When considering how this content could be delivered, the following guidelines were suggested as being appropriate.

Learners should be able to define and isolate their particular needs. The availability of entry testing would provide guidance.

A prescriptive course of study is inappropriate. The learner needs to specify the course and/or topic content and select those areas in which further information is required.

Hours of work need to be considered so that the learning activities can be built around the time available. A course of study should allow the learner to select the time and place of study.

Some learners may require an exit certification to prove successful completion of the course. Others may just be *topping-up*. For them, self-evaluation is appropriate.

A formal examination may provide some learners with a concrete evaluation of their knowledge and understanding. Others may be content with their 'gut' feelings and/or informal feedback from teachers and tutors.

Some may wish to work through the learning activities, apply the theory to practice and then rework the activities and consider previous responses etc. in the light of their experiences. This becomes action research and could be for many students a preferred learning mode.

Open Learning?

A definition of open learning suggests it is a process that allows people to acquire or update skills or knowledge by offering learning methods allowing them to learn at a time, place and pace that suits their circumstances. (Open Learning Planning Committee 1989)

Given this definition, and linking it to the guidelines listed earlier, it is apparent that, if a course was to be offered to library staff to update or provide them with the skills discussed earlier, an open learning structured offering would be most appropriate.

Conclusion

The recasting of curriculum into competency-based training frameworks provides libraries with a wonderful opportunity to promote services and resources available. For maximum benefit to accrue, staff need to become active and valued participants in the instructional process. To support this participation, library staff must have a basic knowledge and understanding of the instructional environment. By having this knowledge and understanding, open communication between teaching staff and library staff will be facilitated thus increasing the quality, relevance and value of library services.

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Appendix

Curriculum Development Model Showing Library Input

Curriculum conceptualisation and legitimisation ✎ conducting needs analysis ✎ determining audience for curriculum ✎ raising philosophical questions, conceptions regarding the curriculum ✎ determining curriculum design ✎ creating the master management plan and determining who to involve	*Input* * identifiable reference point * skill requirements inherent in the curriculum area * skill requirements on the broad socio-economic level * resourcing implications * conduit to collection development policy areas * ensuring effective information interchange between curriculum designers and library network
Curriculum diagnosis ✎ translating needs as to causes and solutions ✎ generating goals and objectives	*Input* * skills to be developed * technical literacies to be developed * familiarisation of resources to be developed * awareness/rational for broad-based skill mastery development
Curriculum development - content selection ✎ selecting a concept of knowledge and content ✎ determining criteria for selection selecting content ✎ organising content	*Input* * identify resource sources * availability of resources in and out of the network * arranging preview, evaluation of resources * proactive purchase of resources * implications for support hardware * advising colleges of purchase requirements * advising college libraries of changes to content that will effect purchase policies * advising on appropriate form of citation

Curriculum development - experience selection	*Input*
✎ selecting conception of experiences ✎ selecting conception of instruction ✎ determining criteria for selection ✎ relating experiences to educational environments ✎ selecting and organising experiences ✎ creating educational environments ✎ melding of curriculum components to curriculum - generation of the instructional plan	* identifying resources available * ensuring effective utilisation of network resources * advising colleges of resource implications * advising on implications and requirements for resource provision at experiential, i.e. delivery, sites
Curriculum implementation	*Input*
✎ pilot testing ✎ delineating types of assistance requisite for affected parties ✎ monitoring the system ✎ keeping information channels open ✎ final implementation	* identifiable conduit between curriculum design teams and college libraries. * assisting with curriculum installation, particularly to college library staff * advice and diagnosis of skill requirements and advising college library staff of implications for reader education programs * promotion of effective resource utilisation * promotion of effective resourcing
Curriculum evaluation	*Input*
✎ formative ✎ summative	* quality of resource services * quality of resources available * quantity of resources available * quality of resource usage
Curriculum maintenance	*Input*
✎ managing the curriculum system ✎ managing the support systems	* maintaining resource currency * identifying new resources as they become available * arranging for evaluation of new resources * publicising new resources to college libraries * maintaining resource supplier access

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