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Joseph A. Meloche
jmeloche@uow.edu.au

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Abstract

This paper examines the particular importance of critical thinking in distance education. It poses that the unique challenge of distance education lies in giving responsibility to the students for their own education. This is particularly important in distance education, as giving direction with face to face contact is not possible.

Keywords

education, thinking, critical, importance, distance

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THE IMPORTANCE OF CRITICAL THINKING IN DISTANCE EDUCATION.

Joseph A Meloche
Charles Sturt University

ABSTRACT

This paper examines the particular importance of critical thinking in distance education. It poses that the unique challenge of distance education lies in giving responsibility to the students for their own education. This is particularly important in distance education, as giving direction with face to face contact is not possible.

This paper examines, briefly, some problems associated with the traditional practice in the provision of distance education and the Australian educational context in which it occurs, and offers suggestions for implementing a critical thinking approach. This paper takes the view that increased student involvement is essential if distance education is to rise to the challenges of the evolving education environment, and that a question-based, critical-thinking approach is an effective way to proceed to this goal.

While traditional practice in distance education in Australia is innovative and more flexible than face-to-face teaching, it is still somewhat cumbersome in that it involves the physical distribution of printed materials and the occasional attendance by students at residential schools. This practice has been recently supplemented by convenient advances in communication and information technology, such as e-mail, forums, and web-based resources.

THE AUSTRALIAN EDUCATIONAL CONTEXT

The situation in the Australian academic educational environment has been directed by changes in government policy, and changes in the

way the government provides support to higher education. *The Higher Education Report for 1999 to 2001* (Kemp 1999) identified that graduates should have the thinking and knowledge skills as listed below. The table, particularly the "Thinking Skills" section, is almost a breakdown of the key attributes of critical thinking. The skills or attributes given in the below lists not only reflect the intention of government policy, but they also reflect what is an essential reality of the students experience in higher education. Students in Australia are currently faced with an over abundance of information, and the onus is now on the students to be able to critically assess the worth of the information that they are in contact with. Students, like academics, now face the receipt of material from a variety of modes: email, physical mail, phone, fax, etc., and even combinations with computer based answering machines and faxes – particularly distance education students.

Receiving information in a variety of modes has the potential to increase difficulties in organisation, authority, and receipt acknowledgment; with there being no single standard or integration protocol available. Thus, the requirements for organisational skills and the ability to use appropriate technology, are now added to the essential skills for distance education students.

Knowledge Skills	Thinking Skills
<ul style="list-style-type: none"> • Have an appropriate level of literacy and numeracy skills • Be able to identify, access, organise and communicate knowledge in both written and oral English • Have good listening skills • Have an international awareness • Have the ability to use appropriate technology to further the above 	<ul style="list-style-type: none"> • Be willing to challenge current knowledge and thinking • Have conceptual skills • Have problem-solving skills • Be creative and imaginative thinkers • Be able to combine theory and practice • Be able to reflect on and evaluate their own performance

The demands being made by students of academics seem to be increasing in direct proportion to the demands being placed on the students themselves. In Australia, higher education has moved to an almost constant mode of development and re-development, as it seeks to address changes in educational delivery and increasing standards for delivery. These increases in standards have in turn been driven, to some extent, by increasing costs for students and increasing choices that they have in seeking education within an increasingly competitive market. Thus, there has been a continual increase in the number of distance education and part-time students who must use a variety of modes of communication and information technology in the course of their study.

It is against the above backdrop that thoughtful change in delivery and interaction in delivery needs to occur. An approach that adopts critical thinking is at once more flexible and one that, by its nature, empowers the student to face this emerging environment that requires lifelong learning.

TEACHING PRACTICE

What has yet to fully change though, is teaching practice. There is still a tendency, when modifications are made, to increase the amount of material supplied to the students, and to increase the amount of material the students are expected to cover. These increases in volume usually result in longer mail-packages, larger reading lists, and higher expectations in knowledge of content, etc., from the students. In addition to the problems that this increase in load places on the students, it also poses problems for the academic. The problems can include increasing difficulty in keeping material up-to-date, and problems in flexibility, such as the use of current examples or issues that present themselves, and ever increasing resource consumption. This lack of flexibility also imposes problems for relevance, currency and the inclusion of timely or local content.

A tradition in the preparation of distance education material is the long lead-time that is involved in the creation of learning packages. This extended lead-time is largely the result of two factors: the time associated with publishing and distribution, and the convention of providing all distance materials for a subject at the beginning of a semester. Other factors relating to the quality assessment of material from peer review and other checks also add to the time cost involved.

The traditional print-based process has been augmented by the introduction of web resources, often provided by giving URLs that provide the location of the desired material. The life span of

some URLs, however, does not match that of the print products that provide them. Thus the movement to on-line learning while a bonus for distance education can also be a burden when it co-exists with traditional methods of delivery.

While various solutions, such as tightening up the publishing time frame, and constant review of material, provide some relief, these measures do not address the main problem. The main problem is the belief or conviction that all the material that needs to be used can either be provided or identified in advance by the academic. As long as this belief is maintained it can only lead to increases in the volume of material supplied. The academic must, if following a mode that attempts to provide all things for the entire range of people studying the subject, increase the volume and scope of material to be supplied. This approach cannot succeed.

What can be achieved are approaches that engage the student in the process of their learning, and give responsibility to the students for provision of material that relates to the area of the subject that they wish to cover. If students are given this role and responsibility, it is essential that they proceed in a manner that is based on critical thinking and critical assessment of the material that they use. The selection and evaluation of the material must form an integral part of the study and assessment. The onus will then be on the student to provide an evaluation of the material that is located, selected, and used.

A useful approach to take when introducing the critical thinking approach is to put questions to the students rather than provide answers. In this way students can be guided in the right direction but will still be called upon to access their knowledge of a subject and to begin to address the study or research that they need to undertake. Asking questions has a number of advantages. This can include using the questions to inform students of the direction or orientation the academic wishes to focus on, and giving the student an indication of the level or depth of work required. The practice of having students also ask question of themselves, of their existing knowledge, of what they need to know, of how they might proceed, and how they will know when they have sufficient knowledge, is important.

The work of the academic then, changes in form, from being the provider of the information or knowledge, to the more appropriate role of being the guide to information sources, or even a critic of the available information. Similarly, students should see themselves as investigators and critics, not merely passive recipients. By following this model, particularly in distance education, it is easy

to see the advantages for increased flexibility in the provision of distance education.

The material supplied by the academic would be kept to a minimum. It would consist primarily of criteria for learning and assessment, an outline of the material to be covered, key questions that must be addressed in the study of the literature, and the assessment tasks that the students would undertake.

What would increase is the amount of contact that the academic would have with the students. Hopefully the amount of contact between students would also increase. This increased communication between students may occur in a number of ways, such as increased group or project work, or through prearranged meetings – virtual or otherwise. The increased contact with the academic, and the willingness and commitment of the academic to be available for an increase in frequent intermittent contact, is essential.

As mentioned earlier, electronic communication resources, such as e-mail, forums and net meetings, and Web resources, are now available to students and academics. These resources, if used as a central part of the learning experience rather than just as an add on, can be very beneficial and can be used to support collaborative learning strategies.

A QUESTION BASED APPROACH

A key problem with critical thinking is that it appears to be an abstract idea that can or is applied roughly across a range of subjects. In the worst cases, students are told to think critically in their assessment items after having been hand-fed material throughout the semester. Students who have merely read through supplied material are not in a position to critically assess that material. Material that is supplied by an academic brings with it an implicit statement that it is the best or most appropriate material, unless it is especially offered as a worst case example. While academics may supply material, it must only exist as an example, comparable to a taste, rather than a meal. Giving the students a taste of what the subject is about or a glimpse of what it might look like is helpful. Providing them with more, however, is not. It is critical for their own development that students make the effort to select, evaluate, and assess the material that they use.

Critical thinking must be put into the context of the particular subject, and this must start from the beginning and continue through the development of the subject, and be well reflected in the assessment tasks.

The following is a brief example of how this may take form:

- *Learning Task*
(This section would provide an overview of the subject and would present the learning expectations for students in the subject.)
- *Key Questions*
(There would be extensive questions provided, possibly contained within sections and supported by brief examples.)
- *Expected Outcomes*
(These would be provided in sections that may relate to parts of the subject or specific periods of time. Such as a fortnight.)
- *Subject Key To Literature*
(Subject headings that give students the range of headings that would help them locate material germane to their study.)
- *Authors*
(An introductory list of authors could be provided to get students started in reading in the area. It would be essential to explain that this list was only a beginning.)
- *Date ranges etc.*
(Date range, location, and other criteria specific to the area of study would need to be supplied to assist students in keeping on track.)
- *Criteria For Assessment*
(Detailed criteria for assessment, preferably at each assessment level and for each assignment, should be provided to the students. The assessment should leave no doubt whatsoever about what is required to achieve the various levels of success for each assessable item.)

If we examine the second point, *Key Questions*, we can demonstrate how the above list may be used. For example, a useful key question might develop as follows:

An interesting perspective on how libraries and information services might be seen has been developed by Bonnie Nardi and Vicki O'Day, where they see libraries as Information Ecologies, (Nardi & O'Day (1999).

What does taking the above view add to our understanding of libraries and information services? How does the above view differ, if it does, from other views that preceded it? Are other people writing or thinking of information and libraries in a way similar to Nardi and O'Day. What are the consequences of perceiving

libraries and information services in this way? Does this view differ from your own concept, has the perspective taken by them changed the way that you understand library and information services?

The above question or series of sub-questions is designed to introduce a reading for students. To have them critically examine it, to place it in perspective, to look for related material that predates it and perhaps follows it and, finally, to assess the impact that it has had on the way they understand the matter at hand.

The above approach or structure is based in part on the following list of learning strategies that was developed by Marton and Ramsden in 1988 i.e.:

- 1) Make the learners conceptions explicit to them.
- 2) Focus on a few critical issues and show how they relate.
- 3) Highlight the inconsistencies within and the consequences of learners conceptions
- 4) Create situations where learners centre attention on relevant aspects.
- 5) Present the learner with news ways of seeing conceptions.
- 6) Integrate substantive and syntactic structures.
- 7) Test understanding of phenomena; use the results for diagnostic assessment and curriculum design.
- 8) Use reflective teaching strategies.

In using the above list it should be remembered that there is also benefit in providing students with the list of strategies, so that they can understand your premise and the reference and follow it further if they wish. The importance of opening up your understanding of the learning process to the students cannot be overstated. The students need not agree with your methods, but they do need to know as much as possible about your approach to teaching and learning.

In summary, it can be seen that if the critical thinking approach is going to work in distance education, students will need to be informed up-front about the implications of this approach, and the responsibility that will be required of them for their own learning. It is by opening up the learning process, by making your assumptions explicit, by including the students as partners in the process of their education, that the benefits that can arise from a critical thinking approach will be achieved. This again, is particularly important in distance education, and in a sense, it takes the distance problem out of the equation in that it places the responsibility for learning where it

ultimately belongs, with the student. While this in no way diminishes the work or the responsibility of the academic, it does change their role and the responsibility that they take in working with the students.

Furthermore, it should be noted that most distance education students in Australia are employed adults, and that what they achieve at university directly effects their role as employees. For when students achieve critical thinking skills they are not only well positioned to continue their education well beyond their first degree, but also into their work environments. It is important to realise that employers welcome students – employees with these skills as they will be able to challenge accepted practices and know how to approach problems and achieve change. It is through questioning and answering these self-posed questions that effective change can and will occur.

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