

Distance education in OHS tertiary education: a primer

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In her article “Professional Education in Australia in 2004 and beyond” in this edition of *Safety In Australia*, Pryor (2006) chronicles the declining number of Australian Occupational Health and Safety university programs. Correspondingly, Pryor’s work has uncovered the trend for Australian universities to offer OHS programs in distance format to meet increasing student numbers.

Distance education is characterized by the separation in place and/or time of instructor, learner and learning resources. Early delivery consisted of written information delivered via surface mail. Today a wider range of delivery possibilities exists, with combinations of written, audio, and video formats offered via asynchronous/synchronous sessions. The most frequent mode of delivery is currently asynchronous via the Internet (Frith & Kee, 2003; Ryan, Hodson-Carlton, & Ali, 1999).

Gardner and Hall (2001) were early to question the “fit” of web-based OHS education. Some of their concerns revolved around the need to ensure that students were both knowledgeable and proficient in applying that knowledge. How could an instructor ensure at a distance that students correctly used equipment or that s/he could effectively deliver training sessions?

Experiences after our first year of OHS distance education certainly aligned with some of Gardner and Hall’s concerns. As Hashim, Mustapha and Alam (2005) have lamented, administrators have rushed to distance education as a means of embracing a “for profit” attitude

without concern for how it changes educational processes. Educators have been left to find ways to “make it work”.

Are there ways to ensure that the distance education demon can be wrestled for the good of a quality OHS educational experience? After all, in many ways the ability to bring learning to students (instead of students to a classroom) fits well with the majority of our students who work, have families and may be in geographically separated regions of the world.

As early work is showing (and discussed at the last Educator’s session at the Safety Institute of Australia’s 2005 Sydney Conference), it is possible to find new ways to achieve quality educational experiences using this new communication medium (Gallie, 2005a; Pisaniello, 2005). However, with it come new roles and dynamics in the educational journey.

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Distance Education – New Roles and Dynamics in the Educational Journey

#1 Student Paradigm shift

Explore the distance education literature and you will find the growing acceptance that “successful on-line learning requires a reconstruction of the roles, responsibilities, and practices of on-line students and their instructors” (Vonderwell & Savery, 2004, p. 1). Many are referring to this paradigm shift as a move from teacher to student-centred or centric learning (Gallie & Joubert, 2004; Jaffrin, 2003).

What this means in basic terms is that students are now more responsible than ever for their educational experience and must enter it with prerequisite skills and attitudes. These include:

- **“Soft” skills of self-directed/self managed behaviour and effective time-management skills – (or – attributes we expect of an OHS professional anyway).**

To illustrate, while the benefit of most distance education events is that you can access the educational event when it is convenient for you, the flip side is that it requires that you be self-motivated to work yourself through the course materials on your own. For students that do not have proficient literacy and analytical skills this can be challenging.

An unfortunate trend in OHS distance education has been to drastically “extend” normal class sizes out of proportion to an instructor’s ability to monitor individual student progress.

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This means that students must also self-initiate/manage contact with the instructor when they require individualised assistance. Thus, in order to be successful in a distance education program, students must be able to work on one's own and be highly motivated to succeed.

Many OHS students are workers and parents and so they must have well-developed time-management skills in order to keep up with course material. This can be quite challenging given the 12 week semester system adopted by many Australian universities. An unexpected family emergency, personal sickness or overtime at work can seriously restrict one's study time.

- **“Computer literacy” (or, master of the information library)**

Distance education requires prerequisite knowledge of basic computer skills e.g. how to turn on a computer, search the internet, etc. In an era where busy professionals must keep up-to-date with ever-changing legislation, advisories and new standards it is a skill set that many see as translating into good professional practice. Information is increasingly being posted on the internet and less and less is now available through traditional mail options. Computer literacy brings with it further access to international best-practices and noted experts in the field; in short, instantaneous access to knowledge that was previously difficult to obtain.

As instructors we have been amazed at the number of students who lack basic computer skills. New responsibilities of administrators/educators include assisting students in acquiring basic computer and on-line distance education program knowledge (e.g., Web-Ct, Blackboard).

- **“Written Communication”**

Distance education programs generally require students to read a lot of written material (rather than video-clips) and compose compelling written responses. In our experience, undergraduates generally have difficulty switching from an auditory to mainly visual written medium as well as transposing their ideas into a written format. Only after a lot of practice and feedback do we become effective written communicators but without this ability we remain “silent” in the distance education medium. Thus, while many students may struggle initially, this prerequisite for distance education resonates with

success in the workplace as an OHS professional (e.g., writing memos, training manuals, incident reports, etc).

Teaching students to write is generally not something that the typical instructor has the time or mandate for, especially in the advent of increased distance education class size. Thus, distance education also brings new responsibilities to university administration to provide supports in the form of communications/learning specialists, IT helpdesk, and ideally, distance education introduction programs.

- **“Critical Thinking” skills**

This is a bit of a circular issue as students must come to the distance education event prepared to share their experiences and extend their ways of thinking. In turn, instructors are responsible for providing the medium that motivates and further develops critical thinking skills. To some extent, how this occurs is contingent on the subject matter and the instructor's and student's preferred approaches. However, as has been documented elsewhere (see Vonderwell & Savery, 2004) we all should be aware that some students may feel that they do not know how to learn unless told what to know by the instructor. For many, past learning experiences have been in a classroom setting where instructors have provided a lot of personalised attention and may have unintentionally produced teacher-dependent students.

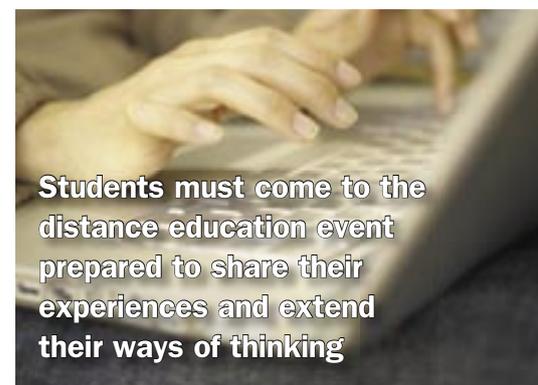
It has been our experience that promoting an on-line presence that includes problem-solving; encouraging students to share their experiences and opinions together with supportive scaffolding of their responses, goes a long way in further development of their professional approaches to analysing and applying information. This approach seems to resonate well with students who are, or have been in the workplace. Things are a bit more tenuous in the case of students without OHS work experience. However, what can be a real benefit of distance education is that it is a communication medium that can be orchestrated to provide opportunities for students to interact with each other. When this occurs successfully you get a genuine sharing of the knowledge and wisdom of each student that adds to the instructor/facilitator's knowledge. In the

often complex and multi-disciplinary nature of OHS this can be a real bonus.

#2 Instructor Paradigm shift

- **“Facilitator/Guide”**

Distance education, and its related student-centric paradigm, also brings changes in one's role as the “teacher”. No longer is one's role to actively select and be solely responsible for the direct delivery of course content to passive students. Teaching now takes the form of facilitating, guiding and scaffolding the learning event to allow students active discovery and construction of knowledge (Vonderwell & Savery, 2004).



Students must come to the distance education event prepared to share their experiences and extend their ways of thinking

- **“Changes in educational approach”**

Employing computer technology as the communication medium will mean that one will need to change one's traditional curriculum, instruction and assessment design (ISTE, 2002). To approach distance education as merely the computer application of one's traditional in-class notes is to miss the opportunity to develop independent thinkers and life-long OHS learners (as well as reduce OHS student attrition and increase grade standings; Gallie, 2005b). Deliverers of distance education are in general agreement that instructor-student, student-to-student and student-content relationships are different than in traditional face-to-face delivery (Vonderwell & Savery, 2004).

What constitutes good distance education is an issue that is still being debated, however, there is general consensus that, for many students, there will be some apprehension in their first distance education course. Instructor clarity around what is expected and how the course is conducted is important. Statements around the need for prerequisite computer skills and ability to work on one's own as well as details on how to access their educational support network is also imperative.

MSDS Myths Exploded:



1. Anyone can produce an MSDS.

FALSE: Under Commonwealth, State, and Territory Legislation manufacturers and importers are responsible for the preparation and provision of an MSDS.

2. An MSDS is any document, bulletin, or report which is prepared in accordance with the requirements of the National Code of Practice for the Preparation of an MSDS.

FALSE: an MSDS means a document prepared by the manufacturer or importer which tells you in part about any hazards associated with the product, how to use it safely, what to do in an accident or incident, and how to recognize any symptoms of overexposure.

3. Anyone can determine what is a hazardous substance.

FALSE: The manufacturer or importer of a substance must determine whether the substance is a hazardous substance before the substance is first supplied for use in a workplace.

4. Any 'independent' document, bulletin, or report claiming to be prepared in accordance with the requirements of the National Code of Practice for the Preparation of an MSDS can be referred to as an MSDS.

FALSE: Manufacturers and importers are responsible for the preparation and provision of any MSDS.

5. Transcribed (re-keyed) MSDS cannot be used.

FALSE: Databases which contain transcribed (re-keyed) manufacturer's or importer's data are accepted by all jurisdictions.

6. An employer can contract out its responsibility with regard to hazardous substances management to a third party.

FALSE: A Duty of Care applies to all employers and accordingly cannot be abrogated. Further, new Legislation such as that introduced in some states including Industrial Manslaughter carry heavy penalties.

7. Generic and third party MSDS are acceptable.

FALSE: Generic MSDS do not relate to a specific manufacturer's or importer's product and therefore do not contain the information required under the Occupational Health and Safety (Hazardous Substances) Regulations. Third party MSDS are those prepared by anyone who does not have a contractual relationship with manufacturer or importer to provide the MSDS on behalf of the manufacturer or importer. Third party MSDS are MSDS which may be based on the manufacturer's or importer's MSDS but which contain information that has been altered.

8. MSDS are not Copyright.

FALSE: The basis of Copyright is to encourage the creation and the productive exploitation of creative work. Pursuant to the Copyright Act every creative work is copyrighted the moment it is fixed in tangible form. No notice is required.

9. Every MSDS is in the public domain.

FALSE: Nothing modern or creative is in the public domain unless the owner explicitly puts it in the public domain. 'Explicitly' means you have a note from the author/owner saying, "I grant this to the public domain or something to that effect." Posting to the internet is not permission for everyone to copy. Remember computers don't make copies, people make copies. Computers are given commands, not permission!

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Clear and basic structuring of the course on-line is important; adhere to the “keep it simple sweet” principle so that students are not lost in a spider’s web of on-line postings. Employ all the communication options on the distance education platform that one’s institution allows and send a course-wide e-mail on the first day of term and before course anniversary dates. More specifics can be found in Gallie (2005b) and in the on-line resources noted at the end of this article.

An instructor can expect to spend more time with a distance education course than in traditional classroom delivery

• “Increased Time Commitment”

As identified by Gardner and Hall (2001) one can expect to spend more time with a distance education course than in traditional classroom delivery (depending on the topic, number of students, and institutional IT/network support the first author has documented a 7 fold increase). Time spent posting information and ensuring active links, attempting timely responses to student inquiries/posts and setting a tone that models the thinking/behaviour you expect of your students takes daily work (the 3 hour lecture period once a week is now dead).

There is also an issue of Internet downtime that, when it occurs, will add to one’s workload in a variety of ways (posting update announcements, reinstituting on-line assessments, contacting students who have inquiries/concerns). As well, since many students access their courses during weekends, one may also find oneself compelled to monitor activity and provide assistance to ensure timely progress through the course.

• “Changes in Job Satisfaction?”

Distance education brings with it a new type of relationship between the instructor and student. The ensuing lack of face-to-face contact may leave both wondering where the human aspects of learning have gone. Many instructors report that students forget that there is a “human at the other end of the computer” and disrespect is sometimes rampant. Whether this is a disconnect between students’ expectations in the distance education paradigm or that student frustration is running rampant

is not always clear. Thus, the onus is on instructors to promote a sense of on-line community and model and ensure netiquette.

Conclusion

To summarise, increasing encouragement to move to online instruction behoves educators and students to recognise the consequent changes to the roles, responsibilities and educational practices. While we have only broached a small aspect of this education paradigm shift

we hope that we have shown how it presents a tool that can be used to promote OHS educational events.

The final word on what constitutes best practice in distance education is still evolving but if you are interested in following the debate, the *Turkish Online Journal of Educational Technology* (<http://www.tojde.anadolu.edu.tr>) or *Studies in Learning, Evaluation, Innovations and Development* (<http://www.sleid.cqu.edu.au>) are good places to start. As it pertains to OHS, there is more limited analysis of distance education coursework (see Gardner & Hall, 2001; Gallie, 2005b; Gallie & Joubert 2004).

If you are interested in reading about how distance education is changing faculty roles, academic institutions and program accreditation please see Judith S. Eaton’s work entitled *Distance Learning: Academic and Political Challenges for Higher Education Accreditation* located at <http://www.chea.org>.

If you are interested in continuing the debate on distance education please share your views, opinions and experiences with the Editor of *Safety In Australia* (scowley@iprimus.com.au) and Karen Gallie (k.gal@island.net).

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