

ARE THEY USING IT HOW WE THOUGHT THEY WOULD? AN EVALUATION OF STUDENTS' LEARNING PROCESSES

Kathy Lynch

Centre for Educational Multimedia, and the Faculty of IT
Monash University, Australia
kathy.lynch@sims.monash.edu.au

Gregor Kennedy

Biomedical Multimedia Unit
The University of Melbourne, Australia
gek@unimelb.edu.au

Abstract

Despite the best intentions, educational technology developers often fail to carry out evaluations of their programs while they are under development. This paper reports on a formative evaluation of students' learning processes while completing an interactive multimedia program called Legal Interviewing Skills. The evaluation found that students used a number of learning strategies which were not predicted by the developers. The findings of the evaluation will be used to refine the existing program and in the development of subsequent modules.

Keywords

formative evaluation, students' learning processes, computer-facilitated learning, legal interviewing

Background to Torts Law and Legal Interviewing Skills

Students in the undergraduate law degree at Monash University complete a subject that deals with the law of torts. A 'tort' in law describes a breach of duty between parties who have no explicit contract. Students must become proficient in examining legal scenarios to determine whether an individual has a course of action which falls within the description of any of the torts covered in the subject.

In order to familiarise students with interviewing techniques associated with the practice of tort law, the lecturers introduced optional interviewing exercises for small groups of students using role-playing methods. With class sizes of 300-400 an investigation was conducted into finding an efficient and effective method for these interview exercises. To this end, a multimedia program, *Legal Interviewing Skills*, was developed. The product exposes common problems or pitfalls in legal interviews and helps students identify the skills needed to address these problems.

The Legal Interviewing Skills product consists of a suite of three CD-ROMs. The first CD-ROM covers material on general legal interviewing skills and is the focus of the evaluation reported here. The program is divided into four interrelated sections. There is an introductory tutorial detailing the basic skills required for conducting legal interviews. The second section of the program presents students with a nine-minute video that shows an interview between a lawyer and a client and exemplifies 'poor' interviewing techniques. The third section presents a similar interview situation, however, this time it exemplifies 'good' interviewing skills. The final section of the module is the 'interview evaluation' section in which students are asked to critically evaluate the poor interview and to critically reflect on poor interviewing techniques. The interviews are divided into a number of segments with each segment exemplifying a subset of communication and micro-skills highlighted

in previous sections of the module. The student's task is to evaluate and identify aspects ('problems' or 'pitfalls') of the interview that have been poorly conducted by the lawyer. For each segment, students are asked to identify (by checking a box) all 'problem' skills in evidence before moving on to the next segment. After indicating which skills they feel are problematic in the segment, students can obtain feedback as to whether their selections are correct or incorrect as deemed by an expert. For further information, students can hyperlink to an explanation of each of the micro-skills that have been identified. Accessing this information is optional and students may choose to skip this activity and progress to the next video segment. The task is cumulative in that students are exposed to a greater variety of skills as they progress through the evaluation exercise.

Evaluation Focus

Our overarching goal of this evaluation was to see whether the program was used in the way it was designed to be used. Reeves (1993) comments that multimedia developers may agree that a particular feature of a program is worthwhile only to find that the same feature is seen by the learner as irrelevant, distracting or confusing. Often due to limited resources (time, personnel or financial) scant attention is paid to the way users interact with program during its development (Reeves & Lent, 1984). This results in an implicit assumption on behalf of developers that their program's design is transparent and that learners will use it in the way the developers intended.

The focus of this evaluation was guided by the evaluation framework developed by Alexander and Hedberg (1994) and extended by Bain (1999). This framework has four primary phases (analysis and design, development, implementation and institutionalism) and its core features are similar to other evaluation frameworks (see Draper, Brown, Henderson & McAteer, 1996; Reeves, 1989, 1993). This evaluation falls in the development phase of Bain's framework and as such is formative in nature, focussing on refining and improving the program. In the development phase Bain (1999) highlights the need to investigate both the learning environment and students' learning processes. Thus, this evaluation sought to determine whether the computer facilitated learning environment was functional and accessible to students. In addition we were interested in how students used the program and their learning strategies as they navigated their way through the package.

Method

Twenty-three students undertaking the Postgraduate Diploma in Legal Practice, Skills and Ethics at Monash University in the latter half of 2000, participated in the evaluation. While the program was developed with students in the early years of an undergraduate law degree in mind, the lecturer in charge of the postgraduate program thought that it would be a useful addition to the postgraduate diploma and the sample was thought to be appropriate for this reason. Ten males (43%) and thirteen (57%) females participated in the evaluation and their ages ranged from twenty-three to sixty-one, with the average age being 35.52. Of the sample, almost half (43%) had had previous interviewing experience and two (9%) had experience as a lawyer.

The class was divided into two groups for the evaluation with students working individually with the program over a one-hour period in a computer lab. In order to collect data on students' learning processes, predominantly qualitative data collection techniques were used including observation, think-aloud and think-write protocols, and a focus group. Four trained observers carried out real-time observation of eight students completing the program. In each group, two students used tape recorders to construct an oral account of their progression through the program (think-aloud) and all students were encouraged to write down their thoughts of the program as they were working with it (think-write). Seven students from the first evaluation group were asked to participate in an informal, but semi-structured focus group at the conclusion of the session. The first author led the focus group in which three other researchers participated. All students completed a questionnaire containing both quantitative and qualitative items at the conclusion of the class.

Results

The results reported in this paper are part of a larger evaluation of *Legal Interviewing Skills*. Only results associated with the focus of this paper, namely, students' learning processes, are reported here. As qualitative data was collected using different techniques, students' comments are provided in italics and the source of the data is provided in parentheses. Most of students' responses regarding their use of the program related to the way they negotiated the final 'interview evaluation' section, and as such, this is the primary focus of the results.

Many students found the interview evaluation task frustrating and tedious, especially when they could not easily identify all the interviewing problems for a particular video segment. Students were particularly frustrated when they felt they could not progress to the next segment of the interview until they had correctly identified all the relevant micro-skills. The program did not restrict students' progression through the interview; rather students often restricted their own progress by refusing to move on until they had identified all the interviewing pitfalls for each segment. Typical comments included...

- *Sometimes answering the evaluation questions became a bit tedious.* [questionnaire]
- *[On] some occasions as far as I was concerned there were four really obvious questions [problems] and two which could have been any out of the ten. And then that got really frustrating for me because it could be [any of] these six and you're there just messing about trying to get the right two.* [focus group]
- *It was very frustrating for me not getting the right answers over and over again, but I kept going until I succeeded, I am pedantic.* [think-write]
- *I must get an answer, I cannot proceed until I do....* [think-write]

Possibly as a result of this frustration, a number of students indicated that the interview evaluation task soon became one of 'getting the right answer' rather than reflecting on the use of appropriate and inappropriate interview techniques. A number of students in the focus group and those participating in the think-aloud protocol suggested their completion of the evaluation section became more an exercise in 'trial-and-error' or 'systematic guessing' to get the right answer rather than reflecting on how particular problems manifest themselves in interviews. As a result, the goal of the learning task became the identification of the full compliment of problem skills for each interview segment rather than reflecting on how these skills affect the interview process. Typical comments included...

- *[I] spent more time trying to get the little red tick rather than actually thinking about the content.* [think-write]
- *There was no sense of you actively thinking about what you'd done wrong, it was more trying to get the right answers.* [focus group]

Despite these reactions, 65% of students agreed that the program generally encouraged them to reflect on the content area and only three students (13%) thought this was not the case. There seems, therefore, to be some disparity in these results. More research is needed to determine which aspects of the program encourage reflection and the degree of congruence between students' learning activities while using the program and their use of self-regulatory and reflective learning strategies.

Comments suggested that students' learning process of 'systematic guessing' may be linked to the failure of the program (and its developers) to provide adequate feedback. That is, if more meaningful feedback were provided to students detailing *why* a particular answer was wrong, they may be encouraged to make a more considered second attempt at the problem rather than adopting a 'hit or miss' approach to simply obtain the 'right' answer. Although half the respondents thought the feedback was meaningful, a third (32%) indicated that they felt the feedback was not meaningful to them and 44% suggested the feedback did not help them understand where they went wrong.

While it was interesting to see that students used a number of strategies to complete the 'interview evaluation', one strategy which students didn't use came as a surprise to the developers. Students had the ability to hyperlink from any of the micro-skills within the evaluation exercise to detailed

information about that particular skill. This function was used sparingly by students. The developers assumed that students would use the hyperlink function to re-visit the summaries of general interviewing skills to assist them with their analysis of the interview segment. However most students attempted the evaluation exercise without needing this information and seemed to rely on their prior knowledge, knowledge they had previously acquired from the resource, or by toggling between the good and poor interview videos. When questioned in the focus group, many students said the reason why they did not use this function was they did not know it was available. Clearly this has implications for the instructional and interface design of this section of the program.

- *I didn't even try that [hyperlink] because all the other things earlier that I thought [were hyperlinks] weren't, so I didn't even bother.* [focus group]

Conclusion

The evaluation of students learning processes focussed mainly on the “interview evaluation” section of the *Legal Interviewing Skills* program. We discovered that students found this section somewhat tedious and, in some instances, not particularly challenging. The developers underestimated how persistent students would be in this section. That is, students refused to move on to the next video segment until they had satisfactorily completed the section they were in; which meant finding all the correct answers. This desire for success led many students into a learning strategy of “systematic guessing”. We hope this problem can be alleviated by providing more adequate feedback to students (an aspect of the program students were critical of) in order to encourage greater reflection and more meaningful interaction with the evaluation section. It may be possible to achieve a similar outcome by restructuring the task itself so that students are given a limited number of chances to select the correct answer.

The development team will use the findings of this evaluation, not only to refine and improve the first module in the *Legal Interviewing Skills* suite, but also to inform the development of the remaining two modules. The formative evaluation of students’ learning processes has been invaluable in contributing to the developers understanding of how students interact with their program. Due to its timely nature information gleaned from the evaluation can be easily fed back into the design and development cycle.

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