

Building graduate attributes using student-generated screencasts

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There has been an increasing emphasis in recent years on developing the “soft” skills, or graduate attributes, that students need once they finish their university studies in addition to the specific domain knowledge of their discipline. This paper describes an innovative approach to developing graduate attributes through the introduction of an optional assignment in which first-year accounting students designed and developed screencasts explaining key concepts to their peers. Screencasts have been used in recent years for teaching but the approach of students, rather than teachers, making screencasts is far less common. Quantitative and qualitative analysis of student surveys showed that, in addition to improving their accounting knowledge and providing a fun and different way of learning accounting, the assignment contributed to the development and expression of a number of graduate attributes. These included the students’ ability to communicate ideas to others and skills in multimedia, creativity, teamwork and self-directed learning.

Keywords: Graduate Attributes, Student-Generated Content, Peer Learning, Accounting Students

Introduction

In recent years there has been a growing recognition of the importance of “soft” or generic skills in the workplace over and above the domain-specific knowledge and expertise that are required to effectively exercise a profession (Litchfield, Frawley, & Nettleton, 2010). This has been accompanied by concerns that university education in many fields is in danger of degenerating into “a technical training camp for business and industry rather than fulfilling its mission to educate and empower the individual” (Scott, 2010; p. 381). Universities have responded by mapping graduate attributes across their degree programs and embedding into learning activities the development of skills such as teamwork, interpersonal communication, problem solving, critical thinking, creativity, ethical decision making, time management and lifelong learning. However, there remains some debate about the best method of developing graduate attributes in university courses. Barrie (2005; p.3) calls for a systematic, evidence-based approach to address the development of generic attributes, and notes that many universities have adopted mere “policy statements and relatively surface mapping strategies”, which do not constitute evidence of attainment of generic skills by their graduates.

In this paper we describe the implementation of a new screencast assignment aimed at building graduate attributes in undergraduate students enrolled in an introductory accounting subject while also giving them the opportunity to learn accounting in a new and interesting way. A screencast consists of the digital recording or screen capture of any actions taking place on a computer screen, accompanied by a voice narration (Educause, 2006). They have great explanatory power, combining as they do both images and audio explanation of what is being viewed on the screen. Thus they have frequently been employed in instructional software guides and increasingly in education, the best known user being the online Kahn Academy (n.d.). For the most part, however, the trend has been for teachers and experts to produce screencasts, rather than students. Having students create them instead places the students at the centre of learning and moves away from passive instructional methods. Furthermore, it recognizes that students who have been exposed to technology for most of their lives require

new pedagogical methods to engage them (Tapscott, 1998). Having students make screencasts provides many learning benefits. These include the development of generic skills in university students, such as technology skills, creativity, the ability to communicate knowledge and work collaboratively (Mohorovičič, 2012; Shafer, 2010). Screencasts have also been shown to be highly motivating and enjoyable for primary school children to make, providing a different way of learning, aiding their understanding through the need to make repeated attempts at the task, helping them become autonomous learners, and being adaptive to different learning styles and individual speeds of learning (Rocha & Coutinho, 2011). To date there has been little research on the use of student generated screencasts within higher education contexts. Given the evidence from these few studies and other research that demonstrates that learner-centred approaches to education consistently aid in the development of graduate attributes (Barrie, 2005), extending research into student-generated screencasts *within* higher education is important.

This paper commences with an overview of the literature that positions this research in relation to the need for graduates with new skills and capabilities to cope with the modern work environment, as well as higher education and the role of learning technologies. We then provide details of the screencast assignment and how it was first trialled and evaluated before its sustained adoption within the introductory accounting subject at our university. The findings of the evaluation are presented, including results of pre- and post-assignment surveys, and an evaluation of the screencasts by the accounting academics conducting the course. Generally, the screencast assignment provided an avenue for students to learn accounting while improving their ability to communicate accounting knowledge to their peers and to learn new multimedia skills, while also developing other graduate attributes such as creativity, teamwork and independent learning. Issues still remain about how to measure improvements in some of the graduate attributes, and the authors highlight this as an area for future research. This paper's contributions are two-fold. Firstly, for researchers, this paper aims to deepen our understanding of an innovative application of educational technology to an area of increasing importance. Secondly, for practitioners, the implementation of this assessment could easily be adapted to any other field in which there is a core body of knowledge and principles or concepts that can form the content for students to generate their own screencast.

Building graduate attributes in university students

Graduate attributes have been defined as the “qualities, skills, and understandings a university community agrees its students should develop during their time with the institution” (Bowden, Hart, King, Trigwell, & Watts, 2000). These skills go beyond mastery of the body of knowledge and emphasise skills and qualities that are applicable to a range of contexts (Barrie, 2004). Whilst descriptors and categories vary, generic graduate attributes typically include transferrable skills such as: critical and creative thinking, communication, teamwork, leadership, ability to apply knowledge, and ethics. Though the emergence of a graduate attributes literature is relatively new, the expectation that graduates acquire skills and qualities supplementary to their disciplinary education is not. Assumptions about the qualities and generic abilities of university graduates can be traced back as far as 1862 (Barrie, 2004) and the learning of generic skills has been described as an existing but hidden curriculum, one that is often incidental and implicit to students' learning of the body of knowledge (Frawley & Litchfield, 2009).

However, it is perhaps only recently that universities and higher education have been called upon to *explicitly* address soft skill or graduate attribute development. There has been a surge of academic recognition and discussion as to the importance of such skills (e.g. Barrie, 2004, 2005, 2006; Chalmers & Partridge, 2012; Clanchy & Ballard, 1995; de la Harpe & David, 2012). Government, professional societies, accrediting bodies, and employers, have called repeatedly for universities to produce graduates that have the skills necessary to meet the needs of the contemporary workplace (AC Nielsen Research Services, 2000; Australian Chamber of Commerce and Industry & the Business Council of Australia, 2002; Department of Education Science and Training, 2004; Mayer, 1992). In general, there is a perception of the workplace as an increasingly complex and rapidly changing environment operating according to many unpredictable factors. The European University Association (2007; p. 6) points to the shift from a reliance on a body of knowledge to a greater emphasis on dynamic processes: “The complex

questions of the future will not be solved “by the book”, but by creative forward-looking individuals and groups who are not afraid to question established ideas and are able to cope with the insecurity and uncertainty that this entails.”

Within the literature, discussions of graduate attributes are routinely tied to stakeholder pressure from employers and industry bodies. The term graduate attributes is sometimes used synonymously with employability skills (e.g. Chalmers & Partridge, 2012, p. 57). This has raised questions as to the nature of knowledge and the role of the university (Barrie & Prosser, 2004, p. 244). However, it would be reductive to think that the embedding of graduate attributes within the curriculum solely served the needs of industry. As Hager and Holland (2006) point out, advantages of the inclusion of graduate attributes within education not only serves industry, but improves course development, course delivery and assessment and quality assurance. Furthermore, definitions of graduate attributes, at least within the Australian literature, constitute more than employability skills. There is recognition that generic skills form a wider role within a student’s life. These include preparing students to be members of society and “agents of social good” (Bowden et al., 2000; Hager, Holland, & Beckett, 2002). They are the skills which form the foundation for the lifelong learning process (Cummings, 1998; Hager & Holland, 2006).

Whilst the importance of graduate attributes is acknowledged within the literature, methods for fostering these within university education remain a contentious issue. Focused approaches typically embed graduate attribute learning activities into the context of the discipline, for example in creativity training and brainstorming exercises (Ogilvie, & Simms 2009), or computer simulations that promote the generation of creative solutions (Wynder, 2004). Other academics advocate courses in literature, history or religion for non-humanities students (e.g. Lister, 2010). Fogarty (2010) criticizes this approach as being not scalable to the large numbers of students enrolled in subjects such as accounting, and too indirect a method, given the distance of the humanities from the accounting discipline. Current research suggests that graduate attributes are best developed through learning and teaching that is: integrated into the curriculum (e.g. Litchfield, Frawley, & Nettleton, 2010), employs active approaches (Moy, 1999) and adopts “sophisticated, student-centered and process-focused” pedagogies (de la Harpe & David, 2012; p. 494).

Increasingly, researchers and practitioners have enacted these principles and pedagogies with the support of educational technologies. e-Portfolios are a way in which students collect evidence of learning over the course of their degree in a wide range of media formats and reflect on this portfolio in order to develop graduate attributes and provide evidence to both the educational institution and prospective employers of their meeting expected professional standards (Allen & Coleman, 2011; von Kinsky & Oliver, 2012). Online Web 2.0 tools, such as blogs and wikis, have been shown to promote communication and collaborative problem solving, and enhance student engagement with and reflection on learning tasks (Douglas, & Ruyter, 2011). Such approaches provide active, student-centred learning where “the learning activity and assessment task are one and the same” (Allen & Coleman, 2011; p. 59).

In summary, whilst the literature on learning and teaching of graduate attributes advocates for embedded, active, collaborative and learner-centred approaches, scalability continues to pose a major challenge, particularly in disciplines typified by large enrolments. Technologies offer approaches that have the potential to scale-up and accommodate large subjects, such as the one that is the focus of this paper. Within this challenging educational context, the screencast assignment offers a complex, student-centred task that calls on students to develop a range of graduate attributes to complete it effectively.

Implementation and evaluation of the screencast assignment

The screencast assignment is the result of a collaboration between Business School academics teaching introductory accounting and Information Technology (IT) academics. Introductory accounting, it should be noted, is one of the largest subjects in the university with enrolments of approximately 1,500 students in the first semester and about 500 students in the mid-year intake. Students include those who willingly take the subject, either as an elective or as the first step in an accounting career, and those who only take the subject because it is a core requirement of their degree; the latter are often poorly motivated. The subject has historically

been perceived to be boring, with low student engagement and high failure rates. The screencast assignment aimed to develop graduate attributes while also improving student engagement by offering of a learning experience that would be different from and more creative than the norm. It further sought to promote the learning of accounting both through students' creation of screencasts and through peer-learning from the screencasts of others.

Graduate attributes that were the focus of the assignment were the ability to communicate accounting knowledge to others and the development of multimedia communication skills. The inclusion of the latter recognised that, in the twenty-first century, communication practices have changed and now include a wide range of media and multimedia (Davies, 2003). Students come to university equipped with existing skills and take part in multimedia practices outside the classroom, uploading their own user-generated content, such as photographs and videos, to file-sharing websites like YouTube and Facebook (Dyson, 2012). The screencast assignment accepted the current practices of the students while incorporating them into the assignment in order to build their multimedia communication skills further. In addition to these two areas of focus, it was hoped that other graduate attribute development would emerge, even though these would be recognized only after the evaluation of the trial.

The trial of the assignment required students, working mostly in small teams (2-3 students), to create a short (3-5 minute), standalone screencast explaining an accounting concept to their fellow students. Though the assignment was designed as a team activity, a minority of students expressed a desire to work by themselves and this was allowed. Students attempted the assessment on an optional basis for a bonus 10 marks, in addition to their other assessments. All students were provided with a short instructional brochure on how to make a screencast using free Jing software (www.techsmith.com/jing), and were given an example of a screencast prepared by the teaching team. Headset microphones and access to quiet computer rooms at the university were available. Another resource was provided in the form of one of the IT researchers, who could provide technical help and advice if they needed it. The screencasts were then marked by accounting academics in the Business School and the best of them used in the final revision lecture. The assignment was trialed in the second semester of our academic year as this has smaller numbers of students and so is more manageable for introducing new learning and teaching innovations. Following an evaluation of the trial, some modifications were made to the procedure and the assignment offered as a permanent part of the course. These changes will be detailed after the results of the evaluation have been discussed.

Evaluation

The aim of the evaluation of the trial was to assess whether the screencast assignment was a success in terms of achieving its objectives and, if necessary, to suggest modifications to improve the assignment for subsequent delivery. Only students who had chosen to make a screencast were invited to provide evaluations. Two surveys were conducted of all those who had elected to undertake the screencast assignment. The response rate was 100% as students were required to register first and could not register or submit the assignment without completing the surveys. Confidentiality was ensured by having the surveys administered and anonymised by one of the IT researchers, rather than the accounting lecturers. The Pre-Assignment Survey was completed when students first registered to do the assignment (n = 124), while the Post-Assignment Survey was conducted once students had completed and uploaded their screencasts (n = 119). The difference between the numbers of students submitting surveys can be attributed to students dropping out of the subject or no longer wishing to undertake the screencast assignment.

The Pre- and Post-Assignment Surveys were designed to gauge student perceptions of the following:

8. Students' knowledge of accounting and their ability to explain it to their peers: pre- and post-assignment (5-point Likert-scale questions).
9. Students' multimedia and screencasting experience: pre- and post-assignment (5-point Likert-scale questions).
10. Students' motivation for undertaking the screencast assignment and what they hoped to learn: pre-assignment (open-ended questions).

11. Students' likes and dislikes of the assignment: post-assignment (open-ended questions).

Survey questions were designed using concepts from the literature and previous survey questions on engagement trialed within the accounting subject. The Likert-scale questions focused on the prime graduate attributes that the assignment was expected to develop (students' ability to communicate accounting knowledge and multimedia communication skills), as well as students' learning about accounting. The open-ended questions hoped to uncover the development or expression of other graduate attributes, in addition to gaining an indication of student engagement with the activity and any areas for improvement in its delivery. The answers to the open questions were analysed by grouping responses into common themes.

In addition, the accounting lecturers and tutors reviewed all the screencasts produced and evaluated the accuracy of the accounting knowledge contained in the screencasts and the level of multimedia skills demonstrated. While the academics were highly experienced in assessing accounting, assessments of the multimedia products and their effectiveness, visual appeal and creativity emerged from discussions with the wider research team.

Findings

Of the 539 students enrolled in the subject, 124 or 23% elected to undertake the assignment. The total number of screencasts produced was 58. Despite offers of help, few students contacted the technical support person on the research team for assistance. Most students preferred to work it out for themselves from a combination of: the instructional brochure, the example screencast provided, and by "playing" with the technology. No students borrowed the microphones provided and most used their own computers to record the screencasts.

Accounting knowledge and ability to communicate it

Two Likert-scale questions about students' accounting knowledge were repeated before and after they had attempted the screencast assignment. One focused on their knowledge of accounting and the other on their confidence in explaining basic accounting concepts to their peers. A 2-tailed (paired-samples) t-test was applied and showed that students saw themselves as significantly better informed about basic accounting concepts after producing a screencast (significant at the 10% level). Furthermore, they rated themselves as better at explaining accounting to their peers after the assignment and this was statistically significant (at the 1% level) (Table 1). Though this demonstrates improvement, students do not, at this stage in the course, feel highly confident or well informed of accounting concepts.

Multimedia and screencasting experience

The focus of the Pre-Assignment Survey was students' prior experience of producing multimedia content and, more specifically, whether they had ever made a screencast before. The Post-Assignment Survey, on the other hand, probed their experience of making the screencast for this assignment: whether they had enjoyed learning the multimedia skills necessary, and their degree of satisfaction with the finished product. The results (Table 2) showed that while almost half of students (47%) stated that they had produced some kind of multimedia content previously, an overwhelming 90% of students said that they had never made a screencast before. The Post-Assignment Survey revealed a high degree of satisfaction with the experience offered by the assignment: 80% of students agreed or strongly agreed that they had enjoyed learning the multimedia skills needed to produce the screencast, and three-quarters (76%) were satisfied with their product.

Table 1: Students' accounting knowledge and ability to explain it

Questions		Mean Score (out of 5)	Probability Value
I am well informed about basic accounting concepts.	Pre	2.69	p = 0.092
	Post	2.82	
I feel confident about explaining these	Pre	2.35	p = 0.002

accounting concepts to others.	Post	2.60	
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Table 2: Students' multimedia and screencast experience (% of responses)

Pre-Survey Questions	Never	Once	Neutral	Sometimes	Often
I have produced multimedia before using cameras, microphones, video editors, etc.	18	13	22	39	8
	Mean Score (out of 5)				3.06
I have previously made screencasts.	90	4	3	2	0
	Mean Score (out of 5)				1.48
Post-Survey Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I enjoyed learning multimedia skills.	0	2	18	47	33
	Mean Score (out of 5)				4.11
I am satisfied with the final screencast.	2	4	18	61	15
	Mean Score (out of 5)				3.83

Students' motivations and learning objectives

The two Pre-Assignment Survey questions "Why did you choose to do a screencast?" and "What do you hope to learn?" were open-ended and thus students could state more than one reason in their answer. Responses were qualitatively and thematically coded to look for dominant themes across the data.

For the first question, "Why did you choose to do a screencast?", the most common reason was bonus marks: 89% of students cited bonus marks as one of their reasons for doing the screencast (see Figure 1). Equal to this, 89% were students' aiming to better understand accounting, or understand the accounting concept that was the focus of their screencast. Students' responses typically included more than one reason, for example, "We like the idea of optional, so rather than being forced to complete the assignment – we are enthusiastic to complete the assignment at our own will with an extra incentive of 10 bonus marks". Numerous other reasons were given, for example, "I believe it is a good way to learn thoroughly a specific concept within this course, whilst also expressing my understanding in a fun, interactive and different medium". Students also expressed interest in learning how to do a screencast: the reasons for this were divided between wanting to learn how to use the technology (5%) and believing that screencasting would be useful for work (4%): for example, "I like to have the opportunity to gain bonus points and to gain experience in different medium that I have never used, this may be useful in future work".

In response to the second question "What do you hope to learn?" students expressed three dominant themes. There was a very specific accounting content focus for 31% of students: typical responses in this category included "I hope to learn the concept of GST clearing a lot better as I found it difficult to understand before", or the general statement "I hope to learn more about the accounting concept we chose". On the other hand, 26% of students were focused on graduate attributes with respect to their intended learning outcomes. Throughout the responses there is reference to creative thinking, teamwork, multimedia and screencasting skills as well as learning how to communicate difficult content to others. Examples of responses are "Teamwork, multimedia skills", and "Team Work, how we can be creative in explaining concepts on a dry subject". Excluding four miscellaneous comments, the remaining 40% of students had mixed graduate attribute and content-learning objectives (Figure 1.).

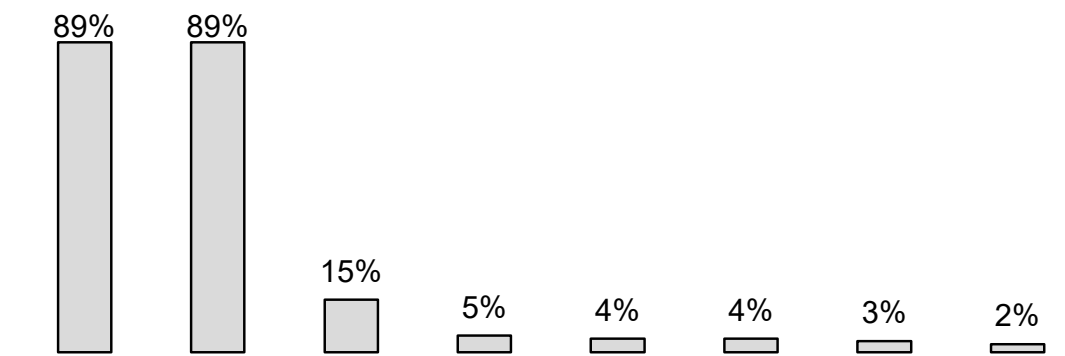


Figure 1: Students' motivations in undertaking the screencast assignment (students could mention more than one)

Students' likes and dislikes

Data from the Post-Assignment Survey about students' likes and dislikes ("What did you like about this assignment? Why?" and "What did you dislike about this assignment? Why?") demonstrated that students' response to the screencast assignment was largely positive. Negative feedback, or dislikes, accounted for a smaller proportion of the total feedback given. As in the open-ended questions from the Pre-Assignment Survey, students could state more than one reason in their answer.

The answers to the question about what students liked about the screencast assignment revealed many interesting themes, summarized in Figure 2. It can be seen that students appreciated that it gave them an improved understanding of accounting (29% of students mentioned this, including the opportunity for exploratory research and revision); they liked earning bonus marks and the opportunity to improve their overall grade in the subject (25%); it allowed them to develop their practical multimedia skills and learn new software (25%); they saw it as a different way of learning accounting and presenting information in a different way (25%); the assignment was interesting or fun (23%); and it allowed them to be creative or innovative (22%). Smaller proportions of students liked the fact that the assignment offered choice, either in terms of topic or that the assignment was optional (13%); the teamwork aspect (12%); and teaching other students accounting (10%).

The answers to the question about what students disliked about the screencast assignment are summarized in Figure 3. This information was useful for revising and improving the assignment. It should be noted that 29% of students liked *everything* about the assignment. Of those students who expressed a dislike, the greatest number (31%) focused on technical issues, including the problem that the Jing software used does not allow editing and so students often had to make more than one recording before getting their screencast right. Some students disliked the time restriction on the length of the screencast (15%); some found the instructions about how to make a screencast or the marking criteria inadequate (9% and 8% respectively), and a few had team problems (4%).

Accounting academics' evaluation of the screencasts

The accounting lecturers and tutors who marked the screencasts found that the majority demonstrated good multimedia skills. However, the majority of screencasts produced followed

the one model provided by the research team, that is, a slideshow screencast. Students failed to explore other technological approaches. The accounting academics also found that the majority of screencasts demonstrated a reasonably good grasp of the accounting concept being explained. However, many contained minor accounting errors. As a result, only 12% (7 screencasts) were deemed suitable for use as teaching and learning resources.

Discussion

The evaluation of the new screencast assignment showed that, even though 90% of students had never made a screencast before and sought minimal help in producing their screencasts (aside from one example and a short brochure on how to make them), 23% of students enrolled in the subject elected to make a screencast.

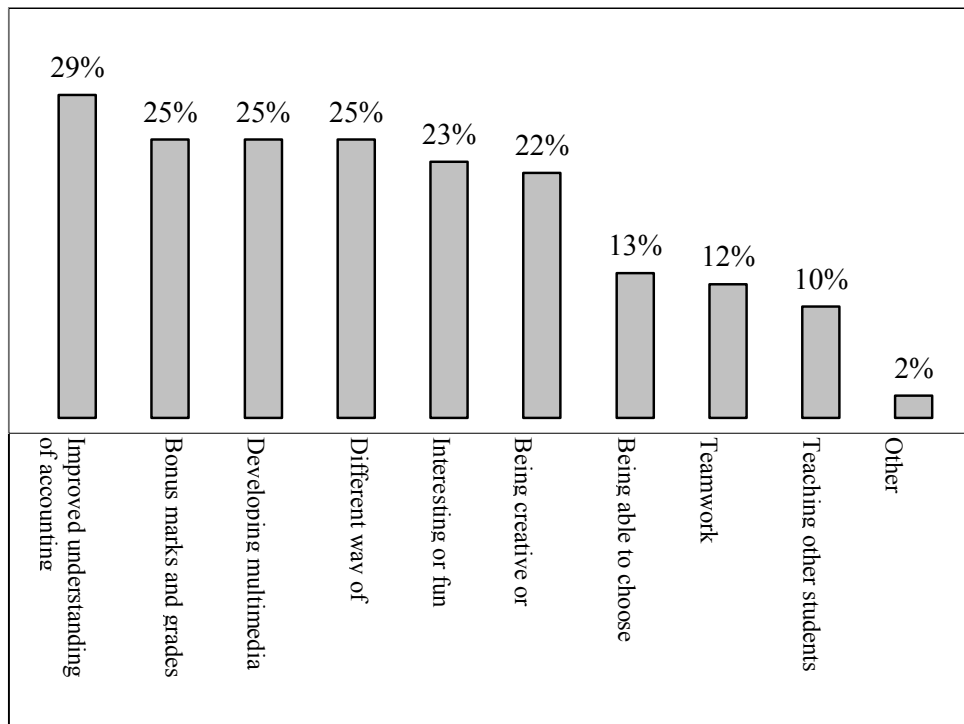


Figure 2: What students liked about the screencast assignment (students could mention more than one)

Students accounting knowledge and ability to communicate it

The objective of promoting the learning of accounting through the screencast assignment was achieved, even if most screencasts, like many other assignments, had small accounting errors. Students saw themselves as better informed about basic accounting concepts after producing a screencast and this change was statistically significant at the 10% level of significance (Table 1). Was this an effect of undertaking the screencast assignment or the result of learning about accounting in lectures, tutorials and through students' study for other assignments and exams over the course of the semester? Certainly, students linked it to the assignment: an improved understanding of accounting and the opportunity for researching and revising accounting was the most commonly listed aspect of the assignment that students liked (29% of students – Figure 1).

Students' learning how to communicate accounting to their peers was evident as 10% of students said they liked teaching other students (Figure 1) and students rated themselves as better at explaining accounting to others after the assignment. The latter was statistically significant (Table 1). The seven screencasts that were completely accurate were used in the final revision lecture of the course and so contributed in some way to peer learning although this was not measured. The number of accurate screencasts for peer learning is expected to

increase as the assignment continues to be offered in subsequent semesters. In time it is hoped that a library of resources will be available for use in both lectures and for students' private study.

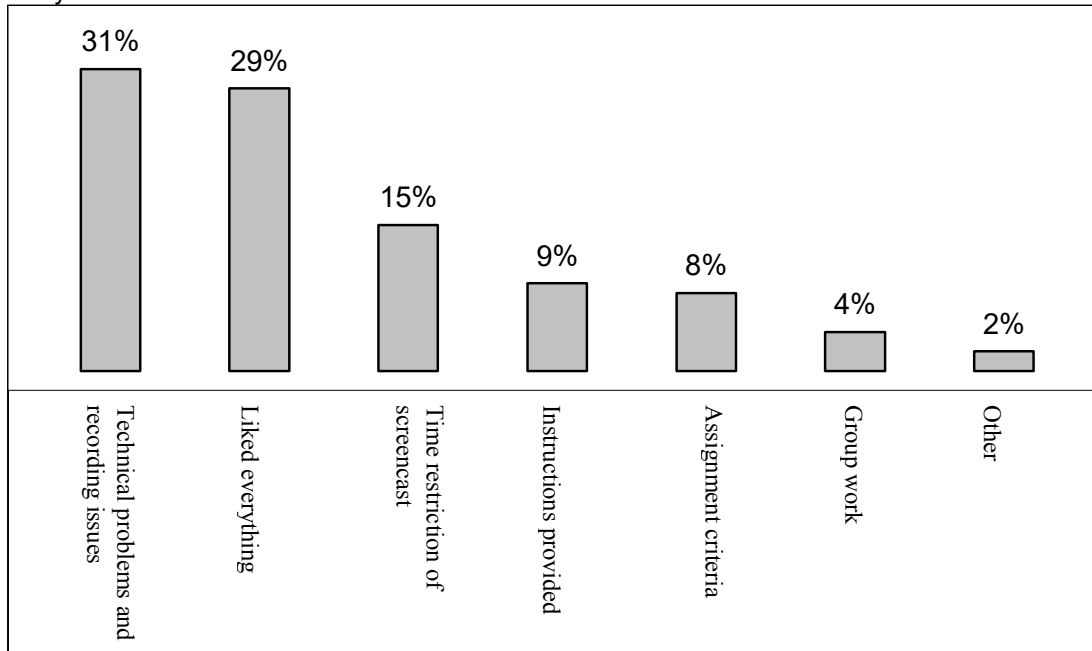


Figure 3: What students disliked about the screencast assignment (students could mention more than one)

Students' multimedia skills

The majority of students (80%) enjoyed learning the multimedia skills required to produce the screencast (Table 2); and many liked the assignment because it allowed them to develop their multimedia skills (25%) (Figure 2). The fact that 90% of students had never produced a screencast before shows that the assignment truly extended their multimedia communication skills and was not merely an exercise in allowing them to practice already acquired user-generated content skills, although it may have built on these.

Moreover, the majority of students were satisfied with what they had produced and the accounting academics believed the majority of the screencasts demonstrated good multimedia skills. The fact that 24% of students were either neutral or dissatisfied about the quality of their screencasts (Table 2) was probably due to the lack of editing functions in the Jing software that students were using. Though much more sophisticated software, such as Camtasia, is available on the market, it was too expensive to purchase a license for the large number of students enrolled in the subject and, furthermore, its greater editing sophistication was deemed to create too big a learning curve for students who had little prior experience of making screencasts. With such large numbers of students enrolled in introductory accounting, a simple software package that students could learn and use with minimal support was essential for practical reasons.

Other graduate attributes

Students' answers to the pre-assignment question about what they hoped to learn and the post-assignment question about what they liked about the assignment provide evidence that the screencast assignment offered them an avenue for developing additional generic skills. The fact that 66% of students undertaking the assignment wanted to acquire soft skills and not just learn more about accounting shows that students realize that studying a course is not merely a matter of acquiring the body of knowledge, but that graduate attributes are also a necessary component. The range of attributes mentioned included creative thinking and teamwork. Again, being creative or innovative (22% of students) and teamwork (12%) were two of the things students liked most about the assignment (Figure 1). These are important skills in the modern

workplace. A further graduate attribute that can be deduced from the conduct of the assignment is that of learner autonomy and students preparation for lifelong learning. The fact that students did not require the support of the nominated contact on the research team and used their own recording and computer equipment shows that they were prepared to figure things out themselves and use their own resources, despite the technical problems and recording issues that almost a third of students encountered (Figure 3).

Improving student engagement

In addition to the building of graduate attributes and students' subject knowledge, a positive aspect of the screencast assignment was that it provided an engaging way of studying accounting. The high level of student motivation demonstrated by the many aspects students liked about the assignment (Figure 2) and the fact that 29% of students could cite nothing they disliked about the assignment (Figure 3) show that our objective of improving student engagement with the subject has been realized, at least for those students (23%) who chose to undertake this optional assignment. For many, it was a different way of learning accounting (25%) and was interesting or fun (23%) (Figure 2).

Revising the screencast assignment

Following student feedback the screencast assignment has been modified and is now a permanent component of the introductory accounting course. Based on student feedback we decided to keep the assignment optional. Students complaints about needing clearer instructions and marking criteria were acted on by revising the instructional brochure, providing more examples of screencasts and giving more precise criteria. The new exemplar screencasts include different technological approaches in order to stimulate students to expand beyond the slideshow approach and be more creative in this aspect. However, student complaints about the short allowable length of the screencasts have not been followed: in fact, the permissible length was reduced to 3 minutes, instead of 3-5 minutes in the trial semester. The accounting academics felt that the shorter screencasts were more successful in conveying the core message.

Conclusions

As far as we are aware, the use of student-generated screencasts for building graduate attributes is a unique approach in the accounting discipline, and represents an innovative approach in university education as a whole. The assignment engages with students' everyday practices and interests in multimedia, while extending their skills to a new and powerful learning and teaching medium which few have prior experience of producing, namely screencasts. The screencast assignment offers students the opportunity for acquiring discipline-specific knowledge while becoming more confident in communicating the concepts they are learning, doing this using newly acquired multimedia skills. There is evidence from our study of the development of other graduate attributes, such as creativity, teamwork and independent learning. Furthermore, the assignment is scalable to the large numbers of students enrolled in accounting and requires little in the way of support once the example screencasts and "how to" notes have been developed. However, issues remain about how to accurately measure the impact of the activity on improving students' graduate attributes. In this trial, we relied on students' perceptions of the activity and the accounting academics' lay evaluation of the effectiveness of multimedia expression in the completed screencasts. More thought will be given to these issues in the future while we continue to pursue this innovative approach to building the graduate attributes our students will require in the workplace.

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Note: All published papers are refereed, having undergone a double-blind peer-review process.



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