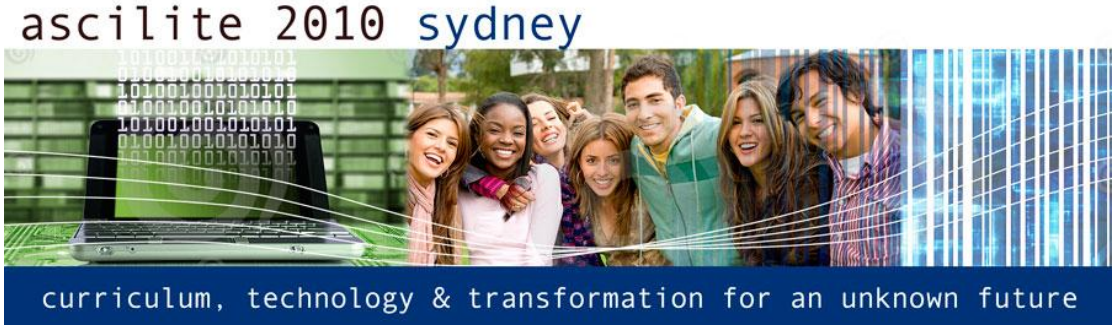

Using and evaluating publisher-supplied software: A case study of an undergraduate unit

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The availability of publisher supplied software products from publishers is becoming more common, yet there is little evidence in the literature about how these technologies can be utilised in specific contexts to develop a deeper level of engagement for students. This research project evaluated a publisher supplied software product, WileyPLUS to discover whether it was a tool that could encourage a deeper level of engagement from students and therefore a better learning environment. We also evaluated the resources and the experience of using the tools from the lecturer's perspective. An evaluation checklist was developed that can be adapted to guide academic staff when selecting publisher supplied software tools in other contexts.

Keywords: e-learning, publisher supplied software, WileyPLUS, student engagement, productivity tools, assessment, evaluation of tools

Introduction

With increasing demands on academic staff to engage in research and quality teaching, the effectiveness of the materials and tools used is important for developing and maintaining a quality learning environment. There is a myriad of tools available, including web-based offerings by publishers that support textbooks. These resources are just part of a considerable e-learning market, a growth industry considered to be worth between $21 billion and $28 billion by 2008 (Brown, 2006; Liu, Liao, & Pratt, 2009). These tools are designed to support both students and the academics that run the courses.

This research project assessed a publisher supplied software resource from the perspectives of both students and the lecturer, that is, software provided by the publisher in conjunction with the textbook offering. The software was developed by a well-known global textbook publisher using resources from academics who write the text books. The software was WileyPlus from Wiley Publishing. WileyPLUS was assessed in a third year undergraduate information systems course in the accounting degree at a large university in Sydney, Australia.

The aims of the study were firstly to ascertain whether WileyPLUS was a tool that developed a deeper level of engagement with students and therefore a better learning environment; and secondly, to discover whether the software could provide the quality resources to assist staff to develop a unit. We were interested in whether this tool could enhance student engagement, the benefits of utilising these

technologies and limitations of using WileyPLUS including unexpected effects. The research used an evaluation checklist that could be adapted to assess other publisher supplied software by academic staff.

The following section provides some background to the development of these types of technologies and some of the issues that are unresolved. Our findings clearly show that WileyPLUS and how it can be utilised effectively are still a work in progress.

Background

Many of today's students are technology literate. The term 'digital native' has been coined to describe students that have grown up with technology and know how to use it (M. Prensky, 2001; 2005). Many of today's students know how to utilise technology effectively to interact and communicate in a variety of ways (Phillips et al., 2007). Students can use anywhere, anytime technologies for example, mobile phones and social networking sites such as *Facebook* and *Twitter* to interact effectively with peers.

Conversely, many of the educators of these students are 'digital immigrants' (M. Prensky, 2001; 2005). These are people that have adopted many of these technologies but have links to the pre-digital world. According to Prensky (2005), this means that educators need to consider how new technologies and tools can engage and motivate students. Therefore academics need to be able to utilise technologies to provide anywhere, anytime resources that students can engage with when it suits them. If students are digital natives and their educators are digital immigrants, there is a potential disconnect between students and academic staff in technology skills and capabilities (Prensky, 2001). Both these perspectives are important in determining the success of technologies in learning and teaching.

There is debate about how to measure student learning in the context of e-learning (Turney, Robinson, Lee, & Soutar, 2009). This is in large part due to the many ways that technology can be used in the delivery of a course, from basic content information to sophisticated, integrated learning environments (Biggs, 2003; Turney et al., 2009). A way to conceptualise this is the idea of learning objects.

Learning objects are digital resources that can be reused. They are interactive and develop a small number of interrelated concepts which are pedagogically useful (Cochrane, 2005). A definition by Wiley (2002:1) of learning objects is:

> The term learning objects generally applies to educational materials designed and created in small chunks for the purpose of maximising the number of learning situations in which the resource can be utilised.

Learning objects can be shared and accessed via the internet (Jaakkola & Nurmi, 2004). The promise of learning objects has led to many organisations spending millions of dollars building and standardising educational systems. The proponents of learning objects believe that learning materials can be effectively developed and delivered over the internet in numerous environments. Most importantly, learning resources can be reused. The perceived benefits become enticing: maximising learning resources; economic benefits due to scalability and reusability; and the sharing of resources (Campbell, 2003; Jaakkola & Nurmi, 2004).

Although there is a great deal of optimism about learning objects, there have been a number of criticisms about whether learning objects can achieve the advantages proposed (Butson, 2003; Parrish, 2004). One of the main criticisms is the design of learning objects. At worst they are simplistic and context and pedagogy-free (Butson, 2003; Jaakkola & Nurmi, 2004; Parrish, 2004). Pedagogy is the first consideration (Ferdig, 2006; Gibbs & Gosper, 2006; Turney et al., 2009) when considering implementing any technology that one hopes will provide an environment more conducive to student learning. The teaching and learning context – which is a difficult, complex and imperfect activity involving human interaction – is an important consideration (Parrish, 2004).

In scanning the educational technology literature, no evidence was found by the researchers about the effectiveness of these technologies in learning and teaching. There were however, examples in the literature of frameworks for evaluating overall curriculum designs using technologies and specific types of technologies. For example, Gosper et al (Gosper, Woo, Muir, Dudley, & Nakazawa, 2007), developed a framework for selecting and evaluating software for specific curriculum contexts. Their

CICTO Framework for Software Selection involved exploring the curriculum context, the technologies and the wider organisational context including infrastructure and support. This framework was used to guide the selection of WileyPLUS and the evaluation process.

WileyPLUS selection

When reviewing textbooks for a third year undergraduate unit, it was important to consider the curriculum context of the course, the student cohort and the resources available for both the student and the teaching staff. The context was a third year elective undergraduate unit. The unit was called 'Information Systems for Management' and covered topics that related to new technologies and their use in business. Therefore the textbook selected had to be current and relevant with references made to contemporary case studies. Most of the available textbooks for third year undergraduate and postgraduate courses in this area are American regardless of the publisher. However, technology utilised in businesses is global, so an American textbook designed for international use was an appropriate choice.

Textbook publishers provide additional materials with textbooks. Examples include banks of multiple choice questions; solutions to review and discussion questions; suggestions for assessment tasks; lecture slides; and lecture notes. In many cases there are also additional resources provided for students. The quality of these materials is variable. In selecting a textbook for the 'Information Systems for Management' unit, a number of textbooks and their resources were evaluated.

In April 2008, three publishers were approached for potential textbooks and resources. During April and May 2008, discussions were conducted with the three publishers to ascertain the most appropriate resource for the 'Information Systems for Management' unit. Turban, E. Leidner, D., McLean, E. & Wetherbe, J. (2008) **Information Technology For Management 6th Edition** John Wiley & Sons was finally selected. The reasons for selecting this particular text were:

- The textbook covered current material with a new version to be released for second semester 2009. Investment of time in developing the course would therefore be worthwhile because the material could be reused with updates for two or three semesters.
- There was an option for students to purchase a hard copy of the textbook, or students could pay a reduced amount to have electronic access to the book. If students chose the hard copy they also had access to the electronic copy.
- Wiley offered support for setting up the course in WileyPLUS as well as ongoing technical support.
- The instructor resources available for this textbook in WileyPLUS were comprehensive and well constructed.
- The student resources available were well designed and easy to use and understand. The students could take advantage of additional material if they chose to.
- Wiley provided assurances that both the students and instructor could effectively utilise the WileyPLUS interface and material.
- It was important that assessments utilising technologies were part of the information systems unit. This textbook provided a virtual café website that students could evaluate by answering questions relating to the topics covered in the course. The instructor resources were also useful in designing tutorials and other assessment tasks.
- Quizzes could be set up to be marked automatically each week. Setting weekly quizzes required students to keep up to date with the material with limited extra work on the instructor's part, that is, no marking. Students received immediate feedback on their progress.

Students were taught in a two hour lecture and a one hour tutorial per week. All the lectures were taken by one lecturer (one of the authors) and the tutorials by three tutors (the author and two sessional staff). In the lectures and tutorials, Australian-based case studies were used to supplement the textbook. This provided students with a localised view of the topics and issues discussed. It made the material more relevant and concrete to students.

The WileyPLUS resource provides resources for both educators and students. According to Wiley, the purpose of the tool is:

> W**ileyPLUS** is a powerful online tool that provides instructors with an integrated suite of resources, including an online version of the text, in one easy-to-use website. Organized around the essential activities you perform in class. (http://www.johnwiley.com.au/highered/gen-nav-b/tech-soloutions/index.html).

The next section explains the method used to evaluate WileyPLUS in this particular context.

Method

This study was undertaken using a case study methodology (Yin, 2009). The framework developed by Gosper et al (2006) to explore software for use in teaching was used to inform the evaluation of WileyPlus learning objects in a specific curriculum context from both the student and teacher perspective

The insights from the questions asked from surveys, interviews and lecturer reflections provided both quantitative and qualitative data in the specific teaching context context (Creswell, 2007). More specifically, these questions were:

1. Do students perceive WileyPLUS as useful for their learning?
2. What are the benefits and limitations of publisher supplied software products such as WileyPUS (including unexpected outcomes)?
3. Can an evaluation tool be developed to assist educators in making informed decisions about using publisher supplied software products such as WileyPLUS?

The study was designed to explore one specific context in detail, therefore a case study was used to capture a rich description of the specific context from the perspectives of students and the instructor. Although generalisability was not an aim of the study, it was anticipated that the emerging themes and the evaluation process that followed may be relevant to future research and colleagues.

The students were asked to participate in a 'Learner Experience of Unit' questionnaire, part of the University's teaching evaluation process. Students were also asked to participate in an additional questionnaire that was specifically designed to elicit the student's response to WileyPLUS – a six point Likert scale. A framework developed by the University's Academic Development unit was used as the basis for the questions in this questionnaire, along with the themes from the literature review above.

These questionnaires were undertaken in the last week of classes. To explore the issues in the survey in more detail, students were also offered the opportunity to participate in interviews about their experience with WileyPLUS. The third data collection method was an academic portfolio, kept by the lecturer during the semester, which included observations and experiences of using WileyPLUS. The case study was designed to capture student and staff perceptions to provide a holistic view of the technology.

Student perspectives

There were 145 students who undertook this unit in second semester, 2008. The cohort of students was similar to previous years. Students were encouraged to access WileyPLUS via the course Blackboard site because it was important for students to perceive the tool as part of the learning environment. Blackboard was used to upload lecture notes, for discussion forums, for uploading of assessment items and for viewing of grades amongst other things. There was also a discussion forum on Blackboard where students could document any issues or concerns regarding WileyPLUS. Of the 145 students in the unit, four agreed to be interviewed. These interviews were conducted over the telephone and recorded to enable more accurate transcription of the data.

Learner experience of unit

We wanted to delve into students' perceptions of the course to ascertain the students' perceptions overall because WileyPLUS was used as an integral part of the learning environment. 'Information Systems for Management' received very good ratings. The number of respondents was 71:

Table 1: Respondent perceptions of the course

Criteria	Mean (range from 1 to 5)	Standard Deviation
Clear Goals and Standards	3.94	0.85
Organisation	3.91	0.83
Learning Support	3.81	0.91
Intellectual Challenge	3.95	0.77
Appropriate Assessment	3.94	0.87
Feedback	3.88	0.89
Appropriate Workload	3.94	0.84
Tutorial	3.90	0.96
Teaching Staff	4.03	0.87

We were particularly interested in the highlighted criteria for the evaluation of WileyPLUS. In the Learning Support criteria, 73% of the respondents strongly agreed or agreed that the teaching activities and materials were helpful to their learning. Some comments relating to WileyPLUS:

> "WileyPLUS was quite interesting"
> "WileyPLUS was a very helpful tool to use"
> In the Appropriate Assessment, 79% of respondents strongly agreed or agreed that the assessment criteria were clearly defined and set at an appropriate level. This refers to the online quizzes and the virtual company assignment which required interaction with WileyPLUS. Some comments relating to what were the best aspects of the course were:
> "The online assignments"
> "Online support"
> "WilyPLUS was supportive"
> "Assignments covered a good cross-section of the course"
> "Online tests were great. Although they were very easy, most of my basic knowledge came from these online tests"
> "The online quizzes and how easy it was to get it reset"

In the Feedback criteria 74% of respondents believed that they received timely feedback and the feedback assisted them to address weaknesses. This suggests that respondents believed that they received adequate feedback, although it would be useful to find out why 26% did not feel that they received the level of feedback they expected.

In the Appropriate Workload criteria 78% of respondents thought that the workload was reasonable and paced appropriately. This indicates that from the respondent's perspective the amount of work required seemed to be at about the right level for this cohort of students.

WileyPlus evaluation survey

We wanted to explore the demographics of the cohort of students in be able to more comprehensively analyse the responses. We asked students to complete a survey with questions specifically relating to student's perceptions of the WileyPLUS tool. The response rate (66 and 67) was similar to the Learner Experience of Unit. The demographic representation is outlined in Table 2 below:

Table 2: Respondent demographics

Year of Birth		
Answer Options	Response Frequency	Response Count
1900-1945	3.0%	2
1946-1964	1.5%	1
1965-1982	10.4%	7
1983-1991	85.1%	57

answered question		67
skipped question		8
Gender		
Answer Options	**Response Frequency**	**Response Count**
Female	58.2%	39
Male	41.8%	28
answered question		67
skipped question		8
Is English your first language?		
Answer Options	**Response Frequency**	**Response Count**
Yes	38.8%	26
No	61.2%	41
answered question		67
skipped question		8
Are you enrolled part time or full time?		
Answer Options	**Response Frequency**	**Response Count**
Part time	15.2%	10
Full time	84.8%	56
answered question		66
skipped question		9
How many units have you studied at Macquarie in Semester 2, 2008?		
Answer Options	**Response Frequency**	**Response Count**
1-2	21.2%	14
3-4	72.7%	48
5 or more	6.1%	4
answered question		66
skipped question		9

Most respondents were in the 18 to 26 year old demographic (85.1%) with some considerably older. There were some respondents aged between 27 and 44 (10.4%) with the remainder being older again. This aligns with the full-time and part-time respondents, where the majority were full-time respondents with those older undertaking the course in a part-time capacity. The part-time respondents are also likely to be working, many in a full-time capacity (the researcher was aware of this anecdotally). However, it is also the case that many respondents with a full-time study load (52%) also work, sometimes full-time equivalent hours.

Another interesting observation is that 61.2% of respondents had English as a second language. This is relevant because the teaching resources used must be able to be utilised by the cohort of students: those with English as a second language, students with special needs and students with learning difficulties. How did this cohort of respondents believe that WileyPLUS enhanced their learning experience?

Table 3: WileyPLUS evaluation survey responses

The WileyPLUS resources were useful to my learning for ACCG355							
Answer Options	**SA**	**A**	**N**	**D**	**SD**	**N/A**	**Response Count**
.	4	42	20	4	4	0	74
answered question							74
skipped question							1
The WileyPLUS resources were useful supplements to the other materials and resources for							

ACCG355							
Answer Options	SA	A	N	D	SD	N/A	Response Count
.	4	36	25	3	4	0	72
						answered question	72
						skipped question	3
The WileyPLUS resources were complete and accurate							
Answer Options	SA	A	N	D	SD	N/A	Response Count
.	5	18	24	20	5	1	73
						answered question	73
						skipped question	2
The support from Wiley was timely and helpful							
Answer Options	SA	A	N	D	SD	N/A	Response Count
.	3	26	29	8	3	3	72
						answered question	72
I found navigating in WileyPLUS easy							
Answer Options	SA	A	N	D	SD	N/A	Response Count
.	10	36	17	8	3	0	74
						answered question	74
I found WileyPLUS made ACCG355 more interesting							
Answer Options	SA	A	N	D	SD	N/A	Response Count
.	5	26	22	11	7	2	73
						answered question	73
						skipped question	2
I would like to see tools like WileyPLUS used in other units							
Answer Options	SA	A	N	D	SD	N/A	Response Count
.	5	32	16	14	7	0	74
						answered question	74
						skipped question	1
WileyPLUS resources were well designed							
Answer Options	SA	A	N	D	SD	N/A	Response Count
.	5	30	25	9	5	0	74
						answered question	74
						skipped question	1
WileyPLUS resources were useful for revising for the final exam							
Answer Options	SA	A	N	D	SD	N/A	Response Count
.	3	23	21	12	6	7	72
						answered question	72
						skipped question	3

Respondents clearly believed that WileyPLUS resources were useful for learning because 62.2% strongly agreed or agreed with this point. Respondents also believed that the resources provided by WileyPLUS were useful supplements to the other materials provided in the course, with 55.6% of respondents either strongly agreeing or agreeing with this point.

What was particularly surprising in this survey was the high number of neutral responses. This may be because students were concerned about expressing a strong opinion because they had not yet sat the final exam. It may be due to students being ambivalent about the third party resources being used. Alternatively it may mean that students were insufficiently engaged with WileyPLUS to have a strong opinion.

The point on the completeness and accuracy of WileyPLUS resources was more problematic. Only 31.5% of respondents strongly agreed or agreed with this statement. More respondents (34.2%) either disagreed or strongly disagreed with this statement. This question also had a high neutral response rate of 32.9%. There were a number of reasons for this. The first was that there were a number of errors identified in the material available with WileyPLUS. There were some errors in the questions and solutions to the Virtual Café assessment task. These were minor and easily fixed, but nonetheless errors. There were also a number of inaccuracies in the quiz solutions, particularly practice quizzes. There were also some mislabelling of diagrams and other minor irritants that did not materially affect students. However, Wiley were very quick to respond and provide feedback on queries that could then be passed on to students. This was done via messages in the discussion forum on Blackboard. One reason given by Wiley for not fixing some of the known errors was because the resources were being applied to the new version of the textbook rather than the current textbook.

The support from Wiley had a high neutral response rate, in part because the students did not interact with Wiley directly. The lecturer contacted Wiley on the students' behalf. In many cases Wiley had to contact their American counterparts and this sometimes took a couple of days.

Respondents for the most part believed that WileyPLUS was easy to navigate: 62.1% either agreed or strongly agreed. Before using WileyPLUS, students were requested to undertake 'Assignment Zero'. This assignment was ungraded and provided students with navigating and usage tips before attempting quizzes. It was up to the students to decide if they wanted to undertake this assignment, however it was strongly recommended and most students did take up the option. Respondents perceived that WileyPLUS generally made the course more interesting, although there was a high neutral response of 30.1% to this question. Some students agreed or strongly agreed – 42.4% – while 24.7% either disagreed or strongly disagreed. It may be a difficult question to answer from the students' perspective unless one is attempting the course for a second time.

However, respondents would like to see WileyPLUS used in other courses. There were 50% of students that either agreed or strongly agreed that this publisher supplied software would be useful in other courses. A proportion of them, 21.6%, posted a neutral response and 28.4% did not believe the tool would be useful in other contexts. Respondents in this cohort were unsure as to whether the resources were well designed or not with a 33.8% neutral response. There were 47.3% of respondents who thought that the resources were well designed; however, 19% disagreed or strongly disagreed with this statement.

The last question was related to revising for the final exam where 36.1% thought WileyPLUS was useful; 29.2% were neutral; and 25% disagreed or strongly disagreed. This may indicate that other resources were utilised such as iLecture or lecture notes to revise for the final exam.

The data from the interviews largely echoed the results of the survey. All interviewees found the resources helpful as either motivating or as a study tool. They were seen as a supplement to the other materials and as encouraging the students to keep up to date with the unit content. One respondent suggested that the resources made an interesting change from reliance on a textbook.

All interviewees were aware of the issues with the errors in the resources, but none expressed concern. They used the resources as a supplement so did not rely entirely on them for their learning. None of the interviewees raised any issues with the technical support from WileyPlus, although they acknowledged that they had not relied on the service. One interviewee said he had contacted friends or the lecturer when he had an issue, rather than the WileyPlus technical support. One suggested that he had worked part-time as a technical support person and, although he heard others complaining about the service, he was 'tolerant' of the difficulty of the role of technical support.
The interviewees used the resources throughout the semester and acknowledged the benefit of keeping up to date with the content. The resources were not linked directly with helping prepare for exams,

although one respondent used the quizzes to help generate summaries and practice the content through questions, which indirectly helped in preparation for exams.

All of the students interviewed indicated they would recommend this type of resource to other academics. On balance, interviewees perceived that WileyPLUS was useful to them, however many were unsure as to how it contributed to their learning experience. The next section deals with the lecturer's perspective on the resources.

Lecturer perspectives (self-reflection)

The lecturer used an academic portfolio to document and reflect on the use of WileyPLUS throughout the semester. This reflection is documented using a framework derived from Boud and Prosser's (2002) Framework for Appraising New Technologies for Learning. It encompassed the components of Learner Engagement, Challenge for Learners, Practice for Learners, Critical Success Factors and Enhancements. This was undertaken in the context of the WileyPLUS resource.

Learner engagement

The assessment activities facilitated learner engagement and reflection in a number of ways using WileyPLUS. The intention for setting quizzes in WileyPLUS each week was to encourage students to keep up with the content. The quizzes were open for one week after the lecture so the students were further encouraged to undertake the quizzes in a timely manner. Students could then reflect on any difficulties and revise questions that they did not understand. The WileyPLUS virtual company assignment provided an opportunity to further engage with the material by answering topic-specific questions in a portfolio that had to be submitted in week 10.

Challenge for learners

- Students were encouraged to utilise the WileyPLUS resources to further develop skills, although many students did not take advantage of the additional student resources. Perhaps this was because it was not assessable.
- It was hoped that the WileyPlus resources would challenge the students and encourage them to engage with the content. For some students, their capacity to detect the errors was seen as affirming, but many were irritated and the errors may have presented a barrier to their concentrating on addressing the gaps in their knowledge.

Practice for learners

- Students had quick feedback from the WileyPLUS weekly quizzes. The virtual company assignment provided opportunities for students to articulate and demonstrate their learning.
- WileyPLUS quizzes provided instant feedback each week. WileyPLUS resources could also be utilised more comprehensively to provide feedback if students decided to further use the student resources.
- WileyPLUS had practice quizzes and other tools for students to see examples and models prior to attempting a graded assessment task.

Critical success factors

The critical success factors from the lecturers perspective for WileyPLUS were:

- Quality of Resources. This critical success factor was partially met. The lecturer resources were very good, however, as indicated above, some of the resources for students were inaccurate. The lecture slides were of varying quality. Some were excellent and some were poorly developed.
- Reliability of Resources and Support. This critical success factor was effectively met. The support from Wiley was excellent in setting up the course, throughout the semester and closing the course at the end of semester. The people at Wiley were easy to deal with and the response was excellent. The reliability of the software was also very good. We were notified when there was an outage including notification about the impact of daylight saving.

- Ease of use. A book called 'WileyPLUS for Dummies' was an excellent resource and the software was easy to navigate. Anything that was unclear was responded to by Wiley support quickly. For example, the setting up of quizzes to include different questions required some assistance from Wiley.
- Ability to be integrated into existing technology platforms. This was straightforward with a link placed on Blackboard to the WileyPLUS site.

Outcomes, conclusion and future research

This research provided insights how learning objects such as WileyPlus may be utilised effectively in a particular setting. The publisher supplied software, WileyPLUS, was seen as a positive experience for many students, although several respondents had a neutral response to this publisher supplied software product. Of those agreeing or strongly agreeing that the resources were useful, over 75% used them to supplement other materials. It may be that students who are already engaged find that using these tools provides the opportunity for a deeper level of engagement. Those students that are only going through the motions may not engage sufficiently in the unit to find the tools useful. Recent research from Ellis, Ginns and Piggott (2009) found a similar pattern, where those students who had a negative perception about the design of e-Learning materials were more likely to engage in their studies in a relatively poor way and were more likely to achieve poorer results.

The lecturer's conclusion about the value of the resources was, on balance, positive. While the aims of engaging students and encouraging them to keep up with the content seem to have been achieved, there was considerable work in integrating the resources into the unit curriculum and assisting students with the errors.

The lecturer believes that for WileyPLUS to be useful, it must be integrated carefully into the unit learning outcomes. The lecturer found there were benefits in using WileyPLUS as formative feedback for students; however, the errors in, for example, the practice quizzes were seen as a limitation. The support from Wiley was found to be very good from the lecturer's perspective, responding quickly to issues when they were identified.

An interesting observation was that in the final grading of results we found that the failure grades were slightly higher than previous years. However, the higher grades of High Distinction, Distinction and Credit were also higher, with fewer students receiving a pass. It may be that students who are already doing well can engage more effectively using WileyPUS because it provides more hands-on opportunities to develop the topics covered. The students who did not do well may not have engaged with the opportunities available to them.

WileyPLUS with the same version of the textbook was used in semester 1, 2009 for a small postgraduate course. The feedback from students was used by the lecturer to change some of the components of the course and how WileyPLUS is used. A new version of the textbook was available for semester 2, 2009 when the course was run again with modifications using WileyPLUS. Experiences from this will provide us with the opportunity to compare and contrast different cohorts of students with a revised textbook that included updated resources.

There are other software tools that will be evaluated in the coming semesters from other publishers, for example, Pearson have products such as MyAccountinglab and others that can assist lecturers and students in a more comprehensive learning environment.

The experiences from this evaluation led to the development of a tool for use in evaluating third party resources, based on the CICTO framework (Gosper et al., 2007) and Boud and Prosser's (2002) Framework for Appraising New Technologies for Learning. This evaluation tool (see Appendix A) encourages potential users to explore the third party resources from the themes:

- Educational efficacy
- Adaptability
- Usability
- Technical compatibility.

Pedagogy is always the first step. The technology should always be the tool that provides the teachers and the learners with better learning experiences.

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Appendix A: Checklist for assessing publisher supplied software

The purpose of this instrument is to analyse the educational efficacy of a particular resource, the support offered by the providers and compatibility with the environment in which it is being used. Learner Engagement, Challenge for Learners, Practice for Learners, Critical Success Factors and Enhancements

Rate each of the criteria in relation to how it meets the needs of your particular context.
1 = Very Unsatisfactory 2 = Unsatisfactory 3 = Neutral 4 = Satisfactory
5 = Very Satisfactory NA = Not Applicable

	U	N	S	NA	Issues for further consideration
Educational Efficacy					
1. Alignment with the curriculum					
2. Completeness and accuracy of content					
3. Engaging for learners - appropriate for expertise, age, cultural background					
4. Currency/ authenticity					
5. Providing a challenge for learners					
6. Providing opportunities to practice key skills or knowledge					
7. Other – please specify					
Adaptability					
8. Time taken to integrate it into the curriculum					
9. Time taken to customize the resource to local context					
10. Ability to incorporate student requirements effectively eg. Student assessment tasks					
11. Ability to utilise lecturer resources effectively eg. Lecture slides					
12. Other – please specify					
Usability					
13. Layout – navigation					
14. User support – documentation, help facilities for staff and students					
15. Intuitiveness of tool					
16. Other –please specify					
Reliability of Resources and Support					
17. Initial setup support					
18. Support throughout the semester					
19. Support at the end of the semester (eg. To close the unit)					
Technical Compatibility					
20. Compatibility with recommended platforms and operating system requirements (Mac/PC etc)					
21. Ease of integration with other technologies utilised in the unit					
22. Other - please specify					

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