

Delivering Effective Distance Education Through Engaging Students in Authentic Learning Activities A Learning Design and Longitudinal Research Results

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Abstract—Our paper presents the underlying educational principles along with the evaluation results for an innovative project-based postgraduate distance education course. We show how designing the course in terms of sound pedagogical principles has led to an authentic learning experience in which students gain usable knowledge that they can apply in their workplace. Student evaluations clearly demonstrate a positive student learning experience and student pass rates provide a clear indication that students are achieving the intended learning outcomes. Whilst being innovative, delivering a taught project-based postgraduate course brings a number of challenges and these will be discussed.

Index Terms—Distance, postgraduate, authentic, project, teaching, learning, evaluation

I. INTRODUCTION

The Learning Technology Unit and the Centre for Medical & Health Sciences Education at the Faculty of Medical and Health Sciences, University of Auckland jointly offer a course – E-Learning and Clinical Education (ClinEd 711) – as part of a clinical education postgraduate degree program. Students who are pursuing the Masters in Clinical Education are required to accumulate 120 points / credits. Students must achieve the credits through taking a range of taught postgraduate courses and through completing a dissertation that is worth 60 points. Students typically take one or more course from the Masters program before taking ClinEd 711. For example, students have normally taken Clinical Teaching (ClinED 715) and Curriculum and Course Design (ClinED 712) before taking ClinED 711. The reason that this pathway is important is that students come to ClinED 711 with some general pedagogical knowledge and some knowledge of curriculum and course design.

The overall objective of ClinEd 711 is to bring the learners – who are typically clinical educators (health professionals with some teaching responsibilities) – to the point of understanding themselves as instructional designers capable of converting their traditional face-to-face courses for flexible/distance delivery. ClinEd 711 was offered for the first time in Semester 1, 2007 as a fully online distance education course. The course has been offered each year since 2007 with the most recent delivery occurring in 2011. From the outset,

ClinEd 711 was designed to deliver an authentic learning experience in which students would gain usable knowledge that they might apply in their workplace setting. Typically this knowledge would be used by clinical educators as they worked to convert their own courses for flexible / distance delivery. However, as a result of feedback from students and after critical analysis of the first iteration of the course, ClinEd 711 was re-designed to make the course even more authentic through the introduction of student led modules in which the students had to take responsibility for the creation and delivery of a particular course module to be “studied” by their peers. Thus, ClinED 711 evolved to include the aim of teaching clinical educators some of the skills required to teach online. Our paper discusses the ongoing design and development of ClinED 711 and presents student evaluation results to support our contention that ClinED 711 has resulted in a positive student learning experience along with students achieving the intended learning outcomes for the course.

II. AUTHENTIC LEARNING

Herrington and Oliver [1] have suggested that authentic learning can be delivered in a learning environment that features nine situated learning design elements. These are: (1) Provide authentic context that reflects the way knowledge will be used in real life; (2) Provide authentic activities; (3) Provide access to expert performances and the modeling of processes; (4) Provide multiple roles and perspectives; (5) Support collaborative knowledge construction; (6) Promote reflection to allow abstractions to be formed; (7) Promote articulation to enable tacit knowledge to be made explicit; (8) Provide coaching by the teacher at critical times and scaffolding and fading teacher support; and (9) Provide for integrated assessment of learning within the tasks.

The key point with creating an authentic learning environment is to create a learning experience that results in students gaining knowledge that they are able to use and apply in real life. This sort of knowledge contrasts with the storing of abstract or theoretical information that is not retrievable / usable in real life [1]. Therefore, a project-based taught postgraduate course that delivers authentic learning experiences has the potential to provide participants with knowledge that they might use to make changes to their teaching practice. However, the learning design for a course needs to incorporate the situated learning design elements if students are to have an authentic learning experience.

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III. CLINED 711

A. *Designed Authenticity*

Providing an authentic context that reflects the way knowledge will be used in real life – situated learning element (1) – along with providing students with authentic learning activities – situated learning element (2) – are both fundamental to the approach that we took to developing and teaching ClinED 711. ClinEd 711 requires students to progress through the course in terms of an e-learning project of their own choosing. In this way, students engage in authentic, personalized and meaningful learning through selecting their own course for their elearning project and through developing that course for flexible or distance delivery. The emphasis is on the personal relevance of the learning for the learner. Students are, therefore, directed to take ownership of their learning from the very beginning of the course. This situates learners at the heart of the leaning process and as a result the course becomes personally relevant and meaningful to the student. Students – who are typically clinical educators – choose to focus on a course that they are teaching, although in some cases they choose to create a new course. This provides each student with an individual pathway through ClinEd 711. Progression through the modules of ClinEd 711 is centered on two core instructional design documents that are used for project developments within the Learning Technology Unit at the Faculty of Medical and Health Sciences. The use of these two core documents provides an authentic, real-world learning situation in which learners can learn to think like instructional designers. Furthermore, students are assessed on their work on these two documents, which means that assessment is integrated into the learning tasks – situated learning element (9) – and the assessment is authentic.

The first document – Needs Analysis Document – clarifies the potential social and pedagogical usefulness of the project and captures key information necessary for converting a traditional face-to-face course for flexible/distance delivery. For example, students are asked for a rationale for the course conversion and for details concerning the current mode of delivery and the new provisions required for flexible/distance delivery. The document therefore functions to ensure that there is a clear reason for converting the course for flexible or distance delivery and completion of the document also indicates broadly that the project is viable in terms of the development work required during the allotted timeframe of fifteen weeks. Students on ClinEd 711 are expected to complete the Needs Analysis Document during the first three weeks of the course.

The Second Document – Course Development Document – requires students to detail the pedagogical thinking and development work required to successfully convert their course for flexible/distance delivery. Completion of this document ensures that the student's chosen course is appropriately developed in terms of meaningful course content, meaningful student activities, and meaningful student-teacher / student-student interaction [2]. This is achieved through requiring the student to detail: module topics and associated learning tasks; student roles and activities on the course; delivery mode or modes; teaching

and learning resources; tutor support roles; and methods of assessment and feedback. Through completing this document by the end of the course, the student has a “blueprint” for developing and implementing their own flexible or distance learning course.

Subject content for ClinEd 711 was selected in terms of key concepts and knowledge required for the practice of instructional design and the course was structured to foster reflective practice [3]. The ClinEd 711 modules include: the major learning theories of behaviorism, cognitivism and constructivism; instructional design principles and practice; methods for quality assurance in developing flexible and distance courses; and sourcing particular learning objects whilst justifying their pedagogical value and demonstrating an understanding of copyright issues with respect to design and delivering a course for online delivery. The primary theme running through course tasks and assessment was for students to relate course concepts to their personal pedagogical beliefs and their own teaching context.

With respect to social participatory learning – situated learning element (5) – learners engage in collaborative exercises through participating in online discussions and through engaging in peer critique exercises. Reflective practice and articulation of personal perspectives on teaching – situated learning design elements (6) and (7) – are encouraged through peer critique activities, self-reflection activities and through comprehensive feedback provided by the course tutor – situated learning design element (8) – who scaffolds [4] [5] [6] learners through the course in accordance with detailed marking rubrics. Contributing to course discussions constitutes 25% of the overall grade for ClinED 711, which means that reflective learning activities constitute a significant part of ClinED 711 learning.

Since the introduction of student led modules after the first iteration of the course in 2007, students on ClinED 711 progress from being relative novices in the area of instructional design to having to lead one of three modules (out of a total of eight modules) that had previously been tutor-led in the first iteration: ‘Technologies and Media’, ‘Role of the Teacher’, or ‘Quality in e-learning Design and Teaching’. The student-led modules were created as collaborative tasks in which a pair or small groups of students (up to 4) are assigned to one of these three modules. Students are provided with only a brief introduction to the module together with a set of learning objectives that they have to assist their peers to achieve. Each module last 2 weeks, with students expected to collaborate ahead of the scheduled start date to ensure their module was ready to ‘go live’ on the due date. The use of student led modules means that students take a different perspective – situated learning design element (4) – on their learning through having to create a module for their peers. Student led modules also place learners in the position of observing real life learning put into practice – situated learning principle (3) – and in conjunction with the expertise of the teachers learners are exposed to thinkers with different levels of expertise.

The addition of the student led modules made ClinED 711 significantly more authentic. We can understand this authenticity in terms of the distinction between students acquiring particular knowledge / skills and students making

use of those skills in an authentic way during the course. Acquiring knowledge and skills results in the development of expert knowledge [7]. Putting knowledge and skills to use results in practical knowledge or “know how”. Expert knowledge can be taught and learned whilst practical knowledge is learned through concrete experience. Drawing on these concepts we can frame ClinED 711 in the following way. ClinED 711 were taught particular skills and pedagogical knowledge and as a result acquired the requisite technological and pedagogical skills and techniques to convert their own courses for flexible / distance delivery. After a course revision, ClinED 711 students were also required to create and teach a module to their fellow students. This change significantly increased the authenticity of the course through requiring a teaching commitment. Individual commitment means investing oneself in one’s actions and taking responsibility for those actions in the light of uncertainty and contingency. The uncertainty and contingency come from “acting” in the context of social relations. In this situation there are issues of responsibility, responsiveness, risk, contingency, apprehension, anxiety, and multiple environmental variables that can at any time impact on the teaching situation. In other words, the authenticity of teaching is expressed and achieved within the teaching situation and the introduction of student led modules means that students now have to put their learning into practice in an authentic teaching situation.

We have shown fidelity to the principles for creating an authentic learning environment in the development of ClinED 711. Students engage with the course content in terms of authentic project directly relates to their teaching practices. Students are engaged with the tutor and with one another through reflective and dialogical exercises that necessarily involve students in articulating their growing understanding of what it means to be an instructional designer. Students are assessed throughout the course, particularly in terms of their two instructional design documents, which means that the assessment tasks in ClinED 711 are authentic and measuring students on their ability to use their knowledge. A considerable amount of time and effort was spent in developing this course and the student evaluations for the course reflect this fact.

Finally, creating an authentic learning environment entails providing access to expert performances and the modeling of online teaching processes (3). Students on ClinED 711 experience expert performance and the modeling of instructional design processes / teaching practices through the work of the tutor who teaches on ClinED 711. For example, students progress through the course in terms of a learning design that was developed and implemented by the course tutor. Students are supported throughout the course via email, through tutor contributions to the discussion in the social network and through receiving feedback from the tutor on assessments. The tutor on ClinED 711 models excellent teaching practices as evidenced by the comments in 2007 by the external assessor responsible for evaluating and reporting on ClinED 711 for university quality assurance processes. The assessor wrote that, “the creative and practically-oriented assessment tasks are to be lauded. It seems that the course teachers are modelling excellent tutoring techniques.” The

standard of tutoring on ClinED 711 has remained very high with the 2009 external assessor reporting on the course with equally strong praise for both the course design and the teaching.

IV. RESEARCH

A. *Research Approach and Method*

The research approach that we took is referred to as development research or design research [8]. One way to understand development / design research is to contrast it with action research. Action research focuses “on a particular program, product, or method, usually in an applied setting, for the purpose of describing it, improving it, or estimating its effectiveness” [8]. There is no attempt in action research to derive broad design principles that might be applicable in other teaching and learning situations. In contrast, design / development research involves iteratively implementing a learning design and evaluating that design in order to change teaching practices over time in an informed manner. The process is essentially one of gradually clarifying learning design problems / challenges and identifying potential solutions through a process of evolutionary prototyping with the overall aim of arriving at an optimal learning design / set of learning design principles that can be shared, applied and tested in other settings.

Continuing Professional Development (CPD) consists of formal and/or informal learning that leads to the enhancement of knowledge, skills and personal attributes necessary to carry out professional duties [9-11]. ClinED 711 therefore provides clinical educators with a formal professional development opportunity and we deemed it apposite to evaluate ClinED 711 in terms of Thomas Guskey’s first three levels of evaluation for assessing the impact of professional development for teaching: the student experience; achievement of learning outcomes; and changes in teaching behavior as a result of the professional development [10]. On one level, the development / design research process took the form of analyzing quantitative and qualitative research data after each course iteration and making changes to the course based on findings derived from the data. The quantitative and qualitative data was gathered using: a pre-course questionnaire to determine students extant levels of knowledge with respect to pedagogy and technologies for teaching / learning; a post course questionnaire that evaluated the student experience of ClinED 711 along with whether or not students had achieved the desired learning outcomes; and a one-year follow up interview that asked about whether or not students had put what they learned into practice in their teaching (not reported here).

At a deeper level – not reported here but of interest in terms of our overall approach – our design research has involved us in analyzing discussion postings for ClinED 711. We are carrying out this analysis for all iterations of ClinED 711 using the Wmatrix corpus analysis and comparison tool (<http://ucrel.lancs.ac.uk/wmatrix/>). The Wmatrix tool will let us analyze discussion board postings in terms of e.g. frequency of key instructional design / pedagogical terms. It will also allow us to compare frequency in discussion board

postings with standard educational texts. In this way we will be able to make a judgment about the impact of the changes that we have made to ClinED 711 and the extent to which students on ClinED 711 are taking on the discourse of instructional designers / online educators. For example, we would expect to see students on ClinED 711 using an increasing number of pedagogical / educational terms over time. That is, we should see an increase in frequency of use of terms as between the beginning of the course and the end of the course. This research will be of particular interest when looking at differences between earlier iterations of ClinED 711 and later iterations in which students had to create and deliver online modules for ClinED 711. At this point it seems reasonable to conjecture that students in later iterations would have had a more authentic learning experience and that this experience would have resulted in an increased use of pedagogical / educational terms.

Finally, whilst Guskey’s fourth level of evaluation – whether or not student learning outcomes improve as a result of professional development – is theoretically important, we did not seek to evaluate the impact of ClinEd 711 on student learning i.e. we did not ask ClinED 711 students to report on the impact of the changes that they made to their teaching on their own students’ learning. Our main reason for not asking ClinED 711 students to report on the impact of the changes that they made to their teaching on their own students learning was that from a theoretical standpoint we judged that there are too many extraneous variables that can impact on whether or not professional development does in fact result in improved student learning [12]. This judgment can of course be questioned and we remain open to the notion that looking at the impact of professional development on student learning is necessary. However, that said and extraneous factors aside, there are significant logistical challenge with following up with professional development participants over time to determine the impact of their professional development on student learning. For example, this sort of follow-up would require a significant amount of time / resourcing in order to be carried out properly. Professional development staff do not always have this time / access to resourcing to carry out the research effectively. Lack of time and lack of resources may also account for why there is so little in the way of longitudinal research into professional development for teaching in higher education [13].

B. Research Results

ClinED 711 was run for the first time in 2007 and there were 5 students enrolled in ClinED 711 in 2007. 3 (N=3) of the 5 students completed the post-course evaluation. The results for these evaluations are presented in Table 1 below. Students returned a minimal number of neutral responses and these are not reported. Percentage figures have been rounded to the nearest decimal point.

TABLE I. EVALAUTIONS 2007

Evaluation Results 2007				
Question	SA	A	D	SD
I had a clear idea of what was expected of me in this course.	33 %	67%	-	-
I received helpful feedback on how I was going in this course.	100%	-	-	-

Evaluation Results 2007				
Question	SA	A	D	SD
The course helped motivate me to learn.	100%	-	-	-
I found the course intellectually stimulating	100%	-	-	-
The teaching staff showed an interest in the academic needs of the students	67%	33%	-	-
The volume of work in this course was appropriate.	-	33%	33%	33%
This course helped deepen my understanding.	67%	33%	-	-
The assessment measured my learning fairly.	67%	-	-	-
The course materials helped me to learn.	67%	33%	-	-
The mix of learning activities was appropriate.	33%	67%	-	-
The course has enabled me to enhance my practice	100	-	-	-

We recognize that the number of responses is low. However, this is the first time that the course was run and it was important that we gathered feedback, no matter how minimal. This evaluation provides a measure for the student experience / student reaction to the course together with some indication of whether or not students achieved the intended learning outcome of gaining the skills to develop their own courses for flexible / distance delivery. Overall, we can see that students reported being satisfied with the course and that all students (n=3, 100%) reported that the course enabled them to enhance their practice. The only negative responses that we see relate to the question concerning the volume of work on the course. This was to be expected since the students on the course are busy health professionals with significant patient care responsibilities. Additionally, the course itself is structured in a very different way from traditional masters courses and students were expected to engage in project-based learning. The unfamiliarity of the learning experience might, therefore, have contributed to the perception that the workload was too great. However, we accepted that the volume of work for this first iteration of the course might have been too high and we therefore reduced the workload for the second iteration delivered in 2008.

There were 6 students enrolled in ClinED 711 in 2008 and 5 (N=5) of the 6 students completed the post course evaluation. The results for these evaluations are presented in Table 2 below. Students returned a minimal number of neutral responses and these are not reported. Percentage figures have been rounded to the nearest decimal point.

TABLE II. EVALAUTIONS 2008

Evaluation Results 2008				
Question	SA	A	D	SD
I had a clear idea of what was expected of me in this course.	-	80%	-	-
I received helpful feedback on how I was going in this course.	40%	40%	-	-
The course helped motivate me to learn.	20%	60%	-	-
I found the course intellectually stimulating	60%	-	-	-
The teaching staff showed an interest in the academic needs of the students	40%	40%	-	-
The volume of work in this course was appropriate.	40%	20%	20%	-

Evaluation Results 2008				
Question	SA	A	D	SD
This course helped deepen my understanding.	40%	60%	-	-
The assessment measured my learning fairly.	40%	40%	-	-
The course materials helped me to learn.	20%	60%	-	-
The mix of learning activities was appropriate.	40%	60%	-	-
The course has enabled me to enhance my practice.	60%	40%	-	-

Once again we see that students reported being satisfied with the course and that all students (n=5, 100%) reported that the course enabled them to enhance their practice. Therefore, all students over a two year period reported that the course had enabled them to enhance their practice. We considered this to be a significant research finding because the ultimate aim of ClinED 711 was to engage students in an authentic learning experience that would lead to knowledge gains / skill gains that could be applied in real life i.e. in their own teaching practice. Responses to other questions also indicate that the course itself provided a model for best practice when teaching online. For example, the majority of students (n=4, 80%) either strongly agreed or agreed that they received helpful feedback during the course. All students, (n=5, 100%) either strongly agreed or agreed that the course helped deepen their understanding. The number of students reporting negatively regarding the volume of work dropped (n=1, 20%). At the time we thought that the drop in negative responses was a result of the changes that we made to the course, including removing one module and incorporating a reduced amount of module content into another module. However, as subsequent evaluations have shown (see below) the volume of work has continued to be an issue.

In 2008 we asked students some additional questions regarding the student-led modules. 5 (n=5) of the students who undertook the course responded to the additional questions. Students were asked: "Was it helpful for your learning to collaborate with a peer to develop and moderate your student-led module? Why or why not?" All respondents answered in the affirmative with three of the respondents referring directly to the benefit of gaining a different perspective, two referring to the benefit of sharing the workload and one respondent expressing the view that the task provided an insight into expectations that are placed upon their students. These responses directly evidence the fact that the learning environment was authentic as defined by learning elements for creating an authentic learning environment. For example, these responses relate directly to learning element (4) Provide multiple roles and perspectives and to learning element (5) Support collaborative knowledge construction.

Students were also asked: Did you learn more from the student-led modules (led by your peers) than from those led by the course coordinator? Why or why not? Some students answered from the perspective of developing and moderating their own student-led module whilst others responded in terms of their participation in the modules that were led by the other students. Three of the five respondents indicated that they had learned more from the student led modules with one respondent referring to the fact of having to actively learn about a module in order to present it effectively and two

respondents reporting on the value for their own learning of leading a module. Again we can see a direct relation to the creation of an authentic learning environment with students responding in terms of (1) providing an authentic context that reflects the way knowledge will be used in real life and (2) the authenticity of the tasks.

There were 8 number of students in 2009 and 6 (N=6) of the 8 students completed the post-course evaluation. The results for these evaluations are presented in Table 3 below. Students returned a minimal number of neutral responses and these are not reported. Percentage figures have been rounded to the nearest decimal point.

TABLE III. EVALUATIONS 2009

Evaluation Results 2009				
Question	SA	A	D	SD
I had a clear idea of what was expected of me in this course.	17%	33%	-	-
I received helpful feedback on how I was going in this course.	67%	33%	-	-
The teaching staff of this course motivated me to do my best work.	83%	17%	-	-
I found the course intellectually stimulating	50%	50%	-	-
The staff showed an interest in my learning needs.	67%	33%	-	-
The volume of work in this course was fair and reasonable.	-	50%	17%	-
This course helped deepen my understanding of the subject.	50%	50%	-	-
Assessment tasks were effective aids to learning.	50%	50%	-	-
Methods of evaluating students were fair.	67%	33%	-	-
The course resources and materials helped me to learn.	67%	33%	-	-
The mix of learning activities was appropriate.	67%	33%	-	-
The course has enabled me to enhance my professional practice.	50%	50%	-	-

The evaluations for 2009 show that students consistently rated the course highly in terms of their learning experience and the support that they received. All respondents (n=6, 100%) either strongly agreed or agreed that the course helped to deepen their understanding. Additionally, all respondents (n=6, 100%) indicated that the course helped them to enhance their practice. Although the number of respondents for each iteration of the course was low, by the completion of 2009 we had three years of evaluations with each evaluation clearly indicating that all students who responded (n=14, 100%) felt that the course had enabled them to enhance their professional practice. This is extremely important because ClinED 711 was designed so that learners would end up with usable knowledge that they could apply to their own teaching. Qualitative data gathered across the same period backs up the contention that ClinED 711 achieved its aim of enabling students to gain usable knowledge to enhance their practice. For example, in 2009 one respondent wrote that, "This course took an in-depth approach to e-learning with a focus on how this approach could be most effectively used to promote learning. The best part about this course was that it caused me to reflect both on how I learn and how I would best like to help the student learn. This

course was structured and supported by staff in such a way that I have become quite excited about not only this approach but also my teaching in general”.

There were 9 students in 2010 and 6 (N=6) of the 9 students completed the post-course evaluation. The results for these evaluations are presented in Table 4 below. Students returned a minimal number of neutral responses and these are not reported. Percentage figures have been rounded to the nearest decimal point.

TABLE IV. EVALUATIONS 2010

Evaluation Results 2010				
Question	SA	A	D	SD
I had a clear idea of what was expected of me in this course.	50%	33%	-	-
I received helpful feedback on how I was going in this course.	67%	33%	-	-
The teaching staff of this course motivated me to do my best work.	83%	16.7%	-	-
I found the course intellectually stimulating	67%	33%	-	-
The staff showed an interest in my learning needs.	33%	67%	-	-
The volume of work in this course was fair and reasonable.	17%	-	-	-
This course helped deepen my understanding of the subject.	100%	-	-	-
Assessment tasks were effective aids to learning.	67%	33%	-	-
Methods of evaluating students were fair.	33%	67%	-	-
The course resources and materials helped me to learn.	50%	33%	-	-
The mix of learning activities was appropriate.	33%	67%	-	-
The course has enabled me to enhance my professional practice.	17%	67%	-	-

Overall students responded positively with respect to their learning experience with all participants (n=6, 100%) either strongly agreeing or agreeing that the course enabled them to enhance their practice. Additionally, all respondents (n=6, 100%) strongly agreed that the course helped to deepen their understanding. However, the issue of workload remained with only 1 participant (n=1, 17%) reporting positively with respect to workload. The remaining respondents (not reported in the table) were neutral concerning whether the volume of work was fair and reasonable. However, this was the fourth iteration of the course and by this time we were convinced that the amount of work was appropriate for 150 learning hours / 10 hours a week over the course of the semester. Therefore, we have not made any further changes to the course. Finally, qualitative data from the 2010 evaluations continues to support our contention that we created an authentic learning environment. For example, when asked what was most helpful for their learning one student responded, “Excellent facilitation - realistic tasks for assessments” and another student responded, “Experiencing as a student what I was learning about through using the tools and new information, knowledge and skills by applying it in practice during the course”.

There were 7 students in 2011 and 5 (N=5) students complete the post course evaluation. Students returned a minimal number of neutral responses and these are not

reported. Percentage figures have been rounded to the nearest decimal point.

TABLE V. EVALUATIONS 2011

Evaluation Results 2010				
Question	SA	A	D	SD
I had a clear idea of what was expected of me in this course.	40%	20%	-	20%
I received helpful feedback on how I was going in this course.	40%	40%	20%	-
The teaching staff of this course motivated me to do my best work.	60%	20%	20%	-
I found the course intellectually stimulating	80%	-	20%	-
The staff showed an interest in my learning needs.	20%	60%	20%	-
The volume of work in this course was fair and reasonable.	-	60%	20%	20%
This course helped deepen my understanding of the subject.	60%	40%	-	-
Assessment tasks were effective aids to learning.	20%	40%	20%	-
Methods of evaluating students were fair.	40%	40%	-	-
The course resources and materials helped me to learn.	80%	-	-	-
The mix of learning activities was appropriate.	-	60%	40%	-
The course has enabled me to enhance my professional practice.	60%	20%	-	-

Overall students responded positively with respect to their learning experience with all but 1 (n=1) participant either strongly agreeing or agreeing that the course enabled them to enhance their practice. The negative response from 1 student can be explained in terms of a range of non-course related factors that impacted negatively on that student’s experience of ClinED 711. Additionally, all respondents (n=5, 100%) strongly agreed or agreed that the course helped to deepen their understanding. However, the issue of workload remained with only 2 (n=2, 40%) of students reporting negatively with respect to workload. We had continuously considered workload throughout the various evaluations and at this point we made the firm judgment that the “cost” of deepening understanding and being able to enhance practice was a perceived heavy workload. Therefore, we have no plans to reduce the workload for ClinED 711.

V. DISCUSSION

WE have taught ClinED 711 over five years with consistently positive results for the student learning experience and attainment of learning outcomes. In particular, all but one student over a five-year period have reported that ClinED 711 enabled them to enhance their professional teaching practice. Qualitative data gathered during the same period provides additional evidence that ClinED 711 is an authentic learning environment. Whilst ClinED 711 has been a very successful course – measured in terms of student experiences and student learning – there have been some significant challenges in delivering a course in this format.

First, teaching on ClinED 711 is a time intensive activity for the tutor. There are two main reasons for this. First the assessment tasks are authentic and complex and marking these assessments takes a considerable amount of time.

Secondly, 25% of the overall grade for ClinED 711 is now awarded for participating in the ClinED 711 discussion forum for the duration of the course. If students are not active in the discussion forum then the tutor has to commit a considerable amount of time to trying to engage students because social participatory learning is an important part of the learning experience on ClinED 711. When students are active the tutor also has to commit a considerable amount of time because students expect the tutor to be active in the discussion forum, contributing in terms of knowledge and responding to student questions.

The second challenge with this course lies in the student workload. Students have consistently told us that the workload is too high. In the 2010 student evaluation, one student responded that, "This paper was the most demanding of the ClinEd papers that I have taken so far, in terms of time required on a weekly basis. The frequent commitments – whether on the network or with coursework – did not leave much room for flexibility in time frames. Many of the readings and tasks required a bigger chunk of time/concentration than I could easily give, which meant an awful lot of very late nights trying to absorb and process things after long days at work. If you are fitting study in around full time jobs and on-call requirements, this made the tasks extremely onerous at times." Whilst students still remain vocal concerning the amount of time that it requires to complete ClinED 711, we are of the view that engaging students in quality learning requires a time commitment of this sort and that the learning hours required do not exceed the 150 hours specified for a taught postgraduate course. However, others considering a course of this sort need to bear in mind that students will find the course demanding even if they have a valuable learning experience.

A third challenge lies in having students work cooperatively in order to produce the student led modules. Over the four years that this course has been delivered we have only had one experience in which the students assigned to a particular group did not work well together. This put the course at risk because the students were required to produce one of the modules. After some rather heated online and offline discussions, the tutor for ClinED 711 – who is a trained mediator – managed to get the students to work cooperatively to produce the student led module. Whilst we avoided a potentially difficult situation, it remains the fact that there is some risk in making course outcomes contingent on students working cooperatively.

A fourth challenge with teaching a course in this manner lies in the lack of scalability for a course designed around authentic learning principles. This is a specialist postgraduate course and student numbers are always relatively low. The course is manageable with these sorts of numbers – typically between 6 to ten students. However, if student numbers were to increase a single tutor could not manage the course. If this were to happen we could make another staff member available / employ a second tutor. There is, however, cost involved in doing this and with only 15 students this cost would almost certainly be called into question by management. We know that ClinED 711 provides students with a quality learning experience and the issue is, therefore, one of maintaining quality and providing an authentic

learning experience whilst also being able to cope with increased student numbers.

VI. CONCLUSIONS

We have outlined the principles for creating an authentic learning environment for a distance taught postgraduate course. We have shown how we instantiated the principles in practice, particularly in terms of creating authentic learning tasks and integrated assessments that evaluate students ability to put usable knowledge into practice. The data that we have presented supports our claim that we have created an authentic learning environment whilst also evidencing the fact that ClinED 711 provides students with a positive learning experience that results in students achieving the intended learning outcomes for the course. Finally, we have outlined some challenges with delivering a course in this format.

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