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## Tutor Perception of Delivery Mechanisms for Online Tutorials

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**Abstract:** This paper builds on previous work by Lambie and Law which investigated the role of online Tutorials as part of a flipped classroom approach to teaching and the perception of students to their engagement with online Tutorials. Online tutorials for distance learning students is now an established approach in supporting students at a distance. From the Tutor's perspective a fatal pitfall is to assume that the online tutorial is a direct replacement for the traditional lecture. A passive or semi passive approach to online Tutorials offering an asynchronous delivery may discourage student participation and does not work well in a flipped classroom approach where students have already engaged in active learning. At the heart of the student centred experience offered by the Flipped Classroom approach are: problem based learning, exploratory learning, peer interaction, communication building skills and the overarching need for the student to display their learning. In order to gain maximum benefit from the online tutorial, the student should be encouraged to prepare prior to attendance at the tutorial in order to discuss the topics being covered. Preparation may take the form of preparatory reading, completion of an example question, viewing a video etc. The key is to encourage the student to prepare prior to online tutorial attendance to maximise the benefit of attending. Interaction throughout the online tutorial is paramount, a synchronous approach to tutorial delivery will be beneficial to both the participating student and the tutor. Approaches the lecturer can deploy include group and individual work, problem solving, guided practice and question and answer sessions. The paper seeks to investigate the types of Tutorial Activity that Tutors provide and the level of Engagement that Tutors perceive students exhibit within these activities. The survey further seeks to establish Tutor perception of the role that an online Tutorial plays in supporting students studying at a distance and will examine current practice in the field by surveying tutors on a range of distance learning courses, identifying good practice and offering examples of where an online tutorial contributes to a flipped classroom approach.

**Keywords:** e-learning, distance learning, synchronous communication, flipped classroom

### 1. Introduction

This paper seeks to build on the work of (Lambie and Law, 2015, 2016, 2017) which explored the participation of Open University students in online Tutorials on a particular Technology and Computing course (TU100 My Digital Life). This course has now finished and has been replaced by two courses (TM111 and TM112 Introduction to Computing and Information Technology 1 and 2). The new courses cover very similar material and have a very similar approach to providing support for students who either want or need support via a series of Face to Face and online Tutorials. All of these courses are distance learning courses built around printed and online material and activities with support provided by a specific Tutor who generally deals with around 20 students.

This paper seeks to investigate the perceptions of Tutors who are responsible for running the online sessions, in order to try and determine what delivery styles are used in the provision of online Tutorials. In order to do this the authors have used their observation and experience of participating in online sessions with colleagues over a number of years and particularly on the new TM111 and TM112 modules.

The research is driven by a need to understand attitudes to the use of online support methods and the level of engagement with synchronous activities. In this paper, the effect that Tutors running the synchronous sessions have on the session will be examined with the intention of identifying best practice.

### 2. Literature Review

The literature review presented in the following sections, outlines the manner in which Open University (OU) students study along with the perceived model of study in relation to the classroom activities that are supported and used in both Face to Face and online synchronous tutorials.

## 2.1 Distance Learning and the Flipped Classroom

At the core of the Open University approach is high quality printed material. Presently, this material is also available electronically with week to week guidance provided by a diary based website which also provides varying forms of interactive activity.

Traditionally Face to Face and telephone contact were used to provide support for students studying at a distance. Both these approaches are synchronous activities which require some form of rendezvous between Tutor and Student(s). Technology and specifically, internet technologies, provides a number of options which allow both synchronous and asynchronous communication.

The courses for which the authors are currently Tutors on makes extensive use of tools including Adobe Connect to support students studying at a distance. In the case of distance learning students there is only a limited opportunity to attend Face to Face sessions simply because of the nature of the study. Distance learning students study part time and may be working during the week or even in the evening or at weekends depending on their job. With the development of online technology there has been increasing use made of online tools including Blackboard Collaborate or Adobe Connect to try and bridge this gap widening access to synchronous activities between Tutor and Student. There was an expectation that numbers attending online Tutorials would be greater because of the relative ease of access. This, however, has not been the case with the numbers attending online Tutorials, in the authors experience, not being any better than those attending Face to Face Tutorials.

One factor may be the tools that are being used. Alonso et al. (2005) observe insufficient pedagogical teaching principles in the software design of e-learning tools, such that, the tutors using these tools are defining the pedagogical implementation and approach for their use. Abeysekera and Dawson (2015) state that changing the delivery mechanism of a "transmissive class" will not lead to learning gains, instead, there also needs to be a change in pedagogy.

Interestingly, Lemmer (2013) notes that "pedagogical goals" should be the guide to technology use and not the other way about, also, discerning the level to which "technology supports identified course learning objectives and desired outcomes, and how it enhances or supplements, rather than simply supplanting, the traditional teaching strategy."

Does this then leave the lecturer/tutor trying to shoehorn pedagogical approaches into e-learning tools that are not suitable for the purpose? If so, this will impact on the engagement of the student during participation of online tutorials and hinder the ability to deliver problem based active learning. Lambie and Law (2015) indicate that delivering online Tutorials was not an easy task with a lot of preparation required. So, it is likely that Tutors will be cautious in the effort they expend on preparing material for online delivery.

There are a number of approaches that may be taken in providing material for distance learners with most approaches involving some form of blended learning where at least part of the provision is online. There has been much discussion in Higher Education of the flipped classroom approach to help students prepare for classroom activities in which they have direct contact with a subject specialist. The concept of the flipped classroom originates from a continued exploration of the combination of blended learning and problem based learning, coupled with using "active learning techniques" and "new technologies" to offer greater involvement for the students (Arnold-Garza, 2014). Jarvis et al. (2014) add to this list of concepts; peer instruction. The concepts of problem based learning, active learning and peer instruction, can be harnessed for good effect when delivering online tutorials. The concepts are similar; the need for the student to be involved rather than passive and to demonstrate their understanding of the material being studied. It is therefore apparent that the role of the Tutor is important in conducting these activities.

With distance learning courses including those outlined above the classroom is in some respects completely flipped and attendance at "classroom events" is optional. In terms of preparedness this can be a problem for the Tutor in that there is no guarantee that a student attending a Tutorial has covered specific sections of work so in the flipped classroom sense this can be an issue. This is a point identified by Abeysekera and Dawson (2015) who note their concern with "issues of student motivation" posed by the flipped classroom. As they see it, the "success of in-class activities" relies heavily on the students attempting and finishing the pre-class preparatory work which will allow them to maximise the benefits of the in-class activities, although, gauging

the level of the student's preparedness, knowledge level and usefulness of their preparation process is not easy to judge. Mok (2014) indicated that one way to check on student engagement prior to a classroom session in the flipped classroom model was to include quizzes as a means of monitoring student engagement.

Distance learning students choose to study by that method because the approach suits their lifestyle. However, with an increase in the use of online activities including forum contributions and synchronous conferencing using products like Blackboard Collaborate and Adobe Connect there was an expectation that students studying through distance learning approaches would be keen to utilise these products in order to participate in sessions with their Tutor. This expectation was based on the growth of products including Facebook etc. and other social media products. The fact that students overtly utilise technology is no assurance of "informed learning" and could hamper the procurement of knowledge and understanding (Lemmer, 2013). So it would appear that Technology itself is not necessarily a factor in encouraging students to be active learners. This is in line with the authors' experience.

Abeysekera and Dawson (2015) suggest a strong link between active learning and the flipped classroom; their research points to the passive role that students adopt during the traditional lecture, as such, students are more inclined to "procrastination" and or "surface approaches to learning" leading to a detrimental influence on their performance. The link between the flipped classroom and online Tutorials does not appear to be apparent in the authors' experience. This is based on low numbers of students attending online sessions. So the opportunity to utilise technology does not appear to be a motivating factor for OU students studying at a distance. Abeysekera and Dawson (2015) focus more on traditional classroom activities following some form of flipped study by the student.

McLaughlin et al. (2014) cogitate "higher-order thinking, problem solving, and critical analysis" are aroused through active learning, furnishing the tutor and the student with feedback. Furthermore, active learning can enhance student "motivation and attitudes" (McLaughlin et al., 2014)

The use of quizzes is part of the TM111/TM112 course philosophy and there is scope for using this as a test of readiness for an online problem solving session. Maher et al. (2015) indicate that flipping the classroom allows the students to focus their in-class time on more productive learning activities of "solving problems, writing code, design tasks, or discussing concepts with others." creating a peer based collaborative learning environment improving "overall learning, increases student confidence and makes coding fun." Use of quizzes within the flipped classroom are a productive mechanism for tutor and student intercommunication enhancing student learning (Maher et al., 2015). Maher et al. (2015) used various techniques to maximise the student learning during the in-class activities including pair programming, group problem solving and flexible quiz activities. Using quiz activities as learning activities, Maher et al. (2015) state "retrieving information from memory improves long term retention" and the quizzes reinforce "conceptual knowledge".

There are two specific factors here that need to be considered.

- Getting students to attend in the first place,
- Getting students to return after their first experience of an online Tutorial

For a Tutor running regular sessions with different groups of students this, is likely, to be quite a challenge.

## **2.2 Approaches to running Face to Face Tutorials**

Face to face Tutorials are the traditional way to support students and to provide direct feedback on their work. Perhaps there will be a point in the future where face to face tutorials are no longer needed or used but for many teachers they still play an active role in the lessons they delivery in a wide range of educational institutions from schools to universities. From the authors' experience tutorials are based on questions related to core theory and to problem solving approaches to the application of this theory. So this activity implements a flipped classroom approach where students have already carried out some study and are ready to discuss this activity. The authors are not suggesting that Face to Face tutorials are some form of panacea. Face to Face tutorials can be hard to run and often feel like one is trying to pull teeth. Face to Face tutorials at least allow you to see the nuances of the participants and to judge whether they have completed the preparatory work.

This is much more difficult in the online world where these nuances either are not available or are difficult to see (insufficient visual cues for example along with reluctance on the part of the student to speak)

### 2.3 Approaches to running online Tutorials

How then does a Face to Face Tutorial morph itself into an online Tutorial and what points must a Tutor consider when designing the activity?

There are a variety of possible approaches that can be taken when delivering an online Tutorial session. These include:

Session which is mostly talk by the Tutor

Session where students are expected to present/discuss their solutions to problems set prior to the session

Session where the Tutor leads the students through a number of different questions

Problem solving session in which students actively collaborate and try to solve a problem that is related to their topic of study.

A combination of the approaches above

There are difficulties that need to be overcome with approaches 2, 3 and 4 in that, experience has shown, students are often reluctant to speak in an online situation as identified by Lambie and Law (2015, 2017). This is particularly apparent when the students remain in the main online room with the Tutor(s) present.

Approach 1 is really just a mini lecture and as such would be better considered as some form of podcast that students can download and view at their own convenience.

Approach 2 is best achieved with the students all in the one place and requires students to be active in the discussions as different answers/approaches are discussed.

Approach 4 is best facilitated in breakout rooms where students are put into small groups for a period of time with a specific brief of a problem that they are required to solve. The Tutors can then move in and out of the rooms to check on progress. Lambie and Law (2015, 2017) Horn (2013) suggests the flipped classroom offers the student an enhanced capacity for boosting their learning through a “feedback cycle” that allows the tutor to answer questions and monitor student progress. Online sessions involving problem solving tasks would certainly provide opportunities for the student to get feedback. Jarvis et al. (2014) further postulate that social constructivist theories of learning support both the flipped classroom and active learning; the fact that students learn through interaction with their peers, attaining fresh understanding while reinforcing and enhancing current or previous knowledge affirm the idea that “thinking takes place through communication”.

Using cooperative activities promotes learning together, self-reliance and activeness, however, this needs to be “structured and built” (Alonso et al., 2005). Alonso et al. (2005) suggest three elements are required: Activities, Participants and Instructor. Activities should be collaborative in nature, aligned with module learning outcomes and attention should be paid to the group size and participant background to maximise potential group interactions (Alonso et al., 2005). Participants must exhibit the essence of participation as this is central to “a successful learning community”; also, respectfulness and a work ethic (Alonso et al., 2005).

The Tutor(s) running the session need to be clear in their own mind what the main purpose of the session is. There may be situations where it is appropriate to give some form of mini lecture to clarify specific points but there needs to be opportunities for students to discuss points that are covered in the lecture. If there is no option for discussion it would be simpler to make a recording of some description and allow the students to view this asynchronously. So from experience of running online Tutorials and from the literature it would appear that developing active problem solving sessions is beneficial to students.

The tutor also needs to play their part in facilitating a successful session; to this end the tutor must be: welcoming, encourage student participation, supply timely feedback, offer direction and articulate themselves clearly (Alonso et al., 2005). This reinforces the authors’ experience that online tutorials can have a high workload. Where numbers demand and where it is possible the online session should be run by two Tutors working in collaboration with each other.

McLaughlin et al. (2014) suggests student's capability to "read and learn information on their own", however, their needs would be better fulfilled with the tutor providing a coaching/mentoring role sparking and provoking their thinking, offering problem solving guidance and "encourage their learning and application of the material." So again it would appear that the Tutor role is very important.

The fact that students directly utilise technology is no assurance of "informed learning" and could hamper the procurement of knowledge and understanding (Lemmer, 2013).

Participants must exhibit the essence of participation as this is central to "a successful learning community"; also, respectfulness and a work ethic (Alonso et al., 2005).

The tutor also needs to play their part in facilitating a successful session; to this end the tutor must be: welcoming, encourage student participation, supply timely feedback, offer direction and articulate themselves clearly (Alonso et al., 2005). This is reinforcing the experiences of the authors that the Tutor need to be practice in the setting up and running of the problem solving sessions.

Further, Alonso et al. (2005) postulate that the "e-lesson" is "the minimum self-contained learning unit." comprising "a set of facts, concepts, processes, procedures, and principles" the learning of which is predicated on the learners' current knowledge base. Alonso et al. (2005) define the taxonomy of an "e-lesson" as being split into six sections: Presentation, Objectives, Necessary Knowledge, Learning Tasks, Practice and conclusion, postulating that this format provides "a consistent framework".

Alonso et al. (2015) further elaborate on these six sections as paraphrased here; the presentation element chronicles the subject material being delivered by the "e-lesson" delivering "guidance" and motivation to the participants regarding the "knowledge they are to acquire."; the objective element should specify to the student what the outcome of the learning is to be, and, outline "the tasks that learners will be able to perform."; the necessary knowledge element should offer advice and direction with regard to the exercise being undertaken to advance the student learning during the "e-lesson"; the learning tasks element provide the vehicle for acquiring the skills to be learned; the practice element is used to reinforce and underpin the material delivered in the necessary knowledge and learning tasks elements through the provision of practical exercises and the utilization of group activities and discussions to "drive community learning."; the conclusion element is used to strengthen and reiterate the "key points" of learning delivered through the "e-lesson" concentrating the student's thinking and challenging them to reflect on their learning deciding if they have understood, processed and can apply the knowledge delivered by the "e-lesson".

Alonso et al. (2015) position the six elements of an "e-lesson" into two classifications: content and context; content comprising of necessary knowledge and learning tasks and context comprising of presentation, objectives, practice, and conclusion.

The six element "e-lesson" format certainly offers a template that can be manipulated to suit an online tutorial. Many of the aspects presented in this format are achievable through the use of the Open University's current synchronous learning tool, Adobe Connect, which offers breakout rooms for active and problem based learning, facilitating peer discussion, screen sharing, slide sharing, chat boxes etc.

Embracing active learning as part of the online tutorial pedagogy should motivate and establish the student's ownership for their learning, subsequently, allowing the Lecturer/Tutor to incorporate problem based learning as a student engagement mechanism (Lemmer, 2013). Lemmer (2013) suggest using a problem based learning approach as this necessitates the student to "analyze the problem presented, identify information needed to devise a solution, locate and study the needed information, and apply the newly acquired knowledge to the problem."

In the authors experience problem based learning works when students are put into separate breakout room and are "visited" from time to time to check on progress. This is also an opportunity to provide feedback on progress with the task being carried out.

### **3. Research Methodology: Focus Group**

To help gauge the range of opinions within Tutors supporting these courses, a short focus group was held online as a means of gauging Tutors opinions. The decision to use a focus group was based on the idea of a group interview of Tutors to determine if similarities in teaching approaches prevailed; in the believe that in-depth information on perceptions, insights, attitudes, experiences, or beliefs could be gathered in an open and frank exchange. As facilitators, the Tutors were guided based on a predetermined set of topics. The hope was to create an environment that would encourage the Tutors to share their perceptions and their practices of running online synchronous tutorial sessions. Choosing a focus group methodology did mean that the data collected was qualitative, descriptive and subjective in nature, therefore difficult to measure numerically.

Having previously used a questionnaire based approach to ascertain the students view of participating in online synchronous tutorial sessions, the decision to canvas Tutors using a focus group would provide quicker access to Tutor views with a minimum of setup for the facilitators and the potential for the participants to better articulate their perceptions, insights, attitudes, experiences, or beliefs.

#### **3.1 Conducting the Focus Group**

Both authors participated in the focus group session with the lead author in the role of facilitator and the second author in the role of note taker. The lead author acting as the facilitator, guided the participants of the focus group through the research topics and maintaining the groups focus. The second author acting as the note taker noted, using an online Google Document, the comments of the participants, trying to maintain, as far as possible the essence and manner in which the comments were provided. The focus group was conducted using an online Blackboard Collaborate room, for which participants were provided a link for attending, and had a duration of just short of 90 minutes. A plan for the focus group was devised which included the topic area for discussion and relevant sub-topics and an approximate timing guide.

Specifically, the authors sought to gauge opinion on:

- Style of delivery of an OU module
- Approach to running a Face to Face Tutorial
- Approach to running an online Tutorial

Discussion of the approach to running a Face to Face Tutorial and an Online Tutorial were sought in order to carry out some form of comparison of opinions.

### **4. Focus Group Findings**

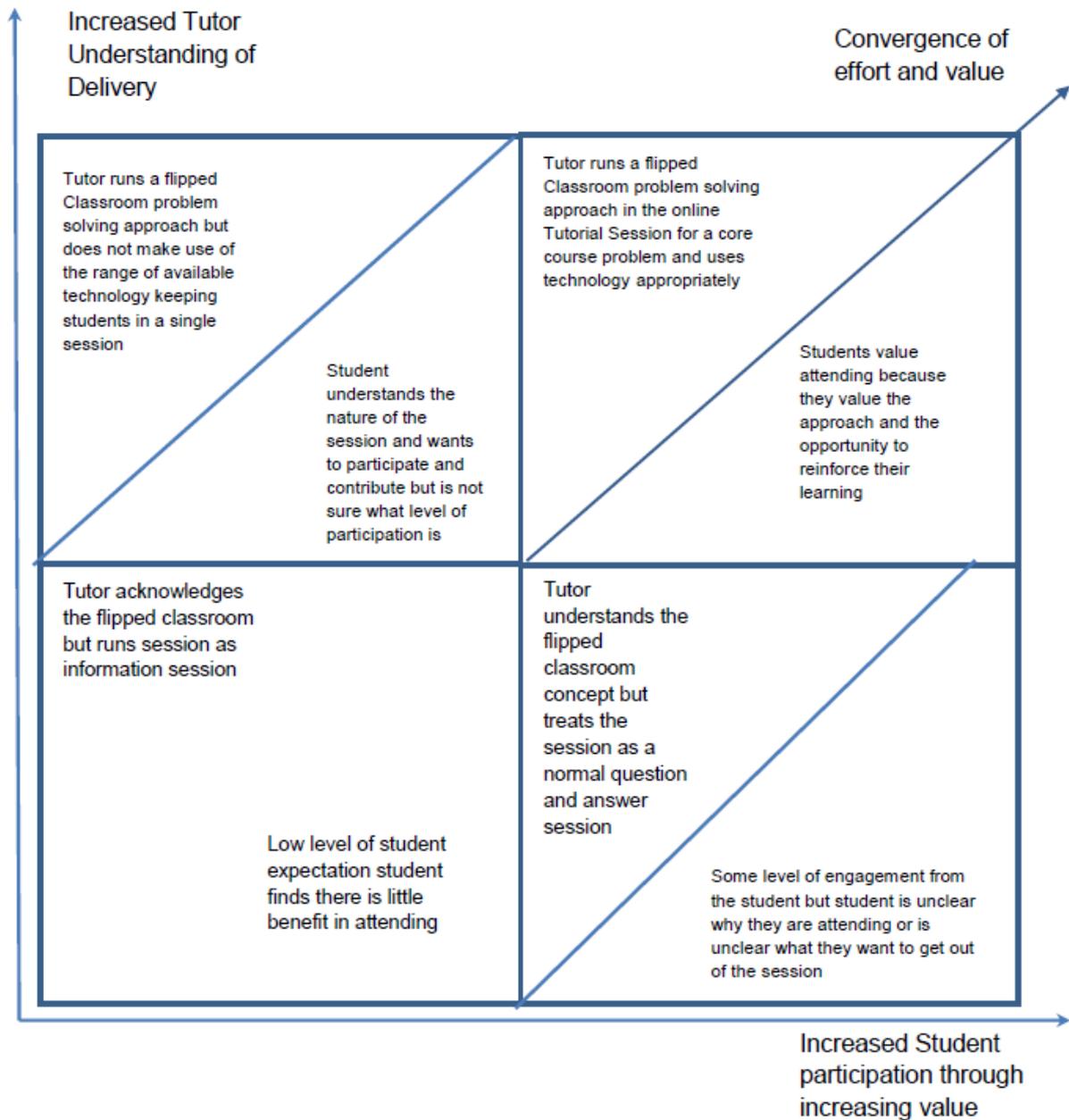
The organisation of the focus group arose out activities and discussions at the Open University Scotland annual Staff development session in November 2016. A number of comments were made at one session which identified a focus on online "tool usage" rather than on the pedagogy of delivering online sessions and the relationship of this activity to Face to Face sessions.

A number of comments stood out from the focus group discussions. These were:

- Uncertainty as to whether students were keen and motivated to attend
- Value attached to attending by students was variable
- A great deal of variety in the styles experienced
- Scope for a better explanation of Tutorials (both Face to Face and online)
- Students were often passive
- Lack of opportunity to perform just in time teaching based on student needs
- Students were more active in their course Facebook Groups than in their course Forums
- Numbers attending were low

It is clear that there are a number of factors at play here and are related to course/institutional attitude, student attitude, tutor attitude/delivery style.

A diagram was constructed using these factors in order to try and relate these factors in some way. This diagram is shown in Figure 1.



**Figure 1:** Attitude and Engagement Interactions

The goal is to have both Students and Tutors working together in the top right hand corner of the diagram. From the discussion in the focus group it would seem that there is scope for explaining to Students that online Tutorials are safe places in which to reinforce the work they have been carrying out in isolation and is an opportunity to have any questions related to their current studies answered.

## 5. Conclusion - What is best practice?

From the discussion in this paper it is clear there are a number of factors at work when it comes to providing and organising online Tutorial sessions to support the flipped classroom approach. These factors are related to course/institutional attitude, student attitude, tutor attitude/delivery style and can be represented on a plane as represented in Figure 1. From the authors' experience and from a review of the literature it is clear that there is a great deal of merit in pursuing problem solving activities as a delivery style for online Tutorials and this is certainly an example of "good" if not best practice. To have the Student/Tutor interaction in the top

right hand corner of the diagram shown in Figure 1 will require a good deal of work on everyone's part including the OU as an institution. The components needed all appear to be there with good quality teaching material at the heart of the delivery. There does need to be a change in attitude across the board starting with student education on the benefits of Tutorials as part of their studies. While it is probably naive to expect a wholesale change in student attitude to Tutorial attendance the target may be to identify specific groups of students who may benefit from attending problem solving type activities in a safe environment. To facilitate this there is a need to provide more in the way of education and training for Tutors in the pedagogical aspects of learning and how these problem solving ideas can be applied in the online world. With the continued growth of online provision and the growth of wired and wireless networks there will be a need to adapt pedagogical approaches in order to deliver support over the internet using tools as Adobe Connect and Blackboard Collaborate.

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