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Encouraging Student Participation in Online Tutorials: A Tutor's Perspective

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ABSTRACT

This paper will present an ongoing project to identify elements of best practice for the delivery of online synchronous tutorials. The authors have been involved with the delivery of online synchronous sessions for several years, observing both the role of the student and the session host. Both the student and the session host play their part in the success of the synchronous session. Therefore, it is imperative for the session host to be equipped with the necessary tools and techniques to deliver a synchronous session which maximises the learning, participation and enjoyment of the student attendees.

CCS CONCEPTS

• **Applied computing** → **Distance learning**; *E-learning*.

KEYWORDS

e-learning, distance learning, synchronous communication

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1 INTRODUCTION

The authors are both Associate Lectures (AL) for the Open University in Scotland and have, over several years, taken the opportunity to explore the participation of Open University students in online tutorials. This research has been motivated by a desire to comprehend student attitudes and participation with synchronous activities and also, the role and effect that the AL facilitating the synchronous session has on the participants.

Using student surveys, observation, participation in online tutorials and focus groups with our peers current best practice has

*Both authors contributed equally to this research.

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been defined to help inform the organisation and running of online tutorials that maximise student experience, participation and retention.

2 DISTANCE LEARNING PEDAGOGY

Several pedagogical styles can be applied to the delivery of online synchronous tutorials. Providing a combination of problem based learning (PBL), active learning, social constructivism, peer instruction, and learner/learning centred will help to provide a valuable student learning experience.

The concepts of PBL, active learning and peer instruction, can be harnessed when delivering online tutorials. These pedagogies provide the basis for involving the student, limiting passive involvement, demonstrating their understanding of the material being studied, and involving the student in peer collaboration [5]. Employing active learning techniques should inspire and institute the student's possession of their learning, thus, the tutor can employ problem based learning as a student engagement instrument [6]. Utilising an active learning technique will promote "higher-order thinking, problem solving, and critical analysis" in the students and facilitate feedback for both the tutor and the student [7].

3 IDENTIFYING BEST PRACTICE

The delivery of online synchronous tutorials is far from a trivial task; delivering a positive, thought provoking and engaging session requires a great deal of preparation on the part of the tutor delivering the session. Delivering a successful synchronous session will, most likely, involve a combination of techniques including tutor lead discussion/problem investigation, student presentation/discussion of their solutions to pre-session problems, active problem solving involving small group peer collaboration and short topic explanation by the session host.

3.1 Online Synchronous Sessions - Guidelines

The authors believe that the points listed below are a good starting point for any tutor looking for guidance on the preparation and delivery of their first online synchronous tutorial session.

- Feeling comfortable with the online tool being used is essential, hence, it is good to practice with it [3] to gain confidence.
- Material that works in a face to face session may not work online and will, therefore, need to be reworked to suit online delivery [3]. Designing activities requires considering numerous factors: collaborative nature and activity level, group and proposed collaboration size, and participant background

[1]. As contributing factors to potential group interactions, careful thought must be applied to the design of the activities making the role of the tutor pivotal in both conducting and constructing activities. In our experience, this is not a trivial task as it takes time to prepare the material [4].

- Slides used should be lively and engaging; they should include: relevant images, diagrams, examples, case studies, interaction slides that students can annotate and have minimal text.
- When developing tasks it is worthwhile breaking the “task down into self-contained learning episodes” [3] with appropriate breakpoints that allow evaluation of the tasks thus far [3]. Also, setting an “estimated time” [8] for these tasks will help with time management.
- Before the session start, check and set up the online room.
- Depending on the level of the module being taught, this might be the students first time using such a system, therefore, the first session should be an introduction to using the online tool itself [3].
- Enthusiasm and energy are important in your delivery and it helps to maintain this, not just in your voice, but, in your whole approach.
- Give the students a focal point when talking over your slides by using the pointer.
- Maintaining relevance is extremely important, therefore, unrelated student questions should be dealt with at the end of the session.
- Not all students may have, or for that matter choose to use their microphone; counteract this by using the whiteboard, “chat pod”, notepad etc.
- Technical issues are always possible, so, have a backup plan! If possible, team teach. This helps with technical issues, responding to individual student queries, and for monitoring the “chat pod” [3].
- Students will invariably attend late and leave early - don’t let this distract you! Build an agenda into your slides as a visual guide to the current, previous and future topics [8].
- The authors would recommend a minimum of two monitors. Allowing the online session to be visible on one and a browser, or other tools, to be accessible on the other [3].
- Don’t be afraid of improvising to keep the online session activities flowing and on course [4].

3.2 Encourage Student Participation - Guidelines

A successful session depends on meticulous preparation and the tutor’s role when facilitating the session. The tutor’s interaction with the students and capacity to judge the pace, mood and ability of the session’s participants are crucial in delivering this. During an online session, it is important to keep the students participating. Possible ways of achieving this are suggested below.

- The tutor should demonstrate a welcoming manner and articulate themselves clearly [1].
- Commence interaction with the students as they arrive [3].
- Open with an icebreaker - something light-hearted to encourage student participation [3].

- Interaction is key to a successful session, therefore, offer direction, ask questions and seek responses in a variety of ways - verbal, written, use of icons/emoticons etc. Having a tutorial that is interactive, engaging and fun will help encourage students to attend future sessions [4].
- Supply timely feedback to activities as this will reinforce the benefit for the student of attending the online session [1].
- Use the whiteboard to allow the students to annotate diagrams, images, graphs, code snippets etc.
- Use the polling facility and/or question & answer facility where available. This can help gauge student understanding before and/or after a topic is delivered. Also, introduces interaction, encourages discussion and provides immediate feedback.
- Use a PBL approach, for example, have the students analyse the process of converting between number bases, then design a pseudocode algorithm and finally code a solution.
- Use “breakout” rooms for group activities [4]. Active learning and PBL works best if the software tool can implement “breakout rooms”, a technique for splitting students into small groups for collaborative tasks. The tutor can “visit” each breakout room to monitor and facilitate discussion, and provide feedback on the task. Breakout rooms facilitate a social constructivism approach; allowing learning through peer interaction, gaining fresh understanding, reinforcing and enhancing current/previous knowledge and confirming the idea that “thinking takes place through communication”. [2]. The use of cooperative activities aids active learning through the promotion of learning together, self-reliance and activeness [1].

4 CONCLUSION

Several factors need to be considered in order to prepare and deliver a successful online synchronous tutorial. Based on the literature review and the authors’ experience, problem solving activities and good teaching material are key ingredients for delivering successful online tutorials.

REFERENCES

- [1] Fernando Alonso, Genoveva López, Daniel Manrique, and José M Viñes. 2005. An instructional model for web-based e-learning education with a blended learning process approach. *British Journal of educational technology* 36, 2 (2005), 217–235.
- [2] Wade Jarvis, Wade Halvorson, Saalem Sadeque, Shannon Johnston, et al. 2014. A large class engagement (LCE) model based on service-dominant logic (SDL) and flipped classrooms. *Education Research and Perspectives* 41 (2014), 1.
- [3] Iain Lambie and Bobby Law. 2015. The 21st Century Tutorial. *European Conference on e-Learning*, 299–XV. <http://search.proquest.com/docview/1728004271/>
- [4] Iain Lambie and Bobby Law. 2016. Using the e-Learning Acceptance Model (ELAM) to Identify Good Practice in the Provision of Online Tutorials. *European Conference on e-Learning*, 399–406. <http://search.proquest.com/docview/1860070786/>
- [5] Iain Lambie and Bobby Law. 2018. Tutor Perception of Delivery Mechanisms for Online Tutorials. In *ECEL 2018 17th European Conference on e-Learning*. Academic Conferences and publishing limited, 290.
- [6] C Lemmer. 2013. A view from the flip side: ‘Using the’ inverted classroom’ to enhance the legal information literacy of the international. (2013).
- [7] Jacqueline E McLaughlin, Mary T Roth, Dylan M Glatt, Nastaran Gharkholonarehe, Christopher A Davidson, LaToya M Griffin, Denise A Esserman, and Russell J Mumper. 2014. The flipped classroom: a course redesign to foster learning and engagement in a health professions school. *Academic medicine* 89, 2 (2014), 236–243.
- [8] C. Moore and L. Signor. [n. d.]. Engaging Diverse Student Cohorts: Did Someone Say Completely Online? 4, 4 ([n. d.]), 364–367. <https://doi.org/10.7763/IJIEET.2014.V4.431>