Tutoring at a distance, online tutoring and tutoring in Second Life

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Abstract

Research into tutoring at a distance has a fairly long history and the functions of tutors in distance education institutions are well understood. Over the past 20 years research into online tutoring has advanced significantly as such institutions have 'gone electronic': in this paper we cite published research from the UK Open University. Recently, blogs, wikis and podcasts have arrived to supplement established systems like email, virtual learning environments (VLEs, such as Blackboard) and computer conferencing. Little research has been published so far, however, on tutoring distant students in three-dimensional multi-user virtual environments (3-D MUVEs). Distance educators may well ask whether the best practices from tutoring at a distance and online tutoring can be transferred to these environments, which do *not* resemble VLEs. To clarify what may or may not be feasible in a prime example of a 3-D MUVE, this paper elucidates tutoring by and through avatars on a Second Life Island created by the Beyond Distance Research Alliance at the University of Leicester (which has 7,000 students learning at a distance). It analyses what can be done in Second Life by way of meeting students' needs for tutoring, and discusses some of the opportunities and challenges inherent in asking students and tutors to meet in such an environment.

Keywords

Tutoring, distance education, online education, e-learning, Second Life

Topics of the paper

- Tutoring at a distance
- Tutoring online
- Tutoring in Second Life
- Tutoring in the Sami tent and the Kalasha village
- Virtual StoryCubes and tutoring
- Conclusion
- References
- Acknowledgements

Tutoring at a distance

In distance education, tutors grade students' work and comment on it to them; they may also advise students on which courses to study and help them with study problems. In traditional correspondence courses, offered for many decades in many countries, students sent their assignments to tutors and waited for the marks. In the worst cases, students did not even know who marked their assignments: it was very impersonal. In the best cases, students also met their tutors' face-to-face, if infrequently.

For example, the Open University's students in the early 1970s could meet their tutors in face-to-face sessions. These were for diagnostic and remedial purposes rather than for substantial exposition of content by the tutors. Students often sought guidance from their tutors on writing their assignments, which they sent to their tutors by mail for grading, detailed comment and return by mail, as in a correspondence course. Tutors were expected, through these comments and the tutorials, to help students to build up their scholarship in the course content. Tutors helped students to persist with their studying, not drop out.

In summarising OU research on tutoring at a distance, Hawkridge (1978) reported that OU students made many disparate demands on their tutors. They said that they valued the correspondence tutoring via their assignments more highly than face-to-face tutorials, but note that the OU has always made assignments essential and tutorials optional. Northedge and Durbridge (1978) pointed out that tutorials were the only means whereby OU students could fleetingly confront the academic world in person. Tutorials carried with them functions that in the campus university are normally spread across lectures, laboratory sessions, chats in the coffee bar, chance meetings in the library and so on. Nevertheless, almost all OU tutoring was at a distance, not face-to-face. This was the pattern then, and still is, in many correspondence education institutions.

Tutoring online

As early as 1987, a few OU courses introduced computer conferencing for those students and tutors who were already online. From 1993, the OU began to go electronic while retaining its reputation for successful supported self-study based on print and other materials delivered by mail to students learning in their own homes. Much OU tutoring went online by using computer conferencing and email, plus an online system for students to submit (and tutors to grade, comment on and return) their assignments. With even fewer face-to-face tutorials per course, could the tutors' support to students be maintained? The research evidence is mixed.

Online tutoring was the only form available to OU students taking the international Master's in Open and Distance Education programme from 1997 onwards. In the printed study guides were student activities. Students were asked initially to post their answers in the online workbook, in the conferencing system. The educational rationale was that students would benefit from seeing each other's answers and being able to discuss them online with their tutor. The first course began well enough but soon there were far too many messages to read and the novelty wore off. Contributions from students dropped; they debated issues less

and less. The online café, which invited students to 'drop in' informally, was better sustained, with shorter friendly messages, but few of these related to academic issues. The most successful computer conferences were those linked to assignments. Most but not all students participated in these, some more enthusiastically and fruitfully than others. Students also used e-mail to get direct advice from their tutors on assignments and administrative problems. Tutors used e-mail or sometimes the phone to contact students who wrote little in the workbook or who fell behind schedule. E-mails were important in supporting students (Hawkridge, Morgan and Jelfs, 1997).

In a study of an OU technology and society course with over 1000 students, Kear and Heap (1999) observed both positive and negative consequences of online tutoring. In an advanced mathematics course at the OU Thomas and Carswell (2000) tried with some success the 'snowball' online tutorial, in which students start off in pairs and move by stages to group discussion under a tutor; the trial showed that this method resulted in a little more continued interest from students. Goodfellow (2001) looked at the problems of assessing OU students' participation in groups, while Goodfellow et al. (2001) discussed the cultural and linguistic barriers that OU students meet in global online learning.

To switch to online tutoring in its 25,000-student Business School, in the late 1990s, the OU needed to train *online* hundreds of tutors, nation-wide and abroad. They all had to become online e-moderators for computer conferences with their students. Through action research, Salmon (2000) developed a five-stage e-moderating model, grounded in constructivist learning theory as well as practical experience. Just as the best face-to-face tutors aim at meeting, motivating and getting to know their students, so she emphasises access and motivation in Stage 1 and online socialisation in Stage 2. Wise face-to-face tutors advise students on sources and how to be selective; similarly, Salmon's Stage 3 calls for online exchange and discussion (students-to-students, tutor-to-students, students-to-tutor) to build up critical selectivity. Face-to-face tutors meet with groups to explore concepts and issues; online, Stage 4 calls for knowledge construction. Face-to-face tutors aim to help students to learn how to learn, how to understand over-arching theory, how to challenge ideas and construct meaning for themselves; Salmon's Stage 5 provides for the same kinds of learning online. Not all online students will reach Stages 4 and 5. The same is true in face-to-face groups. Some students need more pushing than others, whether face-to-face or online. Some tutors/e-moderators are better at their job than others (some are better trained than others, too). Salmon (2002) asserted that essential to online tutoring are what she called e-tivities, reflective learning activities undertaken by students individually and in groups at each of the five stages. She offered ample guidance on how to create them.

Salmon's is not the only model for tutoring online: for others see McCreay (1990), Berge and Collins, (1995) and Mason (1998). But Cox et al. (2000) regarded these models as lacking the flexibility and imagination needed to exploit opportunities created by online discourse. In evaluating a 700-student OU course, T171 *You, Your Computer and the Net*, taught almost entirely online, they found that the tutors generally failed to stimulate or facilitate online discussion. Elsewhere, McConnell (2006) – formerly at the OU as a researcher – drew on evidence from his research to develop theory and practice regarding e-learning groups and communities. Macdonald's (2008) research in the OU in Scotland yielded guidelines for good practice in online asynchronous and synchronous tutoring.

Price et al. (2007) compared the experiences of OU students taking U213 *International Development* when tutorial support was provided conventionally (using limited face-to-face sessions with some contact by telephone and email) or online (using computer-mediated conferencing and email). They summarised their three studies thus:

> "Study 1 was a quantitative survey using an adapted version of the Course Experience Questionnaire and the Revised Approaches to Studying Inventory. Study 2 was another quantitative survey using the Academic Engagement Form. Study 3 was an interview-based examination of the students' conceptions of tutoring and tuition. In all three studies, the students receiving online tutoring reported poorer experiences than those receiving face-to-face tutoring. Study 3 showed that tutoring was seen not only as an academic activity but also as a highly valued pastoral activity. To make online tutoring successful both tutors and students need training in how to communicate online in the absence of paralinguistic cues." (Price et al., 2007, p1)

Price et al. (2007) did acknowledge that U213 might have posed particular problems for tutors and students because it was a multidisciplinary course. In a further study using the same instruments, Richardson (2009) found no significant differences on two humanities courses between students who received online tutoring and those who received face-to-face tutoring, either in their perceptions of the academic quality of their courses or in the approaches to studying that they adopted on those courses. The differences obtained by Price et al. (2007) did not appear to be peculiar to multidisciplinary courses. Richardson concluded that course designers could be confident about introducing online tutoring into distance education, provided that tutors and students received appropriate training and support.

Ideally, the technology enables online tutors to weave together conference conversations, Web pages and even emails. They do so by acknowledging contributions, synthesising and summarising, drawing threads together, watching for and correcting conversational 'drift', spotting good ideas, opening up new avenues for development, identifying holes in arguments (and patching them), separating opinions from facts, clarifying areas of agreement and disagreement, encouraging further exploration, pointing to valuable sources, promoting selectivity and building patterns.

Tutoring in Second Life

Social networking, with Web 2.0 technologies such as Facebook, YouTube and Flickr, offers tutors and students huge opportunities to reach and learn from each other. Of the three-dimensional multi-user virtual environments (3-D MUVEs), Second Life (SL), accessible via the Internet since 2003, is by far the most widely used. Keegan (2008) said SL was the third most popular social software application in the UK, after Facebook and YouTube, in time spent using it. Worldwide, well over 10 million people have registered as 'residents' in SL. At any one moment, 30-50,000 of their avatars (their virtual representations) are likely to be active in-world.

SL is a social environment, not a game, although avatars can be very playful. Generally, users are *not* expected by the software to meet objectives, engage in battles or undertake quests and tasks as in most virtual games. SL contains no goal-driven rules. Although SL was not designed with tutoring in mind, avatars in SL can do more or less whatever they like, including learning, except visit areas where owners of the virtual land restrict access.

SL is starting to command attention in higher education (see Salmon and Hawkridge, 2009). Among the

reasons for this attention may be because it offers opportunities for immersive learning. Seely Brown (2008) suggested that immersion was one of the principal ways in which the learning landscape could be transformed. For example, he said, everyone learns a home language through immersion – and desires to learn it. Virtual worlds in three dimensions may now enable people to learn by immersion in many fields, along with other learners: they can learn from and with them, in virtual space.

Salmon's (2000, 2002) online tutoring model and e-tivities can be adapted for SL. Students' avatars and their avatar tutors can move through the five stages, engaging in SL-tivities as they go. Based on a pilot study, Edirisingha, Nie, Pluciennik and Young (2009) provided a discussion, with examples, of how socialisation for learning can be promoted in SL. The SL-tivities designed by the tutor's avatars and related to objects or artefacts are placed on the island ready for use. They are either stand alone pilot activities or integrated into more formal education practices. Such SL-tivities can either be displayed in-world or integrated into the VLE alongside more mainstream activities.

So far, academics seem to be using SL for educational purposes such as virtual laboratories and field trips, problem-based learning, group discussions and design teamwork. For recent examples from campus universities, see *ALT-J*, 16, 3, 2008, and the *British Journal of Educational Technology*, 40, 3, 2009. Such initiatives try to take into account students' preferences and habits, and, by exploiting aspects of immersion, aim to enrich their learning.

As yet, nobody seems to have asked the research question: Is SL an ideal setting for distance education, and for tutoring distant students? An answer may emerge from studies at the University of Leicester, where the Beyond Distance Research Alliance has built an Island in SL for its Media Zoo (Wheeler, 2009). The Zoo is a 'cutting edge research laboratory' (Guardian, 2009) for members of staff from the institution and beyond to experience, interact and understand the potential applications of learning technologies. There are currently three versions of the Zoo: the physical version (the on-campus laboratory), another version available on the Internet and a third accessible in a virtual form in SL. A fourth version is being developed as part of the new Library on campus and will be made available to students to help them to understand how technologies can be used for learning. But it is the virtual version that is being used to study various aspects of distance education, including tutoring.

The Media Zoo offers a setting for communities of inquiry as defined by Garrison and Anderson (2003), who suggested three forms of presence in such communities: social, cognitive and teaching. Using research data from in-world sessions in SL in different disciplines, Armellini and Nie (2009) mapped the criteria associated with each of these three presences against the use of text, visuals and avatar behaviour. Their research showed that SL text-based chat logs of students' and tutors' avatars offer significant evidence for all three presences. Avatars provide social presence through movements, gestures and engagement with each other and with the environment. Artefacts in SL offer opportunities for simulation, creation, exploration and collaboration that reinforce the cognitive and teaching presences.

Needless to say, the avatars may represent tutors and learners from any part of the globe. An institution like the University of Leicester with its 7,000 students learning at a distance can limit access to its island (or a part of it) to those registered for a particular tutorial or course, and doing so eases problems of identity and trust that crop up if complete strangers appear out of the blue, so to speak. As tutors get to know their students' avatars, however, they may find their own identity and authority challenged, not least because avatars tend to be on equal terms in SL, more so than their owner-users are in real life (RL). Tutors who try to replicate their RL 'full-frontal' teaching style in SL may find themselves at a considerable disadvantage, since presentations can take up to four times as long in SL and student avatars may well wander off. If the tutors' avatars are tutoring synchronously worldwide, time differences can be a problem for students in other time zones, but participants in asynchronous sessions have to 'wait' for students' avatars on other continents to contribute. These and other issues are summarised in Table 1.

Despite such challenges, SL offers tutors and students considerable advantages, as Table 1 illustrates. For example, tutors can create artefacts or objects in SL that simply do not exist or are inaccessible in RL, to use for illustration or as the spark for a discussion among avatars. Examples from the University of Leicester include the development of a virtual Sami tent and a virtual village environment based on the Kalasha population of northern Pakistan.

Tutoring in the Sami tent and the Kalasha village

SL offers the possibility of immersion quickly, cheaply and effectively, in ways that other technologies cannot. During the MOOSE project (Modelling Of Second life Environments) two artefacts were created in SL to offer tutors and students this immersive experience (Edirisingha et al., 2009).

The first artefact was based on the Sami tent and was used to simulate some aspects of the lives of the Sami people of northern Scandinavia. Tents like this have been used as temporary dwellings by nomadic reindeer herders of northern Scandinavia for the last 2,500 years. Sami tents are divided into social spaces, access to which depends upon an individual's gender and status in the group. The purpose of the SL Sami tent was to familiarise students' avatars with the concept of social space. For example, there are two entrances: one at the front for females, children and servants, and one at the back for the men in the group. To give the students something close to a RL experience, 'permissions' were added to the SL tent based on these criteria and then assigned to the avatars replicating and replacing different social statuses. When some avatars found that they could (but others could not) enter certain areas in the tent, this added authenticity to the learning experience.

The second SL immersive development was a replica of a Kalasha village, another example of social space. The Kalasha are an ethnic group from the Hindu Kush Mountains in the north-west of Pakistan. The Kalasha, like the Sami, divide space on gender and social status. In SL, the avatars were taken on a tour up the side of the valley, as they might on a RL field trip, and immersed themselves in the culture of the Kalasha environment.

In both cases, tutors' avatars can enter into the students' experience by going with them and by joining their students' discussion (usually conducted through text messages in SL) of what they find. For distance education, SL is as good as tutors and students being together in a tutorial, and in some respects, as we have shown, it is even better (see Table 1).

Table 1. Some advantages and disadvantages of distance education tutoring in SL

Advantages	Disadvantages

SL helps to break down barriers between students and tutors. Students feel more among equals and more comfortable in collaborating in group activities.	Tutors in SL may find their identity (and authority) challenged if their avatars cannot cope well with the SL environment.
Tutors can send advance information to students via SL, to supplement other materials provided online in a VLE and in face-to-face sessions, with the result that activities taking place in SL are more focussed, therefore more challenging!	Tutors in SL find it too time consuming if they try to 'replicate' some real-world teaching styles. Lecture presentations in SL, for example, take four times as long as they would in RL.
Tutors can create artefacts or objects in SL that simply do not exist or are inaccessible, to use as the spark for a discussion. They can expect a steeper learning curve of their students and provide in SL opportunities for reflection, discussion and development of new ideas.	Tutors in SL need to be creative – or receive help in becoming creative – in realising SL's potential. E-tivities suitable for SL (SL-tivities) may be very different from those deployed in online tutorials in RL.
Tutors in SL find that their students have time to reflect on topics before contributing and are more likely to say something meaningful rather than just "I agree" as they might in an online discussion board.	As with all 'real-time' synchronous interactions, differences in time zones can become a problem for tutors and students. And the virtual space may get crowded if many avatars come to it at once.
For tutors in SL, students' perception of them as 'cutting-edge' tutors gives them more weight to stretch and challenge their students in ways that would be more difficult using traditional technologies.	Students (and tutors) unfamiliar with SL may need time to get used to and feel comfortable in its ambience, or may be distracted by other islands in SL, some of which are bizarre!
Tutors and students in SL have more accessibility in terms of the language used. Chat logs (and possibly audio recordings) of the interactions build confidence in those students who may have English as a second language – plus there are plenty of opportunities to practise languages away from the learning scenarios.	As with many technical innovations, older students who are less 'tech-savvy' may be put off at first and take longer to see the possibilities of SL than their younger counterparts.

Virtual StoryCubes and tutoring

StoryCubes have been used within the classroom as a tactile thinking and storytelling tool for exploring relationships and narratives. On each face of the cube students write or draw an image to illustrate or describe an idea, an object or an action relating to a specific topic. Each cube is personal to the student making it and therefore tells its own story. When StoryCubes are placed together, it is possible to build up multiple narratives or explore the relationships between them in a three-dimensional way. StoryCubes can be folded in two different ways, giving each cube twelve possible faces – therefore an additional two ways of telling the story. Like books turned inside out and upside down they are read by turning and twisting them in your hand and combining them in vertical and horizontal constructions. When building a structure of multiple cubes, some faces remain hidden from view, leading to debate among the story-tellers about which are the key issues, both of the topic and the story being represented by the cubes.

On the Media Zoo Island, virtual StoryCubes have potential for virtual-tactile thinking in SL. Students find them simple to construct, and their size and flexibility are almost unlimited in SL, enabling more complex, interactive stories to be told. StoryCubes are not affected by gravity as the paper-based cubes are in the classroom. Adding high quality images is straightforward, leading to amazing StoryCubes that remain for others to view and use long after the SL class has gone.

Virtual StoryCubes are a playful approach for exploring ideas in three dimensions, allowing students to reveal different perspectives and make new connections and associations. They are particularly helpful in enabling groups to build shared narratives that allow them to see new perspectives. Tutors can use them in SL:

- for brainstorming, to help people share and discuss ideas
- as an evaluation tool
- to help students collaborate on group work, enhance their negotiation and debating skills and develop their tactile and spatial construction skills
- to help students to see each others' perspectives
- for storyboarding and organising storylines for writing, animations and films.

Conclusion

These examples do not provide a comprehensive or final answer to the research question – Is SL an ideal setting for distance education, and for tutoring distant students? At the Beyond Distance Research Alliance we are engaged in further trials and research in Second Life. Two projects underway are SWIFT (Second World Immersive Future Teaching, see http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/swift) and DUCKLING (Developing University Curricula: Knowledge, Learning and INovation Gains, see http://www.le.ac.uk/beyonddistance/duckling). In both, the outcomes may benefit tutors and their students learning at a distance, as well as those on campus.

SWIFT is a collaborative project with the University of Leicester's Centre for Excellence in Teaching and Learning (CETL) in Genetics, known as GENIE. It brings together expertise from four experienced university teachers, including three National Teaching Fellows (NTFs) working respectively within the fields of biomedical sciences, pedagogic research and future learning technologies, to create exciting new solutions. SWIFT will develop immersive learning activities for undergraduate students using SL through which activities will not replace, but rather enhance the effectiveness of RL laboratory work. SL enables students to explore, experiment and evaluate situations in risk-free interactive ways in virtual laboratories. The impact of the use of laboratory activities in SL will be researched, contributing to our overall knowledge of technology-enhanced learning in this emerging area.

DUCKLING is developing advanced delivery, presentation and assessment processes to enhance the work-based learning experience for students studying remotely through three technologies – e-book readers, pod casts and SL. The project will demonstrate the practical marriage of sound approaches in delivery together with new technologies and work-based pedagogies for learning support, communication and assessment of professional adult learners from commencement to completion of their programmes of

study. DUCKLING has already developed an Oil Rig on the Media Zoo Island in SL for students to develop evacuation procedures and test their accuracy in ways that could not be achieved in RL. How tutors and their students, among others, will benefit from the final outcomes of this project remains to be seen.

We look forward to reporting developments in this journal and elsewhere.

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