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Breaking Down Barriers with Tablet Technology for Teaching

Hannah Lavery

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Key Takeaways

- A **blend of teaching modes** can make the best use of each approach **for different learning activities**.
- **Students** especially **like the freedom** to write directly on a whiteboard using a **tablet's handwriting capability**.
- For technologies to be seen as normal or even necessary for teaching, **technical support and infrastructure** will have to be **efficiently and reliably available** at the appropriate venues.
- **Evolving tablet technology** calls for **further investigation** into the devices' **potential contributions to learning**.

Online versus face-to-face teaching: Are they conflicting, complementary, or something else? A recent study suggests that tablet technology can help tutors break down barriers between face-to-face and online teaching. In her report “Bridging the Digital Divide,” Meg Allen recognizes that “factors such as income and previous education can have an impact on access to IT and the Internet.”¹ Certainly access to the physical tools that permit engagement with information and communication technologies (ICTs) is a key factor in their adoption, but it seems that the conceptual gap between face-to-face (human-mediated) and online (technology-mediated) learning can also affect engagement. Allen studied the issue in 2008 and reported, “The majority of students did not regularly use the [online] forums. They found the layout of the pages, and the content, confusing and unhelpful and the level of input and interaction to be poor.”² So how do we close the gap? I believe that using the tablet PC to bridge these teaching spaces can encourage a clearer sense of student ownership and engagement in online teaching.

A Closer Look at Tablets

A recent action research project at the [Open University](#) revealed that using tablet technology to teach literature and creative writing in the classroom and through asynchronous and synchronous online tutorials helps blend the teaching modes.³ An earlier project⁴ revealed how using tablet technology for marking student work can improve the interpersonal qualities of feedback delivered over a distance. These findings were supported in this most recent project; for instance, an MA English student commented, “Handwritten text gave it a more personal feel.” Our tablet technology project expands on that work by considering the relationship between the technology and its academic users.

Tutors at the Open University currently offer monthly, noncompulsory tutorials to students registered for their course. These take place in either 2-hour face-to-face sessions; 10-day asynchronous sessions in the [Moodle](#) virtual learning environment (VLE); or 1-hour online synchronous tutorials using [Elluminate](#) web conferencing software.⁵ A mix of delivery methods provides access for distance-learning students, although reports from tutors indicate that students who attend one type of tutorial are likely to attend all types. This permits the blending of

teaching modes within the course, making the best use of each approach for different learning activities.⁶

Project participants included Nicky Harlow, a tutor on Level 2 and 3 Creative Writing courses, and myself, serving as an MA English tutor. Synchronous online teaching methods in these subjects had been introduced during the 2010–11 academic year. Combining these new methods with asynchronous and more traditional face-to-face teaching allowed us to explore the tablet's potential for blended learning.

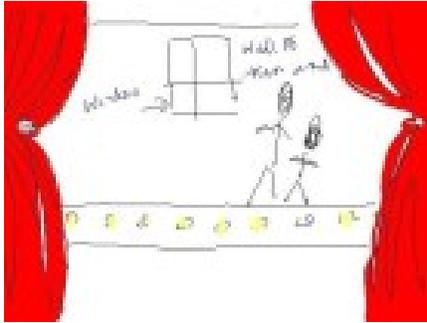
Tablets in Asynchronous and Synchronous Online Environments

Initially we wondered whether the tablet could be used for asynchronous online tutorials taking place in discussion threads in the Moodle VLE. All courses covered by the project have access to this type of forum for general communication among the tutorial group, although 11 of the courses use these forums for running scheduled online tutorials. These asynchronous tutorials generally run 14 days and are limited to the individual tutorial group members. The English MA course, however, runs clustered online instruction in the VLE forum area, which is used for team teaching at scheduled times.

I found the tablet useful for conceptually linking work undertaken in the classroom with follow-up postings in the tutor-group forum area. For instance, in face-to-face tutorials I passed the tablet to students to serve as a notepad for recording their response to a small-group revision exercise, which asked them to note the defining characteristics of a range of literary theories. The students' notes, recorded on a PowerPoint slide, were then uploaded to a discussion thread in the TGF (Tutor Group Forum) area for the full group to complete, because some students were unable to attend the tutorial. Asynchronicity lets students check and add to their work later, thereby consolidating current knowledge and incorporating later learning. Thus the tablet PC was key in enabling the blended teaching environment, as it gave students ownership of the task across time and the different media.

Nicky reported similar success with her students when moving from work undertaken in the face-to-face tutorial to a later, synchronous Elluminate tutorial. She did note, however, that teaching in Elluminate was not simply the replication of teaching materials from offline groups. "It is a different way of thinking," she said, and tutors need time to adapt their teaching styles when new technologies are included in the teaching model. Figure 1 shows three examples from the Elluminate tutorial slides used in the creative writing course.





Character No 1



Figure 1. Slides Used in a Creative Writing Elluminate Tutorial, Using the Tablet PC

The slides demonstrate the advantages of the tablet for its immediacy of use, which allowed Nicky to talk through the process of developing ideas for the production of a piece of creative writing. These examples show how the tablet was used to explore making decisions around the construction of characterization and concerning the choice of media best suited to a particular story. The drawing and writing capabilities of the pen therefore allowed for the real-time development and recording of ideas, to explore the writing process with the student group, even though they were dispersed geographically.

Handwriting Gains New Respect

We agreed that tablet technology was essential for effective teaching with Elluminate using the whiteboard. Study participants unanimously agreed that using the pen to interact with the whiteboard slides was invaluable for writing comments, pointing, and circling, accompanied by Elluminate's audio functionality. Although interactive tools are available to tutors and students in the vRoom, the relative difficulty of handling and applying these tools accurately using a mouse or touchpad proved off-putting. The tablet pens enabled the tutor to work faster and more accurately with the slides while teaching. Nicky noted:

"I used both handwriting and typing on the screens.... The students preferred the handwriting even though it was my dreadful scrawl.... As we worked through the different scripts, one of the students mentioned that he thought this would be great to use with an iPad, as it would mean he could 'handwrite' too.... All three students said they liked the handwriting aspect of the tablet and would like to try it for themselves."

She reported feeling particularly pleased by the session's success and surprised at the amount of banter and general enjoyment it provoked. She attributed this partly to the nature of the tablet: "The freedom of being able to write directly on the whiteboard made it feel personal." The capability of the tablet to record on-screen pen strokes lets the tutor better record and link

together work completed across different teaching events, thereby blending instruction more effectively across different modes.

The interactive qualities of the tablet, which conceptually navigates and acts as a bridge between the physical spaces of human-mediated and online instruction, enable the tablet to work effectively as a teaching and learning tool. This bridging of environments helps to establish a conceptual relationship between the individual and the “classroom” while respecting the different strengths and opportunities offered in each medium. Students develop a range of skills, and the more personalized use of technology makes for easier engagement with educational technologies in general.

Tablets in the Classroom

All but one course in the project included regular face-to-face instruction (between two and four hours, usually at monthly intervals). Tutors were surprised by the tablet’s usefulness for preparation and actual instruction in the classroom, something very few participants had foreseen at the initial briefing session when considering their personal aims for the project. However, two tutors working at different venues identified compatibility issues. Subsequent discussion at a later debriefing event raised a broader point regarding an individual’s willingness to engage with technology. Three tutors noted that having prepared a series of activities using the tablet and then facing setbacks, such as being unable to use the PC at a venue, dissuaded them from using the tablet in this way again. So, if technologies are to be introduced as normal or even necessary for teaching, technical support and infrastructure (e.g., web access, Wi-Fi support) will have to be efficiently and reliably available.

In terms of the offline teaching environment, several tutors felt that the tablet let them use the physical teaching space more freely. Nicky in particular noted the tablet’s interpersonal impact: she could sit as part of a circle rather than being compelled to remain up front to work the projector. Participants in the study felt that this broke down barriers between the tutor and students, creating greater intimacy, while enabling arts tutors to better encourage group work and discussion. I also noted that this let me run the opening lecture for the MA class, introducing a new theoretical approach, while sitting as part of a circle. Students seemed to feel more comfortable contributing questions and comments than they had the previous year, when I had necessarily stood at the front to use the laptop and projector. Classroom use of the tablet, then, appears to break down different types of barriers.

Conclusions

There was general agreement at the debriefing session that the new opportunities offered by the tablet, used alongside more traditional teaching practices, gave the best experience for students and tutors. The tablet emerged as a useful tool for navigating the different media now employed in higher education, bridging the technology-mediated and the face-to-face learning environments and leading to a sense of greater integration and blending. Unlike the ancient stone tablet, upon which words were inscribed to endure, the new tablet technology facilitates trial and revision, supporting collaborative processes for developing knowledge.

Tablet technology is evolving rapidly. Further work is needed to explore how newer tablet technologies can contribute to the marking-up and teaching activities explored in this study. Students are bringing iPads into the classroom, and tutors on the project were particularly motivated to participate because they recognize that practitioners have not yet fully explored the possibilities of tablet technologies for the teaching environment. This should be our next step.

Acknowledgments

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Endnotes

1. Meg Allen, "Bridging the Digital Divide," report on the Open University's widening participation and e-learning project (August 2008), p. 3. See the [project description](#) on the Open University website.
2. Ibid., p. 3.
3. This comprised 10 tutors across arts and technology subjects, using [HP Compaq tc4400 tablets](#) to explore their potential for use in their teaching and home life. Their findings were recorded during the project using the [Ning](#) online platform and were discussed in detail in face-to-face meetings during the project.
4. Wendy Fisher, "[Do we engage the student in e-assessment by personalising lecturers' feedback interventions?](#)" presented at the Novel Approaches to Promoting Student Engagement Workshop (30 October 2008), University of Ulster's Coleraine Campus in Conjunction with the Higher Education Academy Subject Centre, Information for Information and Computer Sciences.
5. Combined with Wimba technology, Elluminate is now part of [Blackboard Collaborate](#).
6. Kaye Thorne, *Blended Learning: How to Integrate Online and Traditional Learning* (Kogan Page, 2003), discusses the importance of tailoring teaching activities to the qualities of the different media to achieve the best blend for learners.

{Box following}

Further Resources

- Bonk, Curtis J., *Online Teaching in an Online World* (Bloomington, IN: CourseShare, 2001).
- Coates, Hamish, *Student Engagement in Campus-Based and Online Education: University Connections* (London: Routledge, 2006).
- Detweiler, R., "At Last, We Can Replace the Lecture," *Chronicle of Higher Education*, July 9, 2004, p. B8.
- Olson, T. M., and R. A. Wisner, "The Effectiveness of Web-Based Instruction: An Initial Inquiry," *International Review of Research in Open and Distance Learning*, vol. 3, no. 2 (2002).
- Thorne, Kaye, *Blended Learning: How to Integrate Online and Traditional Learning* (London: Kogan Page, 2003).

{End box}

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