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Take your pick: Out-of-class, blended language and Web 2.0 projects, and online

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This paper provides a synthesis of the pedagogical practices of e-learning teacher experts into a four-part framework of approaches: out-of-class, blended language practice, blended Web 2.0 projects, and online. Examples of each approach are illustrated with short extracts from case studies of the participant teachers. It is hoped that these four approaches will be useful as a means for an individual teacher or institution to objectively assess the level of integration of technology within their teaching context and might also serve as a framework for technology-minded language teachers to communicate with other teachers or administrators who might not share a similar mindset.

Keywords: E-learning, Universities, Language Learning, Framework, Case Studies

Introduction

Garrison (2011) defines e-learning as "learning facilitated online through network technologies" (p. xiii). In this paper we take this to mean the use of digital devices such as computers, tablets, and smartphones and various kinds of software, especially Web 2.0 tools, for teaching and learning. E-learning in higher education is becoming more and more common (Johnson, Adams, & Cummins, 2012) particularly as institutions move to provide more flexible learning opportunities for students on campus and easier access for non-traditional students such as working people and senior citizens. Students are increasingly expected to be digitally literate and familiar with various devices and software that enable interaction and collaboration with their teachers,

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classmates and others (Prensky, 2012). In addition, an important aspect to the spread of e-learning in higher education is that students can study wherever they have access to the internet (Rosen, 2010; Turkle, 2011). This means that both teachers and students are creating digital materials to up and download so that they can be exploited outside traditional classroom settings (as in the flipped classroom movement; Bergmann & Sams, 2012).

These general trends in higher education also apply to second and foreign language teaching. Language teachers and students can benefit from digital technology in many ways: teachers can use software tools and internet sites to widen their repertoire of teaching approaches, materials and activities; and, students can practice language skills independently or with others in an increasing number of ways both in and outside the classroom. These widening opportunities are reflected in teacher development books which aim to help teachers take advantage of rapidly changing technology (for example, Lewis, 2009; Hockly & Clandfield, 2010; DuBravac, 2012; Prensky, 2012; Stanley, 2013). There are also many theoretical articles examining various themes connecting technology and language learning. These include online teacher training (Compton, 2009); second language development theories and technology (Thorne & Smith, 2011); digital play (Reinhardt & Sykes, 2014); and, Web 2.0 tools and language learning (Thomas & Peterson, 2014).

In addition to these research papers there are a number of excellent studies that provide practical and theoretical concepts to describe and critically analyse e-learning. In higher education, for example, Garrison and Anderson (2003) and Garrison (2011) introduce the 'Community of Inquiry' framework and the associated theoretical concepts of social, cognitive and teaching presence. This is a well-known approach in higher education which treats e-learning as a way of educating students that is grounded in higher order critical thinking skills and constructivist approaches to knowledge development. As well as initiating a theoretical approach the authors also report on the practicalities of how teachers and learners can work together to create the aforesaid community of inquiry, and they provide many research based examples which demonstrate successful learning outcomes through the use of the framework. One of the interesting perspectives from a language learning point of view is the emphasis on the creation of a learning community through online discussion and shared inquiry. This has great potential as a way to encourage language acquisition, however, thus far there are few language learning examples that have used this approach.

More specific language learning based overviews of e-learning have been put forward. Two papers by Levy examine how technology and learning are connected: in 1997, following Taylor (1980), Levy uses a tutor-tool conceptual framework to describe how different digital resources can be related to learning activities; and, in 2009, he discusses various different kinds of technologies and how they have been used across eight language areas and skills. Recently, Dudeney, Hockly and Pegrum (2013) provide an overview of digital literacies that uses a four-part framework of language, information, connections and design. This is also specifically aimed at second and foreign language teachers and gives an excellent overview of all the different kinds of tools, tasks and activities that a teacher would need to know in order to implement an e-learning course to enhance digital literacy. And even more recently, González-Lloret and Ortega (2014) introduce a series of articles which are united within the frame of "technology-mediated" task based language teaching (TBLT), which, as the name suggests, is an examination of the relationship between language tasks in a variety of technological environments such as text chat and virtual games.

But, despite the rapid uptake of technology, the many books and papers written on these changes, and the excellent overviews of technology and e-learning that have been produced

there are still only a small number of institutions in which e-learning of second and foreign languages is normalized (Bax, 2011). Instead, there are many different approaches at both institutional and individual teacher levels and, as far as we are aware, there are few language teacher-oriented frameworks which can help an institution or teacher place their work within a practical context. This paper is, therefore, an attempt to provide such a framework.

Four descriptive approaches to e-learning are presented and extracts from case studies of expert teachers are given that illustrate each approach with specific teaching practices and issues of implementation. The framework begins with the approach requiring the least amount of technological know-how (called out-of-class) and ends with the one which needs the most institutional support (online). It is hoped that these four approaches will be useful as a means for an individual teacher or institution to objectively assess the level of integration of technology within their teaching context. They might also serve as a heuristic device for technology-minded language teachers to communicate with other teachers or administrators who might not share a similar mindset.

Before describing the four part framework and examples from case studies a brief description of the research study and data that they are based on is given.

Background study

In 2012 and 2013 the two authors of this paper visited five universities in four different countries (Japan, New Zealand, Singapore, and the UK) as part of a project to gather information on the pedagogical practices of language teachers who were expert in e-learning. Our research questions were: 1) What teaching practices do experts carry out? 2) What devices and technologies do they use? And, 3) What are their underlying teaching approaches and philosophies? It is acknowledged that the term expert is a vague one that is difficult to define but we think the label is justified in that all the teachers who were eventually recruited had the following expert qualities: they all had formal qualifications in e-learning and digital technology; all had published academic articles or books on the subject; and, all maintained websites with their own materials for e-learning. Two of them had also developed online games for language learning.

The experts were recruited through a snowball sampling method (Dörnyei & Csizér, 2012) in which personal contacts of the authors were asked to recommend expert language teachers in the e-learning field. We eventually recruited six different expert teachers (teaching EFL, ESL or Japanese as a second language) who were all using e-learning extensively in their work. We were shown around facilities, observed lessons and formally interviewed all the teachers about their teaching experience and approach. The 'thick description' (Geertz, 1973) of these visits together with transcriptions of the interviews were then analysed to find recurring themes. The four main results, as reported in Cowie and Sakui (2013), were: 1) teachers used a variety of different Learning Management Systems (LMSs) and Web 2.0 tools; 2) the main philosophical approach of the expert teachers was a social constructivist one (Pegrum, 2009); 3) institutions varied enormously in the support that they could offer teachers; and, 4) teaching roles changed as e-learning was introduced.

A logical next step in this survey of expert teachers was to synthesize their e-learning practices into a practical framework that can provide other teachers with a general picture of different approaches. In order to do this the data that was gathered from the initial five universities was combined with further observations and interviews at two universities in

Australia and one in the US. The final number of universities that were visited was eight and 13 teachers in total were formally interviewed. This data was then qualitatively analyzed into six categories (following Miles & Huberman, 1994): the need for an LMS or not; what kinds of e-learning software are used; what different teaching approaches and e-learning activities are used; to what degree e-learning is used in or out of class time; what different types of challenges do teachers face when implementing e-learning; and, what different types of assessment can be used. These categories were then used to create a framework of four broad approaches to e-learning. These are summarized in Table 1.

Table 1: A summary of the four e-learning approaches

APPROACH / FEATURE	**Out-of-class**	**Blended language practice**	**Blended Web 2.0 Projects**	**Online**
1. Need for an LMS	Yes/No	Yes/No	Yes	Vital
2. Software tools	Web 2.0 E-books (language skills practice)	Web 2.0 (language skills practice)	Web 2.0 (collaborative tools)	Virtual classrooms
3. Teaching approach	Traditional	Task based	Projects	Online teaching skills
4. In or out of class	Out	Both	Both	Out
5. Challenges	Choice of e-books and websites	Choice of tools	Design of projects and choice of tools	Staff and materials development
6. Assessment	Traditional/ computerized	Traditional/ computerized	Rubrics	Computerized

The framework and approaches are not representative of each geographical area where data was gathered. Rather they are an amalgam of all the different practices that were witnessed and as such we are confident that the framework will fit reasonably well for teachers and institutions in other settings. Listed in the next section are short definitions and explanations of these different approaches: out-of-class, blended language practice, blended Web 2.0 projects, and online.

Four e-learning approaches

1. Out-of-class

In the out-of-class approach teachers teach a traditional class but use online materials for homework to provide extra practice and activities for students. Specific examples of online resources are vocabulary flashcard sites such as Quizlet (quizlet.com) or Anki (ankisrs.net), corpus tools such as Compleat Lex Tutor (lextutor.ca) or Flax (flax.nzdl.org/greenstone3/flax), listening sites such as ELLLO (elllo.org) or EnglishCentral (englishcentral.com), and reading sites such as Breaking News English (breakingnewsenglish.com). Many textbooks also now offer e-learning tools in addition to the paper-based text and publishers provide

their own LMSs to help teachers administer such activities. Assessment can be carried out as the teacher normally does and does not have to be based on online performance. Challenges include the choice of online sites and materials. Teachers do not have to use computers in class but students will need internet access for homework. This kind of class is not oriented towards e-learning but the use of online materials for homework is a good way for teachers to gain some initial experience of e-learning tools and activities without the pressure of having to use them in the classroom.

2. Blended language practice

Garrison and Vaughan (2008) define blended learning as the integration of 'thoughtfully selected and complementary face-to face and online approaches and technologies' (p. 148); that is, teachers work in a traditional setting but carry out e-learning activities in class time to supplement or enhance their customary activities. We have divided blended learning into two types: those where language practice activities are foregrounded; and, those where the creation of a digital project using Web 2.0 tools is the main learning outcome.

In the blended language practice approach activities are likely to be task based (Ellis, 2003; González-Lloret & Ortega, 2014) with an emphasis on skills development. The e-learning component of a class could include the use of language learning websites and textbooks with an online component. Specific examples include the same kinds of internet resources that are used in the out-of-class approach. Assessment may be very individualized and can be based on student performance in computer-based tests. Challenges include the choice of online sites and materials. Regular access to a classroom with computers and internet access is preferred but if these are not available students can use their own digital devices such as smartphones (the bring your own device policy, Lee & Finger, 2010) or share a class set of tablets or notebook computers (see Brown, Castellano, Hughes, & Worth, 2012, for an example of the use of iPads in the EFL classroom).

3. Blended Web 2.0 projects

In a blended Web 2.0 project approach students work on projects using Web 2.0 tools such as Twitter (a social networking service), Google Docs (a collaborative writing tool) and YouTube (a video sharing tool) (these examples are the top three tools in Hart's 2014 survey of online tools that teachers value most). One important role of the teacher is to introduce and facilitate the use of these various kinds of software. There may be less emphasis on direct language teaching and more on using digital tools to carry out collaborative projects that involve various texts and media. The outcome of a project will be some kind of e-product or digital artifact which is uploaded to the internet (such as a shared written text, a video, a digital story or an animation). The assessment of projects would most likely be carried out using instructional rubrics; that is, comparing the end product with the rubric that describes how to make it. Challenges include the choice of project and choice of software. The regular use of a classroom with computers is vital and it is likely that teachers would need access to an LMS.

4. Online

We use Ally's (2004, p. 5) definition of online learning in which learners use the internet to access and interact with materials and to gain support from their fellow learners and teachers. In this approach lesson content and assessment methods are posted online and teachers and students do not need to meet in a face-to-face manner. There may be some kind of virtual classroom or online synchronous meeting place to practice language exchange (such as Blackboard Elluminate or Adobe Connect). Assessment can be carried out in many different ways and all can be computer based. Challenges include the choice of LMS technology and materials development. It takes a long time and a lot of experience to create an online course so it is unlikely that this kind of course is possible for an individual teacher to develop in the short term. There also needs to be strong institutional support for this approach.

Examples to illustrate each type of e-learning approach

In the next section examples from case studies gleaned from the university visits are provided in order to show what each type of e-learning approach means in practical terms and what the implications for institutions might be. A brief description of each setting is given and then a small number of specific features of each case study are highlighted and commented on. University and teacher names are kept anonymous but short quotations from participant teachers are given to illustrate particular points (the country name and page number of the interview transcription are given). In describing these examples we are not suggesting that other teachers should copy them but that they are indicative of the possibilities of each of the four e-learning approaches. We have not taken a particularly critical stance towards the examples; we have not critiqued how effective we think the approaches are for instance, but instead we have tried to describe them in a clear and objective way and have drawn attention to various issues that may arise in using each approach.

1. Out-of-class

One expert teacher in an Australian university teaches ESP to Asian students who come to Australia to qualify as nurses or midwives. The teacher coaches the students individually in a number of different areas including medical terminology, drug names, patient history taking, ward handovers (when one nurse debriefs another on the patients in their care) and report writing. Most lessons are voluntary and in the form of short tutorials using clearly focused worksheets. There are no e-learning activities during class time.

The teacher stores all lesson materials on the university LMS and has developed a number of web-based activities where students can practice further what they have learned in the tutorials. For example, students can listen to audio files of particular pronunciation points and then record and compare their own pronunciation. In addition to the LMS-based activities, the teacher also runs a web forum in which she answers student questions and has developed (with a programmer and graphic designer) six different computer games that students can play online. These are different kinds of vocabulary practice games in which the students can, for example, cure a patient if they identify drug names correctly or harm them if they get the names wrong. The teacher explains why she has developed the games:

> I just happened to do it because I'm a single teacher, I've got 500 or so students, I can't service them all, this services them all. Ok, so it's a logistics thing. It's cheap and it runs and also my ultimate aim … is to send the games, actually say to the students who are enrolling or interested, that they should get a certain score in each game before they turn up to Australia. (Australia (1), p. 22).

She also describes the teaching rationale for the games and the reactions of her students:

> As far as I'm concerned, games are a medium in which to coordinate multimedia materials in a timed environment, forcing students to respond… for fun, and also to imagine themselves, so like if you look at this avatar, they're wearing the student placement uniform. They all are, students love that. I didn't think they'd actually care… but they're like "Oh my God, it was me" they said. (Australia 1, p. 17).

In this example the teacher carries out traditional teaching activities with a strong focus on linguistic form and accuracy that reflect the high stakes learning environment that the students are in: if they do not quickly master the content of the course then they will not qualify to work in the Australian medical system. In addition, in response to the large number of students and limited time that the teacher can spend with each one she encourages them to go online for further practice. This practice may help students to become better language users and the games that they have access to may also increase their ability to identify with their future chosen profession by helping them to imagine themselves as future nurses and midwives (Dörnyei & Ushioda, 2009).

This teacher has a great deal of technological expertise and few others should be expected to create their own website and develop online games in the way that she has. However, there are many other more straightforward means in which teachers can add out-of-class e-learning to their repertoire of teaching activities. Perhaps one of the easiest ways is to use a textbook that includes online versions of materials and activities. There are also many commercial websites (for example: alc.co.jp, cooori.com, dyned.com) which can provide students with extra opportunities for skills practice; and there are many free sites such as elllo.org and breakingnewsenglish.com, mentioned above, which provide authentic and graded materials for student and teacher use. There are also sites where students join a community of learners to collaboratively improve their skills such as the translation sites of duolingo.com and lang-8.com. In these ways teachers that are new to e-learning can begin using it without the need for a great deal of technology or expertise; they just need to demonstrate activities to their students and then encourage them, formally or otherwise, to practice in their own time.

2. Blended language practice

In a different university in Australia two teacher-coordinators described how they have developed online materials for other teachers in their institution to use. The materials are designed for general academic lessons for overseas students on short term English courses (from one to six months). All the materials are available through the university LMS and teachers can either use them for traditional activities using a whiteboard or a worksheet, or can use them in a more digital manner such as by showing a video online or by guiding students through a series of websites to complete assignments (see webquest.org). One example of a unit of work would be to get students to visit different websites to practice

their reading skills on a particular topic and to identify language useful for discussion. Students would then work face to face and online to create a persuasive presentation based on their reading and research. In another example, students speak on Voice Board (available on the school's LMS, Blackboard) in order to practice answering TOEFL-type speaking questions. The teacher can use the LMS to give feedback to students on their answers.

The LMS also provides options for teachers to use online discussion boards, forums, wikis, blogs and audio recording. Some teachers use these facilities but not all do; although courses are coordinated teachers are still allowed a great deal of freedom to decide their own use of technology. One online feature which all teachers do have to use is the automated grading and plagiarism checking system from turnitin.com. The teacher-coordinators provide extensive rubrics for written assignments, and, as well as providing grades, teachers are encouraged to highlight important errors and give personal feedback when they electronically return assignments to students.

The teacher-coordinators stated that it was important in setting up e-learning for teachers to have a centralized system with a small number of software tools and that these tools be introduced through peers. Instead of teaching all their colleagues about new technological developments at the same time the coordinators show them to a small number of teachers who then peer teach others. As well as being an effective form of teacher development in itself this style of knowledge building is a result of the university having few computers available so only a limited number of teachers can use them at any one time. The teacher coordinators also emphasized that they have had to develop easy to navigate e-learning systems where teachers can show students how to move from one task to another in an educationally sound manner; that is, in a way in which materials are scaffolded and graded for students. They explained that they do not want to use technology for its own sake but to make sure that it can enhance the learning experience for students. The coordinators, although 'tech-savvy' (Dudeney, 2009) themselves, were wary of using technology as a result of pressure either from within their own university's technology support staff or externally from technology companies:

> iPads were given out to our science students instead of text books and they've got their readings online, which is really great on the one hand but … it's allowing one company to have predominance and also each year they're going to change their product and then you know, that becomes obsolete. (Australia (2), p. 7–8).

It seems that some teachers, at least in Australia, may feel pressure from various sources to use digital technology but are thinking critically about whether this is educationally useful or not. In other comments the participant experts suggested that a blended environment may be more suited to younger students (18–22 year olds) for whom the social side of an educational experience is very necessary, and that more mature students may prefer a fully online course. This is the opposite of what many observers believe is a digital divide between younger 'digital natives' who have grown up with technology and older 'digital immigrants' who have not (Prensky, 2012; Palfrey & Gasser, 2013). It is important in introducing technology not to assume that younger people are either familiar with the technology or are always accepting of it:

> The young students were all standing up and saying we don't want you to put everything online, and they actually kept saying we want more face to face then you're giving us

> now. You're starting to reduce it too much. And so that was interesting because the university as an institution was thinking the other way. (Australia (2), p. 8).

As Thomas (2013) points out it is important to bear in mind that 'educators have to be wary of adopting conveniently dichotomized modes of thinking – building on the binary logic of "natives" and "immigrants"' (p. 9).

A second example of blended language practice is from a teacher in New Zealand who teaches Japanese as a second language. This teacher would prefer to teach in a fully online environment but her institution, although very supportive, does not yet have enough equipment or digital tools to allow her to do so. Her lessons are divided into traditional classroom teaching, computer-based grammar lessons, and the use of a website that the teacher has created for teaching 'kanji' (Chinese characters). The kanji website has a number of different features including a description of metacognitive strategies for learning kanji and various interactive games and flashcards. The reason for the teacher developing the grammar resources and kanji website was because she needed to teach students in the same class who varied widely in their language level: 'There's so many different learning preferences … in the classroom, so one method, sole method, sole agent type thing just does not work anymore' (New Zealand, p. 7).

The grammar resources and kanji website enable students to work at their own pace using digital devices. Many of the other teacher experts also described how they had first tried using technology as a way to solve a problem and enhance learning for their students. The New Zealand teacher endorsed this motivation and described why she was enthusiastic about using technology from a teacher development perspective:

> I think the good thing about technology is you can do it in little bites … you can just make a little tool or a little something and put it up there and now there are so many, that's one point, there are so many authoring tools that do all the work for you. (New Zealand, p. 16).

Not all teachers need respond to a problem in class with technology but, as mentioned above, it is a good first step in getting used to e-learning.

3. Blended Web 2.0 projects

Examples of Web 2.0 project-based approaches come from Japan and Singapore. The example in Japan consists of several teachers in one university department who all use digital tools in their communication (not language) classes. Desk top computers were available in all classrooms and each student had their own lap top; the teachers also had a computer linked to a projector which was used to demonstrate activities using the university LMS. Lessons ranged from teacher-fronted explanations in Japanese to small groups and pairs of students gathered around one student's computer.

The goal of the classes is to encourage students to use various kinds of Web 2.0 software to create collaborative digital products. Each of the teachers introduced a particular tool (all were available on the university LMS) and students worked together to understand how each tool worked and to produce some kind of e-product. Tools that were used during the lesson observations included Flash (animation making software), Google Docs, and Inspiration (a mind mapping tool). Flash was used by students to make an animated presentation to be used to teach elementary school children about cancer. The draft storyboards

made by the students were presented to the local education board to see if they could be used in schools so it was very much a project with real world consequences. Google Docs was used by other students to write a joint paper examining the impact of different technologies. Inspiration was used as a means for students in small groups to jointly reflect on the projects and technology that they had used in their lessons. In these reflections the students mentioned that they had used Dropbox (a file hosting and sharing service), Twitter, bubbl.us (a brainstorming and mind mapping tool), and Scratch (an educational programming language). These give some idea of the range of tools that students used in their projects.

The second example of a project approach is from Singapore. The expert teacher taught a number of different courses including communication skills, pronunciation, and an English enhancement course. The teacher used a combination of an LMS and his own website to manage the various projects that he set up. Lessons were classroom based with a strong element of technology; the teacher used slides to present ideas and students worked in small groups using their own portable devices. E-learning projects included ones on online journalism, digital storytelling and digital newsletters. For example, students jointly researched a local cultural phenomenon such as traditional funeral rites and created a collaborative video using interviews with local people, subtitled footage and their own commentary. The class videos were then uploaded to YouTube. As of writing these sets of videos have been seen as a collective over 80,000 times.

There are a number of reasons why the university in Singapore uses a lot of technology. At a government level Singapore has a strategy for promoting the use of technology in education; this was partly in response to the SARS epidemic in the early 2000s when many students could not attend school and partly that Singapore wishes to emphasize the use of technology as a key educational strategy (see Vallance, 2008, for a comparison of Singapore and Japan's strategies for implementing digital technology). As a result, prospective teachers have a need to be able to use technology that is widely used in Singapore schools and to keep up to date with various Web 2.0 tools that are used for educational purposes. Some of the tools that were being used by students at the time of data collection were Windows Movie Maker (software for making movies and editing photos), Diigo (a social bookmarking site), and Lino (a messaging site for exchanging comments and opinions).

One key difference between the language practice and Web 2.0 project blended approaches is that in the former there tends to be an emphasis on language development but in the latter language may be taught more indirectly or not emphasized as much; instead there can be more of a focus on developing skills in using different Web 2.0 tools. Learning language is still a vital part of the Web 2.0 project approach but the teachers' philosophy was that digital tools and the principles behind them (such as interaction and collaboration) are equally useful in equipping students with life skills that will be of great benefit to them in the future.

4. Online

The final two case studies come from the UK and from Japan. In the UK institution most students completed various distance learning language courses (Chinese, English, French and Spanish) using only online materials. Technology can enhance the distance learning experience for students but the UK institution also uses an online approach because, as the expert teacher explains, information technology skills are seen as part of a student's 'twenty-first century graduateness and part of their employability' (UK, p. 18). In other

words, it is a fundamental part of the university philosophy that graduates should be able to use digital technology in their learning.

Teachers use various LMSs to organize both synchronous and asynchronous lessons and, in addition, printed course books are sent by post to students. There are also email tutorials and supplementary online lessons for students that are falling behind. Active language practice is carried out through online chat rooms or virtual classrooms (such as Elluminate) where teachers organize lessons using a webcam and an online whiteboard and various other tools; for example, the teacher can use a pointer to replicate the kinds of actions and activities commonly seen in a face to face classroom. Students can see their classmates and teacher and lessons can be recorded so that students can review what was said and done. This facility is also used by teachers to reflect on their own performance and to use the recording to help develop other teachers' skills. This is particularly important as teaching a course totally online means that teachers have to develop different ways of interacting with students compared to traditional teaching:

> We do a lot of staff development… (to) develop aspects of teaching… how do you mark languages? How do you teach languages at a distance? … In some ways it's the same and some ways it's different because it's got the whole sort of double cognitive overload… you're learning in a language as well as learning about the language. (UK, p. 3).

The participant expert explained that students generally respond very positively to the online course as long as it is managed in a clear way:

> You know if the learning design is quite strong and people can see the point of what they're doing and how that feeds into what they're going to be asked to do for the assessment, and what the learning objectives are for the course as a whole, program as a whole, then they're pleased with it. (UK, p. 19).

The expert teacher went on to explain how assessment of students is carried out in a number of different ways in order to give students as many feedback opportunities as possible: tutors give spoken and written comments on spoken and written assignments; there is automated assessment of online exercises that students can resubmit as many times as they like; and, there is interactive computer assessment. In the latter hints are given if errors are made and links to language notes pop up on screen if a student makes further errors.

The second online example is taken from a university in Japan which organizes an online course for science-oriented majors to read and write in English about topics in their field such as math, artificial intelligence, programming and robotics. Students attend their major classes on campus in a normal manner but also have to take the required online course. Students read various authentic texts that have been rewritten in a lexically controlled way using the most frequent 2,000 English words. After reading the materials for each unit students then write essays which they must submit at regular intervals during the semester. The university employs a writing tutor to assess essays and give feedback to the students. The expert teacher who administers the course commented on the need for extra staff:

> You still need somebody as both a technical administrator, so helping students with technical problems, but also giving academic advice or in this case English advice, so you need some kind … of method for them to contact either coming to an office to speak to

> a teacher or Skype or email system. You do need some kind of help, otherwise research shows… where you have minimal supervision you have more drop out. (Japan (2), p. 7).

Within the framework of e-learning approaches it would seem that online is the most difficult to set up and maintain. Online courses need a large investment of staff time to develop course materials and computer systems, and once courses have started there needs to be a great deal of technical and language support for students. If not, as the Japan-based teacher describes, many students may not complete the course.

Conclusion

It is an exciting and challenging time to be teaching languages. The advent of so many digital tools has meant that teachers can empower their students to access and practice language in more ways than have ever been seen before. However, it can be daunting to adapt this technology in an educationally effective way and teachers need support and information to do this, especially in a way in which there is an optimal balance of technology and educational outcomes. In providing a framework of four approaches to e-learning and examples of practice we hope that this paper will, in a modest way, help second and foreign language teachers implement some form of e-learning; and, it may also prove useful as a heuristic device for tech savvy teachers to discuss e-learning with less experienced teacher or administrative colleagues.

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