

# **Pedagogical uptake of technology in e-learning for languages: the case of NBU Moodle**

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## **Abstract**

This article reports on an exploratory study carried out over the academic year 2010-2011 to investigate the faculty pedagogical uptake of technology. A total of 166 groups in the NBU Moodle were explored to investigate the use of e-learning materials of blended English language courses. The data are analysed in the light of the e-materials design and use in the courses to support language learning. The findings show a need for instructional design support to transform learning from a passive into a more active learning experience. Results are discussed in the light of learner autonomy, collaboration between students and sequencing of instruction. Conclusions are drawn about the importance of applying instructional design theory to deploy better quality e-learning experience.

## **Introduction**

E-learning comprises all forms of electronically supported learning and teaching and transcends both out-of-classroom and in-classroom educational experiences via technology. Questions about e-learning often involve a comparison to ‘traditional’ classes because to date much of the teaching and learning has been closely associated with the classroom. Therefore simply transferring what one knows about teaching face-to-face to teaching online sets them on the wrong path.

While institutionally technology adoption is underway, the academics are slow to change teaching practices to suit the institutional requirements. Despite institutional support, part of the problem is with policy makers. They often do not recognize the unique difficulties of teaching online. Thus, under the assumption that online learning can be offered with about the same effort as classroom instruction, academics are pushed into an ‘online classroom’. The bravest have already had some experience using the WWW to support existing teaching. However, no one has given them the kind of support needed to create and deploy quality online learning. They are pushed into the shoes of web developers, courseware designers, and e-learning content writers, this consequently creating resistance to the change and resulting in slow adoption of the innovation. E-learning support is left in the hands of a few enthusiasts creating peer-pressure. As a result the poor quality of e-learning fires back at both the faculty and the institution and the students.

This article reports on the use of electronic resources in NBU Moodle to support language courses.

### **Context of the study**

Fresen (2005, 2011) identified 6 categories of critical success factors that directly affect the quality of e-learning: institutional, technical, pedagogical, instructional design, faculty, and student factors.

#### *NBU technology adoption history of e-learning for languages*

NBU is recognized as one of the pioneers and one of the most successful adopters of technology innovations for learning among the educational institutions in Bulgaria.

In 2003 a multimedia lab was set up to be used for teaching languages through ICT. A portal was launched and a handful (7) of teachers trained to develop interactive exercises for an FLT Portal. A Moodle was also set up to promote innovation and to facilitate communication among faculty. These teachers were the first innovators to take on the e-learning for languages idea on to an institution-wide level. After a year NBU ended up with two more distinct platforms – VEDA and ISDO; Moodle was later on re-launched and replaced VEDA; the FLT Portal was discontinued. Since 2006 Moodle has been used as the main LCMS to support learning. Since then, innovators and early adopters among the faculty members have been offering numerous seminars, workshops and peer-training sessions for colleagues to speed up the technology adoption process.

The authority innovation decision, making the ‘e’ in the e-teaching compulsory for everyone, put pressure on the teaching staff. Institutional support was then provided, and to date is still available. E-learning at NBU is a priority and faculty performance is even evaluated as to the use of Moodle to support learning. However, effective e-learning is not yet taking place.

#### *Institutional and Technical support*

NBU has been offering institutional support through regular and on-demand training for academics wishing to learn the technology. There is enough technology; hardware, software and bandwidth are not deterrents; NBU offers enough technical support too. However, the availability of technology does not necessarily motivate change. Availability of technology does not motivate the students to make use of it for purposeful and meaningful study; nor does it motivate teachers to make the best use of this technology to support learning.

Use of Moodle being compulsory means that the technology is widely adopted. However, the availability of technology does not automatically imply its pedagogically effective use to support learning. Therefore the pedagogical use of the NBU Moodle became the focus of interest in the present study.

### *The courses*

The language courses at NBU take the form of 'blended' courses: for a total of 150 hours per semester, two classroom sessions weekly take place, in between which students are requested to complete some of the course work online in the Moodle LCMS.

### **The study**

The focus of interest was faculty's pedagogical uptake of the adopted e-learning technology, Moodle, to support English language learning. The study set out to investigate the pedagogically effective design and delivery of e-learning materials for ELT. In the present study the researcher was not interested in investigating the student factors.

Faculty English language courses in the Moodle LCMS over one academic year (October 2010 – June 2011) were explored to investigate the kind of use of e-learning materials in the courses to support language learning. The instances of use of a particular Moodle resource or activity were examined and four major categories of use were identified ranging from little or no interactivity to such offering a lot of interactivity and requiring collaboration. Those are:

- printable materials – digitized lecture notes and practice materials (e.g. scanned pages from books, PowerPoint presentations, print-out worksheets, etc.)
- interactivity (e.g. HotPotatoes, SCORM, Quiz, Poll, Survey, alternative assessment student collaboration activities, peer evaluation, etc.)
- individual students' work (assignments involving uploading of files by students, wiki, blog, journal, database modules; use of audio and video, etc.)
- communication (chat, forum, messaging)

### **Trends in the data of the use of materials**

In what follows, important trends in the data are reported on. Quantitative data have been contributed to the identification of these trends.

A total of 166 groups were studied by level (English): A1 (28), A2 (36), B1 (35), B2 (51), C1 (10), C2 (6). Data were collated and are presented in the following table.

OOCK	Printable resources: word, pdf, etc.		Links/Youtube/HotPot, SCORM, etc.		File upload tasks/ assignments, etc.		Communication: forum/messages/chat	
	instances	%	instances	%	instances	%	instances	%
111	183	50.14	83	22.74	69	18.90	30	8.22
211	350	52.55	170	25.53	115	17.27	31	4.65
311	501	45.40	435	39.40	136	12.30	32	2.90
410	877	52.54	485	29.06	201	12.04	106	6.35
511	222	79.28	26	9.28	23	8.21	7	2.50
611	32	39.00	29	35.36	13	15.85	8	9.76
	<b>2165</b>	<i>x</i> <b>53.15</b>	<b>1199</b>	<i>x</i> <b>26,90</b>	<b>544</b>	<i>x</i> <b>14.10</b>	<b>206</b>	<i>x</i> <b>5.73</b>

Table 1 - Resources in English courses on Moodle

*Category: Printables*

What becomes immediately obvious from the number of instances is that the printable resources (*x* 53.15%) is the predominantly used resource in the courses and outnumbers all other resources in the remaining three categories taken together.

Looking at the data across the different levels (Graph 1), English C1 courses exhibited the biggest number of instances of printables (79.28%) provided by the course tutors. At the same time the number of instances of interactive materials drops to 9.28%.

This phenomenon turns the courses into repositories for lecture notes. Such materials provide little or no interactivity. The students are expected to read the material, or if it is practice material, feedback on any such is deferred until in-class sessions, if at all discussed. The tendency is observable at all levels; but bearing in mind the foreign language learning objectives, such materials must not be the dominating resource.

Comparing C1 and B1 levels there seems to be a reciprocal relationship between the use of static and interactive resources, i.e. the more interactive materials there are, the fewer static printable resources are used to support language learning.

Additionally, the use of Moodle as a repository contradicts its development philosophy: namely that the design and development of Moodle is guided by a Social Constructionist view of learning (Moodle, 2011). Moodle used as a repository for digitized print-outs fails to engage learners in a safe environment for practicing language skills other than reading. This further fails to motivate the students through the multimedia component in the e-learning since they are presented with a very narrow view of e-learning. In fact the researcher observed very few follow-ups to the reading resources to engage students in activities, which would otherwise turn into a lot more useful, more meaningful and more effective learning experience for the students.

### *Category: Communication*

The least used category is the *communication*, i.e. interaction between learners and tutors. Some of this may be due to the ‘blended’ nature of the courses. However, Forums and other activities and resources could be used to encourage reflection, collaboration between students and self- and peer-assessment. These, the researcher found, are almost non-existent as a way of learner self-improvement.

### *Category: File uploads (students’ assignments)*

An interesting observation was made at B2 level where the instances of file uploads is the biggest, 201 instances (Table 1). This is expected since the B2 level at NBU is the required passing level for graduation in any major. The comprehensive examination at B2 includes essay writing, which is found to be the major failing component in the written part. However, as a percentage of the total course materials, file uploads in A1 level courses rank highest with 18.90% text file uploads by the students.

### *Category: Interactive activities and multimedia materials*

Most resources are external, though some are teacher-produced. These activities are single instances for individual practice. They are provided by the tutors and directed *at* the learner and offer no opportunity for student contributions or collaboration.

#### *- Learner Autonomy*

The interactive materials in the English courses in the NBU Moodle do not, in the majority, provide independent learning pathways for the students to direct their own learning, which consequently leads to *not* fostering learner autonomy.

Giving learners greater choice over their own learning, both in terms of the content of learning and processes they might employ, would encourage engagement and promote autonomy. As stated in the *Code of practice for the assurance of academic quality and standards in higher education (including e-learning)*, a document issued by The Quality Assurance Agency for Higher Education, “Students should be in a position to appreciate their own responsibilities in terms of responding to requests [...] for participation in individual or group activities that facilitate learning” (2010:62).

If students remain ‘spoon-fed’ by the tutor, or if they are not provided with the opportunity to direct their own, they will be deprived of taking on the responsibility to (continue to) develop as autonomous learners.

### *- Elaboration*

Elaboration, as understood from Reigeluth's *Elaboration Theory* (1999), means teaching students increasingly complex versions of a task. It helps users "select and sequence content in a way that will optimize the attainment of learning goals". It values learner control as "the freedom of the learner to control the selection and sequencing of instructional elements as content, rate, components (instructional-strategy), and cognitive strategies" (p.426).

The activities in the NBU Moodle courses are mostly single instances for individual practice, for example, extra practice on a grammatical structure, or vocabulary. Very few follow-up activities to these have been found. In this respect, the possibility of incrementing the difficulty of instruction, something which Moodle activities easily support, is not exploited. It should be made available to the learners to benefit from a wide range of tasks and activities so they can choose their own learning pathways at a pace they would find suits their learning styles. Additionally, this will help turn the e-learning from a passive into a more active experience.

While Elaboration Theory was not created with e-learning in mind, it does provide explicit guidance for both scope and sequence for developing instruction, which can be used at NBU to structure the delivery of e-learning.

### *- Collaboration*

Student collaboration, student self-assessment and peer-assessment activities in the NBU Moodle courses are almost non-existent.

Numerous research findings worldwide have indicated that the technology-mediated collaborative learning resulted in higher levels of perceived skill development and self-reported learning than the traditional classroom. Furthermore, test grades of groups of students who were in electronic classrooms have been reported statistically higher than those of the groups of students in traditional classrooms. Kearsley and Shneiderman (1999) report on virtual classroom environment that resulted in better mastery of course materials, greater student satisfaction, and a higher level of student-reported learning than traditional classroom experiences.

## **Conclusions**

The study looked into the e-learning materials of blended English language courses in the NBU Moodle in order to judge about the pedagogical uptake of the technology. In the light of the analysis of their design and use in the courses to support language learning,

it is reasonable to conclude that the pedagogical uptake of the Moodle technology is just beginning to take place.

The use of the institutional Moodle is approached from a very traditional view of learning. It is the researcher's observation that faculty have, so far, attempted to accommodate the technology to the practices and processes in a traditional classroom, while exactly the opposite must happen. This is a clear indication that instructional design support is needed. It is especially urgent to focus on aspects such as learner autonomy, sequencing of instruction, promotion of communication and collaboration among students, as well as on pedagogically effective design and development of e-learning materials.

The type of material and the way of using it is indicative of a) the technical skills and b) the pedagogical knowledge of the teacher to support quality language e-learning.

### *Moodle for Communicative Language Teaching*

Stanford (2009:12) identified several features of the Communicative Language Teaching approach that Moodle accommodates:

- "Learner autonomy
- The social nature of learning
- Curricular integration
- Focus on meaning
- Diversity
- Thinking skills
- Alternative assessment
- Teachers as co-learners".

The philosophy of Moodle is grounded in the constructivist and social constructionist approach to education, emphasizing that learners (and not just teachers) can contribute to the educational experience. The observations made in the foreign language courses in the NBU Moodle revealed very little room for student contribution except for essays and other students' writings that are to be submitted as text files and graded by the course tutors.

### *Instructional Design*

There is an identifiable need for instructional design support for the faculty as well as a need for raising the awareness of the pedagogical use of the resources to support quality language learning. The delivery of quality e-learning, however, is dependent as much upon the development of quality e-learning materials as the whole e-learning experience. Thus, instructional design support at NBU should work towards pedagogically grounded course structure, sequencing of activities and multimedia content.

### *Treating e-learning like traditional face-to-face teaching*

Some may be tempted to think that because objectives and content are the same that online learning can be handled just like traditional instruction - that only the delivery methods change. The idea of online learning as simply 'not the classroom' is problematic. An even bigger misconception is that blended learning is the easy, smooth transition from face-to-face to full online learning; that technology is just squeezed in between regular face-to-face sessions. While technically this is true, few are aware that using the two delivery methods alongside throughout a course requires two different ways of thinking about learning as well as different pedagogical approaches to structuring the delivery. E-learning and e-teaching require different media, delivery methods, course design, evaluation methods, and learner-support structures.

### *Student Engagement and Collaboration*

One of the common complaints (shared among academics informally) is that students lack engagement. Engagement is promoted through collaboration among peers and communities of learners. In turn, engagement promotes human interaction in the context of group activities, not individual interaction with an instructional programme. The role of technology is to facilitate such collaboration.

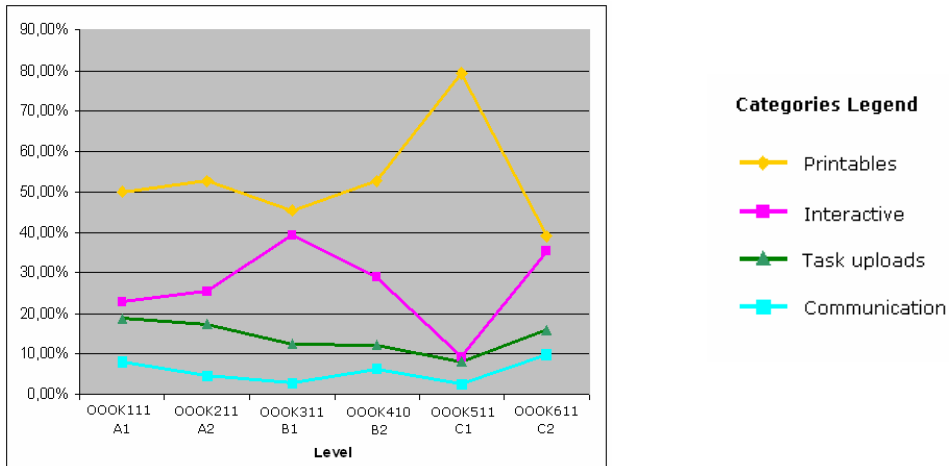
Collaborative methods may be novel for many language learners at NBU and course tutors. Faculty will need guidance and practice in organizing and conducting collaborative activities, particularly in the facilitative role that is needed online.

It is in fact the faculty responsibility to design for, to provide for, and encourage engagement through the use of ICT. Students intuitively find ICT motivating. However, if engagement and collaboration is not built into the course through the course materials and the activities, there will be little student participation and withdrawal from the 'e' in the e-learning.

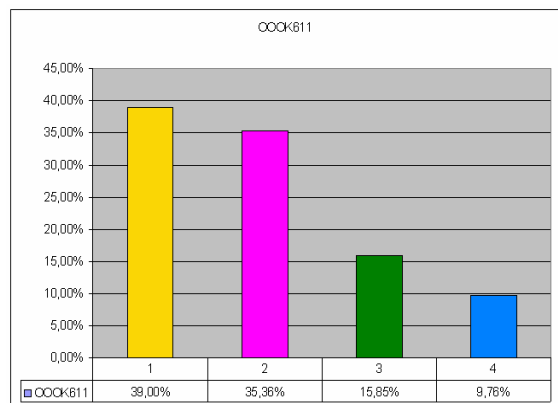
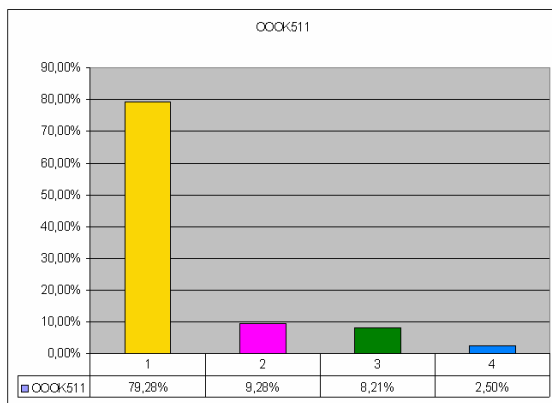
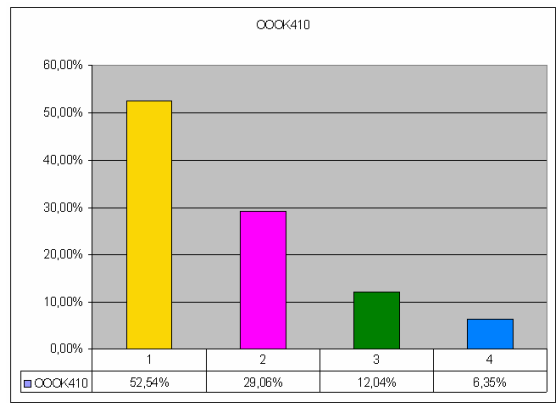
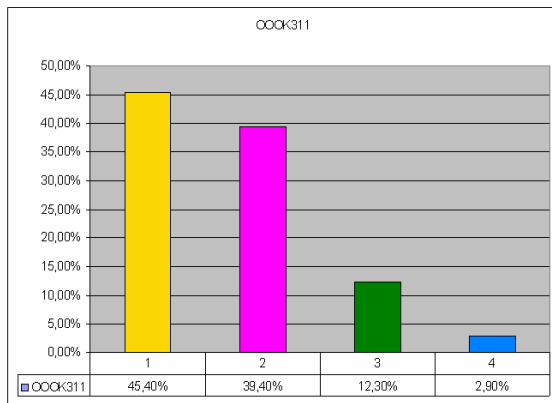
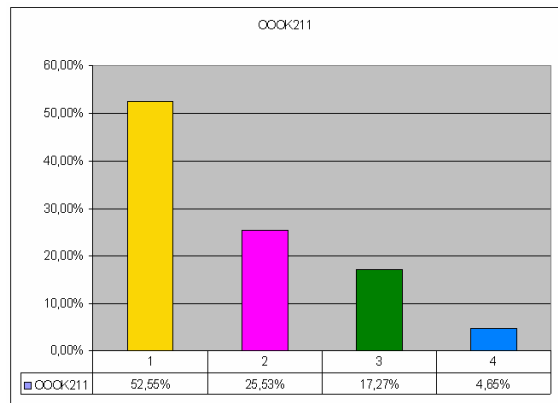
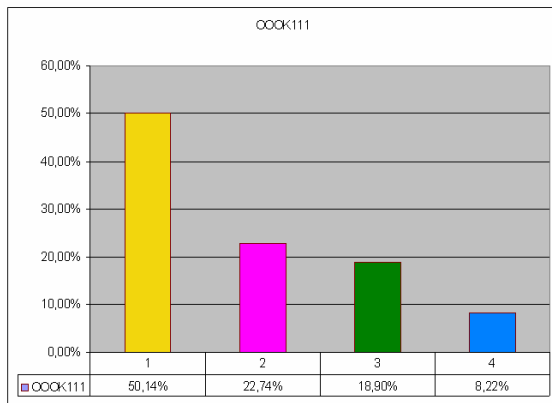
Further research could look into the student factors affecting the e-learning experience at NBU and also at what barriers and limitations are encountered by the faculty in attempting to use the institutional Moodle effectively to support quality language e-learning.

Most of the available technology has already been mastered to a certain extent, but there is a lot of room for improvement. Of greater importance, however, is for instructional design theories to be applied so that NBU keeps up with the modern tendencies in e-learning for languages.

## Appendix



Graph 1 - Trends across levels



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