Ireland & UK Moodlemoot 2012
Conference Publication

Edited by Dr Mark Glynn
Foreword

It is with great pleasure that I share this publication with you, as a follow on to the conference. This publication provides you with a variety of examples on how Moodle is used throughout Ireland and the UK. The authors of each article volunteered to expand upon their conference presentation and share their experience in detail with you. This sharing of experiences and expertise personified the entire conference and this publication is as such an excellent legacy of the conference.

We hope that the conference provided you with opportunity to share experiences and discuss developments and innovations that will enhance the learning experience for your students. We also hope that you found the conference beneficial to your personal and professional practice, that the material presented assists you in meeting the challenges you face in your institution. Finally we hope that the opportunity to meet people and form new networks with colleagues from across the sector will be replicated when you join us at MoodleMoot 2013 in Dublin, February 2013.

Best wishes and happy Moodle-ing,

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Grassroots Moodle
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Abstract
Over the past two decades or so we have witnessed the transition of the web from novelty to ubiquity. The web has become pervasive in our work environments, a necessity we can no longer do without. The emergence of Web 2.0 technologies brought “read/write” access to the web for the masses and thus caused (r)evolutions in fields relying on economics of scarcity.
When we started using Moodle in 2006, many Web 2.0 technologies were already mature, but the use of Moodle was just beginning to gain ground in the field of education, which is generally cautious when experimenting with change.
The aim of this paper is to collect and assess the data and experiences that have been developed over the six years during which Moodle has been in use at our Faculty. A case study methodology was chosen for qualitative investigation into some of the technical and organizational implications of implementing Moodle from a bottom-up approach.
As of this year, the Faculty's Moodle is being used by 55% of our teaching staff and 82% of our students and is managed by one administrator.

Introduction
The Faculty of Arts is the largest faculty at the University of Ljubljana. It accommodates about 7,000 students, 500 teaching and 100 support staff. The Faculty is divided into 21 departments from a wide range of disciplines: Philosophy, Sociology, Pedagogy and Andragogy, Psychology, History, Art History, Archaeology, Ethnology and Cultural Anthropology, Geography, Slovene Language and Literature, Slavonic Languages and Literature, German with Dutch and Swedish, English and American Studies, Romance Languages and Literature, Classical Philology, Comparative Literature and Literary Theory, Comparative and General Linguistics, Musicology, Library and Information Science and Book Studies, African and Asian Studies, Translation.

The initiative to implement an e-learning system began in late 2005, when the idea was put forward by a group of educators who were using a variety of e-learning solutions. At the time, the Faculty did not provide any e-learning service and educators were left to their own ingenuity in terms of finding e-learning solutions. Most were using the services of a colleague's institution, a Moodle installation set-up for managing an international project or other services that were freely available on the Internet. Problems ensued when colleagues...
changed institutions, projects were inevitably completed, or services were either switched off or began to charge fees.

In order to build a more reliable and a more stable solution, these educators formed an initiative to develop an in-house e-learning service. Their first move was to survey the Faculty's departments in order to find other professors who may be interested in an e-learning system and to measure the interest that various departments had for financing such a system. Based on the interest expressed by individual professors and their departments, the Working Group For e-Learning was formed. This group then began negotiations with the Faculty's management in order to obtain necessary funding and to build a workable strategy.

The question of e-learning was one of the main topics covered at the Faculty's management staff retreat in February 2006. During the discussion, experiences from two universities in Italy and the UK were presented and a broad consensus was reached in favour of the necessity for e-learning, with a few cautionary voices warning against the traps that may be inherent in new ways of learning.

At the retreat it was decided that the Faculty would partially fund the initiation of the project by providing funding that was required for the hardware component. The “human” dimension was largely left up in the air and for a substantial amount of time it seemed that administrative support would mainly be accomplished on a volunteer basis, with a vague promise of possible future payment and/or employment.

Luckily, in May of the same year, some funds were found for contracting an administrator. The summer was then spent building and setting up the system and training the first set of users, with a special focus on pilot courses that would run as part of a project that was to provide missing funds. The system went into production in October 2006.
Graph 1: All activities statistics from Moodle logs

Graph 1 depicts the growth and seasonal movements of activities in Moodle throughout the entire time that Moodle has been in use at our Faculty. In November 2011, we reached a peak usage of just over 400,000 individual activities, with an average performance of 109 activities per user. In the month of November 2011, we recorded about 3,700 individual users logging in at an average of 15 times per month per user. During the 2011/12 academic year, we had 1,507 courses and 5,492 active students – 82% of the student population actively used Moodle, as did 275 members (55%) of the teaching staff.

Methodology
As has been stated, this paper is a case study. According to Stake (1995, as cited in Baxter & Jack, 2008), a researcher who has a genuine interest in a case should take an intrinsic case study approach when the interest is to better understand the case. Stake also points out that this approach is taken not because the case represents other cases or because it illustrates a particular trait or problem, but rather, because in its particularity and ordinariness, the case itself is of interest.

As the system administrator, the author of this paper has been directly involved in this case since its beginnings, and hence, to better understand the case was one of the main motivations for this study.

The approach taken for this study is primarily qualitative with a limited amount of quantitative data obtained through the analysis of Moodle log data. The qualitative data was gathered through interactions with and observation of participants as well as through document retrieval and informal interviews that were conducted with members of the teaching staff.

How To’s
Managing a service with almost 6,000 active users is not an easy task, particularly if the entire Moodle stack - from server administration to user support and training - is to be managed by one person alone. Lack of available personnel therefore greatly influenced many of the decisions that were taken and forced us into many concessions throughout the entire implementation process.

User Management
From the start, one of the most important requirements was to put in place a flexible user management and authentication system. In order for it to be as open and to require as little of the administrator’s attention as possible, we chose to use the default email-based self-registration authentication plug-in. In this default setting users themselves create accounts and the educator provides some basic guidance for students at the beginning of the academic year.
At this point, the only element that required the administrator's attention was to assign appropriate roles to educators and to provide assistance to users who encountered problems that were not solvable by Moodle itself. Based on the issues encountered, we have provided clear and simple instructions that are linked from prominent locations on the screen.

The system now has over 17,000 accounts. In order not to clog the system, we delete users who have not been active for more than 3 years. We believe this is a long enough period to cover most of the eventualities of users wanting to return to active use of their accounts and to accessing the data that is associated with them.

This year, we are planning to change Moodle's default authentication plug-in with the recently established Slovenian Educational and Research Federation ArnesAAI (the Slovenian equivalent of the UK federation) and thus, take one step closer to providing our users with one user account that can be used throughout the entire Faculty and University.

In spite of joining the ArnesAAI Federation, we will continue to allow e-mail based self-registration as a way of providing required flexibility in user management (ERASMUS students, project management, other 'non educational' uses).

Support
Introducing a complex and versatile web service such as Moodle into an established institutional setting is bound to cause some techno-angst (Weller, 2011). Approaching the introduction gradually and from a bottom-up approach relieves many of the difficulties that are normally encountered and takes advantage of an already established support network—peer support. Through their networks, students and educators alike seek and offer each other a great amount of support (Glynn, Igbrude & Rushe 2012; Lewin, 2012) and, as a result, surprisingly little is left for the administrator to resolve.

Supporting Students
We generally do not provide students with support unless they report a problem with the actual functionality of Moodle. The main reason is that there are simply too many students to provide for anything more than basic problem solving. Given that about 5,500 student users were active this past academic year, even providing basic problem solving consumes a large amount of the administrator's time, especially in the beginning of the academic year, when students are learning to use the system.

The majority of problems that students report are concerned with user names and forgotten passwords. While Moodle handles most of these cases automatically, there are some cases that require the administrator's intervention. The remaining problems reported by students are predominantly concerned with the educators' misconfiguration of activities, which then cause problems if activities do not work as expected.
Although this approach to student support is mainly motivated by a lack of available personnel, it is also based on the findings of a survey that we conducted during the first semester of the production run. When asking students—especially those who participated in the pilot classes that were required for use of more advanced activities—about problems that they had encountered while working with Moodle, they did not report and major difficulties. The students managed to figure out the inner workings of Moodle either by themselves or with the help of their peers and members of the teaching staff.

Over the past six years, I have had various opportunities to observe students and educators interacting with Moodle. Although educators design and build their own courses, students often manage to get around the course more easily than do their professors and are generally more agile.

Another disincentive to provide support for students is the diversity of courses that are available. In our system, we currently have over 1,500 courses from almost all of the Faculty's departments. Each professor develops his or her own courses and there are no required elements that he or she must use in order to meet a given set of standards.

In recent years, a greater number of educators have begun to use more advanced features of Moodle and students are starting to put pressure on educators who either do not use Moodle at all or who use it more sparingly.

Providing more exhaustive Moodle tutorials might also help to further increase student pressure and we have now begun to consider whether informing students of possibilities available in Moodle might result in an increased use of Moodle's activities by the teaching staff.

**Supporting Teaching Staff**

Due to the "grassroots" method through which we implemented Moodle at our Faculty, lack of educator support is not as substantial an issue as it otherwise could be (Podreka & Lebič, 2010), especially considering the number of educators who currently use the system.

Educators who decide to use Moodle on their own initiative are generally more eager to explore the system and to learn it on their own. This perceived level of autonomy has a positive effect on their level of intrinsic motivation (Sørebø, Halvari, Flaata Gulli & Kristiansen, 2009).

Another strong helping hand is peer support. Members of the teaching staff who are more advanced users can provide excellent assistance and solid advice that is grounded in practical experience.

There is nevertheless a need for more organised training. To provide this, we organise a workshop for the teaching faculty at the beginning of each academic year. If so requested by a group of teachers we also prepare a workshop at any other time.
During the initial implementation stage, we organised beginners' workshops at the start of every semester and after the first year we also began providing workshops for advanced usage. During the last three years we have provided workshops only at the beginning of the academic year because the demand for workshops had steadily declined. We are currently providing three levels of workshops: Beginners, Intermediate and Advanced.

**Diverging from the Original**
Although Moodle developers are doing a great job of providing default settings that make Moodle usable out-of-the-box (Kakasevski, Mihajlov, Arsenovski, Chungurski, 2008), some changes are inevitable.

For reasons already mentioned, we aim to keep our Moodle installation as close to the original as possible. Any change, especially one made to core code, brings a new level of complexity into the system and increases the demand on the administrator's time. Nevertheless, in order to ensure that the system is capable of servicing varying demands of numerous Faculty departments, some changes are inevitable.

**Language**
One of the most demanding changes by far is the language pack. The Slovenian language is a small language, and although Moodle is one of the most used virtual learning environments in the country, many institutions do not mind using it with English interface.

Our Faculty, on the other hand, is a central institution of higher education for teaching and researching the Slovenian language and thus, English interface is not well tolerated. Since we always aim to use the most recent Moodle version, language pack maintenance is usually a large part of our migration procedure.

In version 2.3, the Moodle language pack contains 17,939 language strings that amount to a total of 136,623 words. To put it in another context, the average word count of a Harry Potter series book is 155,000!

**Additional Modules**
The easiest and safest way to extend Moodle's functionality is to install additional modules. Although these modules (mostly) come well tested and are easy to install, their use inevitably brings an increased demand on the administrator's time. The modules may also cause additional problems and even stall migration plans.

All additional modules are installed on the basis of explicit demands made by members of the teaching staff or are chosen in order to provide required functionality. We currently have four additional modules installed: Book, Questionnaire, Hot Potatoes and Group Choice.
Theme
Changes to the Moodle theme are minimal and are limited to adding the Faculty logo and to changing colour schemes so that they match Faculty design guidelines. For the basis of our customizations, we always use Moodle’s default theme, as it guarantees the best compatibility with future changes to Moodle core, modules or other plug-ins.

Moodle Core
Although changing the Moodle’s core code is a means of last resort, we could not avoid this process. We currently maintain two small hacks at the Moodle’s core and our plan for the future is to push these changes upstream. One of the hacks is merely a setting change, which could be exposed through the administrator’s interface. The second is a small hack to show the number of free and occupied positions for individual courses in the course list. Although these hacks are small, they require testing and tweaking at every update and upgrade and thus demand additional attention from the administrator.

Moodle Versions
Our approach to Moodle administration is contrary to the usual administrator’s maxim “don’t fix it if it ain’t broken.”
During each summer academic vacation, we upgrade Moodle to the latest available stable version. We have used this approach since initial set-up in 2006, when we started with version 1.6 and upgraded it, in the following summer, to version 1.8 and another year later, to version 1.9. Because upgrades were made regularly, they were gradual and did not require a lot of the administrator’s effort. Very few users noticed the changes and when they did, they were satisfied with the improvements and with the new features that were introduced.
The next Moodle version on our schedule was version 2.1, which was released on July 1, 2011 (Moodle 2.1 release notes, 2011). This upgrade, was difficult and time consuming. The new version brought major changes to Moodle’s core concept and has caused significant difficulties for the majority of our teaching staff. Thanks to the previously discussed intrinsic motivation of our staff, the changes were engaged in stoically, but nonetheless, the administrator was overwhelmed with support requests during the entire first semester that followed the upgrade.
This summer, our plan is to migrate to version 2.3 as this version brings some interesting new features and, most importantly, solves some of the usability problems that were caused by the previous upgrade. This latest version also puts us back on our original schedule of introducing frequent and gradual changes.
Lessons Learned

If you Build it ... Users will (Actually) Come
Although the introduction of Moodle to our Faculty was initially met with considerable scepticism, the formidable growth of its usage surprised even the greatest optimists from among those who were involved in the initiative. The time for Moodle was apparently ripe at our Faculty and many professors welcomed the possibilities that this system has brought to them. The fact that the system went up and running stable also converted many early sceptics to our side.
This approach was later replicated with a system for electronic magazine publishing. The recipe that we used was almost the same. This initiative began as an issue brought up by a group of professors who wanted to begin publishing a magazine. Because funding was scarce, they considered publishing an electronic version. To satisfy this need, a system was devised that was later able to provide an e-publishing service for the entire Faculty. As in the case of Moodle, this system is now officially supported by the Faculty.

Letting Teachers Discover at Their Own Pace
In their study, Sørebo, Halvari, Flaata Gulli and Kristiansen (2009) have found that teachers' perceived autonomy has a positive impact on their intrinsic motivation towards the use of e-learning. Furthermore, teachers' level of intrinsic motivation has a positive effect on their satisfaction with the use of e-learning technology, and more importantly, has a positive effect on their intention to continue with the use of e-learning technology.
Autonomy in the use of e-learning technologies is therefore prerequisite to the success of a bottom-up approach in implementing a complex system such as Moodle into as heterogeneous institution as is our Faculty.

Do Not Force the “Standards”
From the start, we decided to have no standard layout that courses were required to comply with. No minimum requirements. No obligatory elements. No required activities. Some early adopters thus went on to build complex courses, while others barely scratched the surface of the options that Moodle has to offer. Even now, the majority of teachers predominantly use Moodle as a file repository for their classes, using it to collect student assignments and to provide students with information. The most popular activities are those that elegantly replaced outdated digital methods (such as collecting assignments in Moodle instead of over the e-mail) or that digitally solved an existing problem (such as dividing students into groups in Moodle instead of on lists of paper pasted on notice boards).
For whatever reason, the majority of our teaching staff has decided to engage with Moodle. Their engagement itself “acknowledges that the changes afforded by new technology are not peripheral but fundamental to all aspects of scholarship” (Weller, 2011). In the majority of
cases, progress is slow but considering the number of obstacles that new technologies usually face, as well as the limited amount of institutional support that was provided throughout this project, the results have been nothing short of inspiring.

**Future Plans**

As has been the case so far, future advancements will not be initiated at the Faculty level, but rather, at the level of individual educators and their students. Although we anticipate that progress in numbers will be slower than what we have been used to in the past, our attention will be focused on individual motivated teachers so as to enable and support them in their quest for advancement in the utilization of e-learning technologies.

An attempt will also be made to create a broader inter-departmental online community of teachers that is supported by Moodle itself.

**More Advanced Uses/Users**

Beginning with this academic year, we have selected a few educators who have expressed the wish to engage in more in e-learning and who are either skilful enough to attempt the use of advanced Moodle activities or their courses are representative enough to be a good example of good practice for a wide array of courses that are available at our Faculty.

**Focus Workshops**

In the upcoming academic year we are planning to organize a series of monthly workshops in which we will try to cover the most useful aspects and functionalities that Moodle has to offer.

The main focus of these workshops, besides explaining the theory and technicalities involved, will be on a creative, ‘out of the box’ approach to using Moodle’s activities. We have decided on this approach as a result of having noticed that teachers all too often consider an activities too literally or fail to see their potentialities – i.e. using the forum module as a method of collecting assignments that all participants can see and discuss.

**Video Instructions**

In order to avoid as many basic support requests as possible, we are planning to prepare a set of informative screencast videos. The initial focus will be on covering fundamental Moodle principles and explaining the most problematic as well as the most frequently used aspects of Moodle.

These videos will attempt to enable new and less skilled users to use the system autonomously and to free up the administrator’s time to be able to focus on supporting more advanced usages and users.
Conclusions
Although e-learning is considered to be the correct future direction by a growing number of academic institutions, there is a wide array of exciting activities currently happening in the field of higher education that we do not anticipate our Faculty (or University) will be able to make major investment in during the short term. Although times of shrinking budgets should be an ideal time for (re)considering the use of e-learning technologies, lack of institutional support will continue to be a major influencing factor preventing the wider spread of e-learning technologies.

Quantitatively, we are satisfied with the results that we have achieved thus far. According to the theory of the diffusion of innovations (Rogers, 1962) we have just tipped over the top of the Rogers’ bell curve of adoption and have entered the category of “late majority”, which is characterized by a high degree of scepticism and which will require increased peer pressure to motivate the further adoption of e-learning technologies.

Qualitatively, much remains to be done. We are therefore continuing to evolve our low-budget, bottom-up, grass-roots approach and shifting its focus to enabling and promoting the more advanced use of e-learning technologies.

References
doi:10.5040/9781849666275
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