

# ASSURING THE QUALITY OF THE PRACTICUM IN THE EHEA WITH MOODLE AND GOOGLE DOCS

## *Design of a Tool for Facilitating the Practicum Monitoring*

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Abstract: The introduction of the European Higher Education Area has a methodological impact on most university courses, but in some cases the main change comes from the access of a larger number of students to the courses. Specifically, the Practicum used to be an option for only a few students in most degrees, but after the EHEA its deployment will be much more generalised. In order not to degrade the quality of the Practicum monitoring process, measures should be taken for facilitating the task of Practicum supervisors. In this paper we present the implementation of a software tool designed to this end. A first version of the tool is based on the well-known Moodle e-learning platform. Since we detected some problems due to the coexistence of different versions of Moodle, we introduced other emerging technologies, such as cloud computing, and in particular Google Docs. We show that the combination of Moodle and Google Docs allows an efficient monitoring of the Practicum and helps to guarantee its quality, regardless of the version of Moodle in use.

## 1 INTRODUCTION

The work presented in this paper is part of a wider project developed at Universitat Pompeu Fabra (UPF) aimed at adapting the Practicum to the European Higher Education Area (EHEA).

The definition of Practicum in the context of this work is a course intended to make students put in practise the theory they have learnt, to be developed typically as an internship in the professional environment of a welcoming institution, i.e. a company, a public administration, or any other kind of organisation. The benefits of the Practicum in the learning process have been described in different models (Jaques, Gibbs and Rust, 1993), and in particular in Kolb's (1984) "experiential learning".

At UPF the Practicum system is independent for each of the 12 degrees conducted in its faculties. This represents a challenge for the coordination of the transition to the new EHEA scenario.

The project for adapting the Practicum to the EHEA comprises both a study of the status before the EHEA and a forecast of the changes that will be necessary to adapt the Practicum to the new requirements, mainly student-centred learning and employa-

bility, i.e. training that meets labour market demands.

The greatest impact of the new Practicum system will be a significant increase in the number of students taking this type of course. In most studies at UPF, the Practicum will cease to be an option for a small fraction of the roll and will become a widespread activity, or even mandatory in some degrees. This expansion of the Practicum to the masses should not be detrimental to its quality. In particular, special consideration should be given to the monitoring and assessment of the student's activities during the Practicum.

Clearly, the monitoring of tens or even hundreds of students' professional practices a year by each supervisor should not negatively affect its quality. Our solution is the implementation of Information and Communication Technologies (ICT), which facilitates the task of academic supervisors.

One of the technological measures that can be taken is the use of an e-learning platform for the Practicum management. In our case, the use of Moodle is a natural choice because there is already an institutional platform available at UPF based on Moodle.

The implementation of e-learning technologies based on "the Cloud" is an issue that is currently un-

der development. To the best of our knowledge, there is no conceptual general framework yet. Most of the literature is about cases of study inspired by “trial and error” methodologies, with no bibliographic consolidated literature background.

## 2 THE STARTING POINT: THE PRACTICUM AT UPF BEFORE THE EHEA

At the initial stage of our project, in 2009 we performed an analysis of the status of the Practicum courses in each of the 12 degree programmes offered at UPF. One of the goals of our project is to assess the changes introduced by the EHEA, by carrying out a similar study after the EHEA has been fully deployed, and comparing the outcome of both analyses.

The results of the initial analysis showed a wide disparity of characteristics among the Practicum of the different degrees, in terms of duration of the practices, number of credits assigned, etc. A detailed explanation of these results can be found in Alemany, Perramon and Panadès (2012).

With regard to the monitoring of the practices, we identified four basic models followed at UPF:

- (a) In one of the degrees (Humanities) there was no Practicum at all.
- (b) In other degrees there was a small number of positions available, allowing an intensive monitoring of the students.
- (c) Other degrees offered a higher number of positions. Around 90% of the students in the last term could take a Practicum course. However, the scarce resources available, mainly the limited number of tutors supervising the practices, implied a low intensity monitoring of the Practicum.
- (d) Finally, there were degrees in which the Practicum was an essential part of the students’ comprehensive training. Consequentially, their selection and monitoring were done tightly and thoroughly.

Monitoring Practicum students is a twofold process. On one hand the in-house tutor at the company or external organisation is in charge of the supervision of the student’s day-to-day work. And on the other hand the academic tutor at the university is responsible for periodically overseeing this work and checking that it fulfils its educational objectives.

## 3 HOW THE EHEA IS CHANGING THE PRACTICUM AT UPF

The deployment of the EHEA at UPF started officially with a transitional period in the academic years 2007/08 for some degrees and 2008/09 for the rest, one year before the maximum date set by the Bologna Process (EHEA, 2010). Since the Practicum usually occurs in the fourth year of the studies, 2011/12 marks the start of the bulk of external practices developed in accordance with the EHEA directives.

The results of our work comparing the Practicum at UPF before and after the EHEA will not be available until we repeat the analysis we performed in 2009, but we observe that the four models we identified are converging into just two: model (a), i.e. no Practicum at all, is no longer a model because all degrees have now a Practicum, and models (b) and (c) are becoming the same because the number of students of model (b) degrees is increasing, but the number of tutors is not augmenting equally. Therefore, this leaves us with two Practicum models: one with many students but a low intensity monitoring, and the original model (d) with a tighter monitoring for a large number of students. And in the long term we can anticipate that every Practicum will move to the latter model of high quality monitoring for a high number of students, which is of course the desirable situation.

One significant change that the EHEA is introducing is therefore the extension of the Practicum to the great majority of students. In some cases the Practicum will be mandatory, so that it will have to be taken by 100% of graduating students.

To ensure the quality of the Practicum, a method has to be used to facilitate the tutors’ supervision tasks. Otherwise the job of the tutors might become impractical. And the use of computer tools is of great help to this end.

## 4 A PROPOSAL FOR MONITORING A LARGE NUMBER OF PRACTICES

Part of our project consisted in developing a tool specifically designed for monitoring the Practicum in the new context of the EHEA. In line with the principle that the Practicum is now a subject like any other, and since Moodle is currently the generic platform used at UPF for course administration, we started by implementing a Moodle module for the Practicum.

The main design goal of the system we imple-

mented can be summarised as making the tutors' life easier when monitoring the possibly large number of students they will be in charge of. In particular:

- There should be little or no difference between the assessment of the Practicum and of other courses.
- The tutors' work in reviewing the students' achievements should be as easy and straightforward as possible.

#### 4.1 The Solution based on Moodle

Our Practicum monitoring tool consists of a Moodle module that offers different functionalities to the users depending on their role within the Moodle system.

- Students. They can elaborate periodic reports on their activities, receive reminders or notifications, interact with the tutors, and prepare the final report based on the contents of the periodic reports.
- External tutors. They can read the student's periodic and final reports and the academic tutor's reports, add comments, and write their own reports.
- Academic tutors. This profile has the same functions as the external tutor, and in addition can validate the reports and is responsible for the final assessment of the student.

As with any Moodle course, there is an additional role, the course administrator, who sets the general parameters for the Practicum like the periodicity of the partial reports, e.g. weekly or biweekly, etc.

Depending on the configuration set by the administrator, in each of the periods there will be at least two types of Moodle activities: the student report for that period, and a survey with a number of short questions that the tutors can use to evaluate how the student's activities are fulfilling the Practicum objectives.

Our Practicum course also includes these items:

- A forum for exchanging students' experiences.
- A diary where students can record their personal experiences, e.g. prior to preparing their formal reports, and which is not subject to assessment.
- A glossary where students can add definitions of terms used in their specific Practicum activities.
- A final survey for students to evaluate their overall experience during the Practicum.
- The final report of the Practicum that all students must fill out mandatorily. This will be the basis for the tutors' assessment of the Practicum.

One section of the final report, which we call the summary report, is generated automatically from the periodic reports, and consists of the aggregate of activities done by the student in each period.

Thus it will be possible to know e.g. how many hours the student has spent in each type of activity.

The communication between the Practicum users, i.e. student and tutors, is done through the usual mechanisms provided by the Moodle platform.

After testing our module, the next step was integration into the institutional Moodle system at UPF. At this point, however, we found an obstacle due to the way the Moodle platform is deployed at our university. Some institutions, ours amongst them, use a heavily modified version of Moodle tailored to the singularities of their schooling system. When a new version of the mainstream Moodle is published, resynchronisation of the customised installation with this new version may represent a non-trivial task.

In these cases, updating the Moodle installation is usually deferred until the local changes have been adapted or it has been checked that they do not break the new version of the system. By the time this task is completed, it is possible that a newer major version of Moodle has come out, so that the local system will be constantly lagging behind the mainstream version.

When integrating our Practicum monitoring module into the campus-wide Moodle system at our university, which is based on a 1.9 version of the platform, we found some shortcomings that could not be solved with the specific settings of that installation. Among other problems, we could not collect the results of a set of surveys into a single spreadsheet for easier review, it was not possible to automatically generate a final report from selected parts of the periodic reports, we could not have the comments from both tutors, academic and external, in separate sections of the report, the user associated with the external tutor could not be enrolled in the course with the access rights that we required, and the roles could not be defined more accurately to better suit our needs.

Therefore, we ended up with two versions of our module: one that met our requirements but was installed in a separate platform, and another that was integrated into the corporate Moodle system but lacked some of its intended functionality. The inability to integrate our module into the platform used in the university defeated our initial goal of working with the Practicum in the same way as with any other course.

#### 4.2 The Google Docs Alternative

Given the difficulties explained above, we sought an alternative design based on an emerging technology, generally termed "the Cloud", which is more and more extended in these days, and we focused on a specific implementation such as Google Docs.

The key point that enables the use of this technology is that we can reformulate the Practicum monitoring process as a collaborative document editing process. This may hold true for any course monitoring, but in the case of the Practicum there is a peculiarity due to the involvement of three different actors: the student, the external tutor and the academic tutor.

Indeed, the monitoring can be regarded as the preparation of a series of reports, both in an asynchronous and a synchronous fashion. Asynchronously, part of the documentation is elaborated by the student, another part is written by the tutors separately, and another part consists of comments added by the tutors. When working synchronously, in the equivalent of a face to face monitoring interview, the participants can interact in real time, whether the student with a tutor, or one tutor with the other.

Using a tool like Google Docs, we can benefit from the advantages of cloud computing and, most important, we can solve the problems we faced when integrating our module into the old-versioned Moodle system of our university. Some of the benefits of using Google Docs include file format transparency, flexible access control, real-time concurrent editing, ubiquitous access, reliability, revision history, and integration with spreadsheets.

By using these features, we can overcome the problems due to an outdated version of Moodle, described in subsection 4.1. For example, surveys can be redefined as spreadsheets and exported to a single file to facilitate the tutors' review tasks, a final report can now be generated automatically from the parts of the periodic reports marked to this end, the comments made by each tutor to the reports can be clearly distinguished, and the problems with role assignments within Moodle are solved with the access rights and document sharing functionalities of Google Docs.

Starting with version 2.1 of Moodle, a plugin called Moodle-Google is available for integrating Google Docs, and in general various applications from the Google Apps suite, into a Moodle course (Moodle, 2011). This plugin has been backported and adapted to Moodle 2.0 as well. It allows access to a Google Apps account from Moodle, and the use of the Google applications available to that account.

The main problem we had when working with the university institutional Moodle is that it is a pre-2.0 version of the platform, in which installation of the Moodle-Google plugin is rather complicated. Thus, instead of using that plugin we simply work with web links pointing to the Google Docs documents created for editing the assessment reports.

Although this solution is not as seamlessly integrated into Moodle as it would be with the Moodle-

Google plugin, it fulfils the initial requirements defined for the Practicum monitoring process and works reasonably well with any version of Moodle.

## 5 CONCLUSIONS

In this paper we have presented an implementation of a Practicum monitoring system based on well-known technological solutions such as Moodle and Google Docs, with a view to accommodating the large number of students that will likely be enrolled in the Practicum due to the deployment of the EHEA.

We have described the features of the Practicum at UPF that make it require a specific tool, but it can be generalisable to other tutored practice systems.

Some difficulties arose when our tool was to be integrated into the campus-wide Moodle system at UPF. The problems came from the rigidity of this system, which provides for the management of courses in all majors, and thus incorporates many adaptations to the local teaching system. It is therefore not easy to update when new versions of Moodle are released, and we found that the version currently used at our university is too old for the module we implemented.

For this reason we have developed an alternative solution based on Google Docs. We have shown how the problems derived from the use of an old version of Moodle can be overcome with Google Docs, based on the cloud computing technology. And although the access to the Google Docs documents is not as fully integrated into old versions of Moodle as it can be with newer versions, it nevertheless meets satisfactorily the goals we had established for the assessment of the Practicum of a large number of students, without degrading the quality of the monitoring.

## REFERENCES

- Alemany, J., Perramon, X., and Panadès, L. (2012). The Practicum after EHEA. A case study. Submitted to 7th International Congress on University Teaching and Innovation (CIDUI 2012).
- EHEA (2010). European Higher Education Area official website. Retrieved Feb. 13, 2012, from <http://www.ehea.info/>.
- Jaques, D., Gibbs, G., and Rust, C. (1993). *Designing and Evaluating Courses*. Educational Methods Unit, Oxford Brookes University, Oxford.
- Kolb, D. A. (1984). *Experiential Learning*. Prentice Hall Inc., New Jersey.
- Moodle (2011). Google Apps integration – MoodleDocs. Retrieved Feb. 13, 2012, from [http://docs.moodle.org/21/en/Google\\_Apps\\_Integration](http://docs.moodle.org/21/en/Google_Apps_Integration).