EFFECTIVENESS OF TEACHING METHODS IN INVOLVING STUDENTS: PRACTICAL DIGITAL EXPERIENCES AND GAMIFICATION

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Abstract

The Bologna Process was a European initiative to bring about transparency and compatibility of higher education across Europe. It involved the establishment of a European Higher Education Area (EHEA) by 2010. Although much has been said about the virtues and drawbacks of this profound reform of the entire academic ecosystem, there’s still a feature which has deserved little attention: the involvement of students in their entire process of teaching and learning at college stage. The objective of this study is to investigate the differential effectiveness of teaching methods on students’ academic performance.

Research shows that Quality teaching tends necessarily to be student-centred. It aims to help most -if not all- students learning. Therefore, focus should not only be on pedagogical skills, but rather on the available tools in the teaching-learning process, as well as the way teenagers think and conduct themselves nowadays. There is a great need of new teaching methods and pedagogies to meet these circumstances. Hence, we can say that there is also a need of change in the learner and teachers’ means of interaction.

This paper addresses the role of professors in this process, a process requires a whole shift in the way teaching has traditionally been understood. Based upon our current experience in Centro Universitario Villanueva, we present a comprehensive research-driven perspective on what we think digital technologies and gamification can achieve in Law studies. Specifically, and given the teacher plays a vital role in this scenario, we show that a new “teaching style” can contribute to academic excellence in three ways: 1) by enhancing students’ attention in class as well as motivating their interest for the topics discussed; 2) by making the experience of learning something that, if it may be not be funny, doesn’t necessarily have to be boring; 3) by explaining why, given the world is changing, and so are our students, teachers need to be technology savvies as well, in order to meet new global emerging demands.

Keywords: Higher education; digital environment; learning enhancing; gamification; students’ engagement; involvement; teaching techniques.

1 INTRODUCTION

Widespread use of new technologies, such as the Internet, social networks and mobile phones, affects the processes of education at universities. Technology has an important impact on education, making possible both a better communication and the implementation of the newest information systems, useful for enhancing learning and encouraging student’s involvement and engagement.

As we all know, the so-called “Bologna-process” is paying close attention to many important things regarding High School education, such as skills, competences, new research trends, ICTs, accreditation and quality assurance, etc. Those issues are taking much of the attention of scholars and whoever is devoting efforts to research about them, and indeed they deserve it. However —to our understanding— both the academic community and the public entities entitled to the implementation of the European Higher Education Area (EHEA) are overlooking at least two crucial issues: who today’s students learn, and how professors achieve student’s engagement in their classes. Given they are closely related, our presentation to this EDULEARN 2019 conference is intended to cover both.

It was probably the reading of Richard Light’s seminal work1 that brought these issues to may attention, since I was considering that although the students are to play a key role in the new EHEA, and indeed they are supposed to be placed at the very center of the teaching-learning process, however, no schemes are developed yet to hear them, and –whenever necessary or convenient- take their opinions into account.

The results presented after his survey was conducted are, to say the least, counter-intuitive, and to some point somehow astonishing. For example, we learn that students are more enthusiastic about
learning in courses that have some relevance to their personal lives or interests outside the classroom, instead of just fulfilling a graduation requirement. Or that they learn more when they collaborate on challenging homework rather than performing their assigned tasks individually. To my understanding, they also get more involved in a given task when it somehow deals with the world in which they are born, and the one they dwell more familiarly: the digital ecosystem. We address this topic in Section 2 of this paper.

We address in Section 3 the other topic, closely linked to the previous one: how can a professor achieve a maximum of the students’ involvement in class? Although much has been said about quality in research, little—in anything—has been written about what makes a class, a team-work, a group discussion or a lecture given by a professor a unique experience. And how to deal with an almost universally perceived “apathy” in class. Basically, the point here is, simply, what makes a great teacher great?

Drawing on the experiences and techniques of several college and university professors who are commonly known as “good professors”, the short answer it’s not what teachers do, it’s what they understand. Lesson plans and lecture notes matter less than the special way teachers comprehend the subject and value human learning. It doesn’t matter whether they’re historians or physicists, or whether they teach in Harvard or somewhere else, the best teachers know their subjects inside and out. But they also know how to engage and challenge students and to provoke impassioned responses. Most of all, they believe two things fervently: that teaching matters and that students can learn. And, accordingly, digital environment can be used to enhance learning, to make subjects, classes, and even exams, more “friendly” to our today students.

Finally, in Section 4 of this paper we offer some conclusions on the issues discussed above, and what we consider most interesting of the topics covered in this paper: students’ perception.

2 DIGITALIZATION IN HIGHER EDUCATION

To my understanding, much of the debate regarding digitalization in education has been referred to primary and secondary classes, but not to higher education. We are now going to address that specific issue, since we firmly believe that the digital environment is something “natural” to our today’s students, the so-called “digital natives”, so using teaching techniques that accommodate digital tools enhance their attention. Also, given the internet is their day-to-day ecosystem, as shown in Figure 1, why not transform it for educational purposes?

![Figure 1. Frequency of Internet use by the Z generation](image)

Of course, what we are going to show here goes beyond the mere transformation from the ‘Physical Space’ to the ‘Digital Sphere’: such goal has been, up to date, mostly achieved by those universities who have understood the importance of this revolution, and have been able to devote the corresponding resources to it. What we are proposing, as some people in High-Tech industries have already noted, is a totally new approach to the way in which professors teach, and accordingly, in which higher education students learn.
It is well known by now that technology continually disrupts almost every area of our lives, resulting in constant shifts across all segments of our society. The education sector is no exception. In fact, the nature of its target audience—mostly (although by no means all) young and highly connected—means that the sector must adapt to accommodate their expectations. Most students have grown up online and will expect the same levels of technology in their learning environments as they experience in their day-to-day lives. If we don’t provide that sort of environment, we fail.

Today’s students rely on permanent access to the network and resources, wherever they are on or off campus; why not use it for a deeper and more flexible learning experience? Because the opposite is also true: traditional rigid modes of classroom instruction are unlikely to inspire students whose online life outside the classroom is dynamic and evolutionary. This is what professor Light realized, about “connecting” their daily lives with the classes. That is why we are dealing in this paper with creating an effective digital learning environment.

Lack of opportunity is one major threat, because limited or no access to technology will result in a greater divide between certain categories of students. At the same time, without the technology that many young people take for granted in their everyday lives, student experience will undoubtedly suffer, which would lead to less engagement in the courses they attend and lower retention levels.

As all recent studies show—and this is especially crucial in my field, Law studies—students’ potential future success and their insertion in the labor market could be severely compromised by lack of technical proficiency. It is now widely accepted that law firms want graduates who are adept at using technology to connect, communicate, and collaborate with workplace technology. This mismatch between potential employer expectations and how universities prepare students for the future workforce has been well documented in academic studies and continues to be an issue.

What we need, then, is to create next-generation learning environments that effectively prepare students for the future by offering access to the tools they need to prepare for the workplace while also providing a fulfilling learning experience.

Digital technology can supply the framework to support new learning approaches that engage students. From video-recorded lectures to online access to course materials, students can “attend” classes anywhere, anytime, via any device. For both students and teachers, ubiquitous connectivity facilitates greater collaboration, enabling people to develop increasingly connected communities in their chosen fields. Being more available to students can also empower teachers to deliver more innovative, exciting lectures, whether face-to-face or online, while offering more personalized feedback and mentoring. Yet, I am not going to deal with e-learning here, rather, with a new broader concept: d-learning, digital learning, using all sort of available schemes.

Effective digital transformation isn’t just about technology, though. It requires a willingness to adopt technology in new ways, beyond administrative process. It must be continual and evolutionary in order to enhance teaching and learning, support business processes and improve efficiency. It also necessitates collaborative working; vision and leadership; culture; process and methodology—and the technology itself.

What we propose in this paper is transforming classes, personal study, and even tests or exams, using internet, digital technologies and students’ devices (smartphones, laptops, tablets) to increase their engagement.

3 SOME PRACTICAL EXPERIENCES: GAMIFICATION, LINKEDIN & KAHOOT!

Given all the abovesaid considerations on the importance of digital transformation in higher education, and the crucial role it has in learning, let us know move on to some practical experiences that have proven useful and successful in implementing the goals of enhancing student’s engagement in the courses they take.

The starting point is ‘gamification’ (do not forget we are dealing with millennials here), which we address in section 3.1. we move then to a simple way to connect what we see in class with their constant and the ubiquity of their internet use: LinkedIn debate groups, covered in section 3.2. Finally, the use of Kahoot! is illustrated in section 3.3.
3.1 Gamification

In recent years, 'gamification' has become a hot topic in higher education. Gamification refers to using technological innovations to 'gamify' learning by borrowing aspects of games, such as scoreboards, competition, rewards, and badges. The idea behind gamification is that it will increase student learning by engaging them more. This issue has been broadly analyzed, there is no room in this paper to address its full and rich implication in the teaching-learning process. I will just make some references to major contributions in the academic literature\(^4\), and to my humble own experience in this field.

Certainly, if there is something in which all the experts who have worked in this issue is that gamification in higher education -as well as in other fields of the teaching / learning process- enhances motivation\(^5\), engagement\(^6\) and allows for a more intense interaction\(^7\) between students. All the literature we have examined suggests that gamified learning interventions increase student engagement and enhance learning.

Of course, those findings are of practical interest to teaching and learning practitioners working in a range of educational contexts, and at all levels of education, but especially in higher education, who wish -as we certainly do- to increase student engagement and enhance learning.

Whereas there are many ways to characterize the concept, for our aims in this paper gamification is defined as "the use of game design elements in a nongame context"\(^8\). While gamification is not a new concept, new dynamics are unfolding that may cause more businesses, educators, and librarians to consider the use of game-like elements into future endeavors. In addition to more generation Y or millennials entering higher education and the workplace, there has been a significant acceptance of routinely using smartphones, laptops and tablets in classroom, so as the Caesar said so many centuries ago, if you can't defeat your enemy… just join it!

Because the task is not only gamification in itself -nothing new under the sun- but to do it in this digital environment. With proper integration of gamification in the field of e-learning into higher education, a positive impact on the learning process can be achieved, such as higher satisfaction, motivation and greater engagement of students. The importance of clearly defined objectives, rules, techniques and mechanisms of gamification that affect the dynamics of the teaching / learning process is also a topic which has been profoundly covered in the academic literature\(^9\).

Thus, properly developed this digital learning which uses gamification can increase satisfaction, engagement, effectiveness and efficiency of students. Right combination of digital means, gamification and balanced tasks and skills can lead students into a higher performance both in class and in their study and comprehension.

3.2 Linkedin debate groups

One of the most successful -and, by all means, cheap, no investment in developing a digital platform is required- way of enhancing students' involvement in the courses they take at university is simply using something fully connected to their day-to-day life: social networks.

Although there are already some experiments using Facebook or Instagram, those are to my understanding too “personal”, more belonging to the private sphere of the students, quite far from the necessary academic formality. So, I prefer LinkedIn, that provides a quite more “professional” approach, and allows to fulfill the tasks required for its use for academic purposes.

The experience I’ve developed these last years is simple, yet quite effective. Part of the grades for the topic I teach -Economic analysis and competition law- are achieved by discussing news and all sort of issues I launch through a debate group in LinkedIn.
Once they are familiar with the platform, it is mandatory that each student propose a discussion topic, which others should also comment and criticize. The results are highly satisfactory, since all the group get immediately engaged in the topics covered in the course, keep their attention, to the point that even in their homes, while they are out of class, and of course at any time in the week, they are somehow thinking about it, looking for news in the media in order to upload the debate, and, finally, it also encourages peer-to-peer discussion and constructive and enriching debates among them.
3.3 Class tests by Kahoot!

Finally, and to sum up most of the considerations we have presented in this paper, we can't provide a better practical experience of how gamification meets digital tools to achieve students' involvement in class than with the tests run by means of Kahoot!

This basic tool it is quite well known by now, and I think most professors nowadays\textsuperscript{10} use it in order to dynamize their classes, and introduce healthy competition between students, given the grades they obtain not only depends on knowing the correct answer to the questions posed, but also in answering faster than their colleagues. To avoid excessive competition and encourage team-building, I always "play" the game by groups, because its funnier, and develops other skills within the groups and in the classroom as a whole.

![Simplified flow diagram of the Kahoot! application.](image)

Games typically allow players to restart or play again, making mistakes recoverable. This freedom to fail allows students to experiment without fear and increases student engagement. Even though this is still a test, there is room enough -without lack of academic seriousness and exigency- for this sort of fun.
Again, the results of this simple technique are astounding: in clear opposition to the conventional way of doing exams or tests (each student by him or herself, with a paper and pencil, in silence, and anyone knows how the rest is performing) the Kahoot! tests allow a wide range of achievements, in terms of student involvement:

- They do the test with their laptop or smartphone, so the “interface” with the questions and answers is fully familiar with their usual digital environment;
- They get instant reward for the answer, which is something also expected for the so-called “millennials”;
- They get automatic ranking in relation to their classmates, so it encourages both the ones who are performing well to keep ahead and those who stay behind to increase the effort;
- It allows me -the professor- to instantly show the correct answer, and explain why it is so, and ask those who have failed if they understand the reason;
- Finally, the dynamic in itself is simple, quick, and allows for a quite dose of merriment and “sportive” competition, and surely all these features make the learning experience (and something always usually considered “scary”, a test or examination) somehow enjoyable.

We introduced this paper stating that a professor plays a vital role within the classroom by delivering the specific planned content which is a part of curriculum for a specific grade. It depends on him or her to plan it out and use effective strategies for learning enhancing and getting students involved. Understanding needs and interests of the digital students of today is as simple as using such an easy tool as Kahoot!

4 CONCLUSIONS

To some extent, I have already said the conclusions I have drawn from the elaboration of this paper, based on the academic literature and my personal experience in classroom as a Commercial Law Professor at Centro Universitario Villanueva.

I think that the best way to sum up all the things I’ve tried to show in this paper is simply by reflecting my students’ perception of how this digitalization of my classes and the introduction of gamification enhances learning and motivation. As stated in the introduction, if the aim off all these efforts is to increase engagement of the students, the best way to ascertain whether the goal is achieved is asking them. This is what they have answered (of course, on an anonymous-based questionnaire):
“I think the way the classes were driven has contributed to a better understanding of the issues at stake. I want to say also that the classes have been very participative and engaging, and that suits me, as well as how everything we look at in class is connected with real and practical life.”

“I consider very interesting the way in which this subject has been imparted and that the professor does not merely explain the materials previously given to us but in addition to it he shows the connection between them and real and practical issues (…)”. 

“I consider very interesting not only the content but also the way of giving the classes with the combination of theory and practice. They achieve that we learn and also retain the concepts explained. It is very important also the application to real life situations”. 

“The classes have been enjoyable and amusing. Also, the way of giving the classes has helped a lot in visualizing the concepts explained so we could better understand them”. 

“The subject of Commercial Law, which in my opinion was a boring thing, by the way of how the classes have been been; I have totally changed my mind. The content has been great, and over all the classes. Thanks to the continuous interaction between the professor and the students, everything was far more entertaining and at the same time interesting”. 

“I have to admit that although this subject is not the one I preferred in the beginning, the way in which the classes have been given, making all of us participate, and doing it in a very dynamic way, turns a supposedly boring subject as commercial law into something interesting and even amusing (…)”. 

REFERENCES


