

ASSESSMENT IN BOLOGNA CONTEXT FROM THE TEACHING PERSPECTIVE, SIMILARITIES AND DIFFERENCES BETWEEN DISCIPLINES

Evaluación en el contexto de Bolonia desde la perspectiva docente, semejanzas y
diferencias entre disciplinas

Avaliação no contexto de Bolonha, a partir da perspectiva dos professores, semelhanças
e diferenças entre disciplinas

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Abstract

In higher education, assessment is especially significant due to the high level of autonomy and self-regulation that is assumed in the students at this stage. While there is a bulk of research on which assessment evidences are used in higher education, research on how university professors design these evidences is lacking. Using a mixed method technique, we analyzed the assessment methodologies used in three different degrees (Mathematics, Medicine and Sport Sciences), and the design process followed by the teachers in each degree. We found important differences in the assessment methodologies used and the approaches to the assessment design in the degrees. This study shows the way in which teachers of different degrees modified their assessment methods during the Bologna process, as well as the factors that influenced them throughout the process.

Keywords: *Higher education; assessment instruments; assessment design; teachers' perspective; disciplinary thinking*

Resumen

En educación superior, la evaluación es especialmente relevante dado el alto nivel de autonomía y autorregulación que se asume de los estudiantes de esta etapa. Si bien hay

amplia literatura acerca de las evidencias de evaluación empleadas en educación superior, el modo en que los docentes diseñan esas evidencias debe explorarse en más detalle. Usando una metodología mixta, analizamos las metodologías de evaluación de tres grados diferentes (Matemáticas, Medicina y Ciencias del Deporte) y el proceso de diseño seguido por los docentes en cada uno de ellos. Encontramos diferencias significativas en las metodologías y aproximaciones a la evaluación de cada uno de los grados. Este estudio muestra el modo en que los docentes de diferentes grados modificaron sus métodos de evaluación durante el proceso Bolonia, así como los factores que les influyeron a lo largo del proceso.

Palabras clave: *Educación superior; instrumentos de evaluación; diseño de evaluación; perspectiva docente; pensamiento disciplinario*

Resumo

No ensino superior, a avaliação é especialmente relevante, dado o alto nível de autonomia e autorregulação que se assume que os alunos têm nesta etapa. Embora haja vasta literatura sobre as evidências da avaliação usada no ensino superior, a forma como os professores desenham essas evidências deve ser explorada em mais detalhe. Utilizando uma metodologia mista, analisamos as metodologias de avaliação de três Licenciaturas diferentes (Matemática, Medicina e Ciências do Desporto) e o processo de desenho seguido pelos professores em cada uma delas. Encontramos diferenças significativas nas metodologias e abordagens utilizadas na avaliação de cada um das Licenciaturas. Este estudo mostra o modo como os professores de diferentes cursos modificaram os seus métodos de avaliação durante o processo de Bolonha, assim como os fatores que os influenciaram ao longo do processo.

Palavras-chave: *Educação superior; instrumentos de avaliação; desenho de avaliação; perspectiva do professor; pensamento disciplinar*

1. Introduction

Authors as Bearman et al. (2017) mention the importance of the so-called “impetus for change” as a starting point for any change in the assessment methods. The Bologna process can be conceived as a country-level impetus for change, which encouraged the redesign of the practices at all Spanish universities. Recent studies show how this process has favoured the diversity of assessment methods in Spanish higher education (Panadero

et al., 2019). However, the empiric data about how faculties and teachers in different fields have experienced this process can still be expanded.

There is not much literature that explores the way teachers design their assessment methods. However, as discussed in Bearman et al. (2017), some previous works identify certain factors that may affect teachers in this process. These factors include: the tension between summative and formative purposes of assessment (Meyer et al. 2010); the constrains of administrative requirements (Meyer et al. 2010; Norton et al. 2005); or the influence of the specific academic field (e.g. mathematics) on how assessment is implemented (Norton et al. 2005).

However, the role that disciplinary thinking can have in the design of assessment methods has not been sufficiently explored (Bearman et al., 2017; Norton et al., 2013; Carless, 2015). To shed light on this topic is the main aim of our study.

- RQ 1: What are the differences in the assessment methodologies performed in each of the degrees (Sport sciences, Medicine and Mathematics)?
- RQ 2: How do teachers in each degree design their assessment methods?

2. Method

All the syllabi of the three degrees from a university in Madrid were analysed in order to get data about the assessment evidences used: Sport Sciences (N = 57), Medicine (N = 81) and Mathematics (N = 39). We chose these degrees following Neumann et al. (2002) categorization: soft-applied (Sport Sciences), mixed (Medicine) and hard-pure (Mathematics).

Interviews with 25 participants are being collected, chosen according to the characteristics of their assessment methodologies reported in the syllabus (6 interviews have been completed at this time). The interview prompt is an adapted and translated version of the one used by Bearman et al. (2017). This prompt collect data about the teacher's training and experience, the development process of their assessment methodologies and the possible factors affecting the assessment design.

3. Results and discussion

Figures below show data about the total percentage of the students' final grade associated to each assessment evidence. As shown in Figure 1, the assessment in the Sports Sciences is relatively balanced among the different evidences. There is a high frequency of assignments and practices, especially in the first year. The use of the final exam is also

relatively frequent, although it tends to assume little weight in the final grades of the students (44.86% on average).

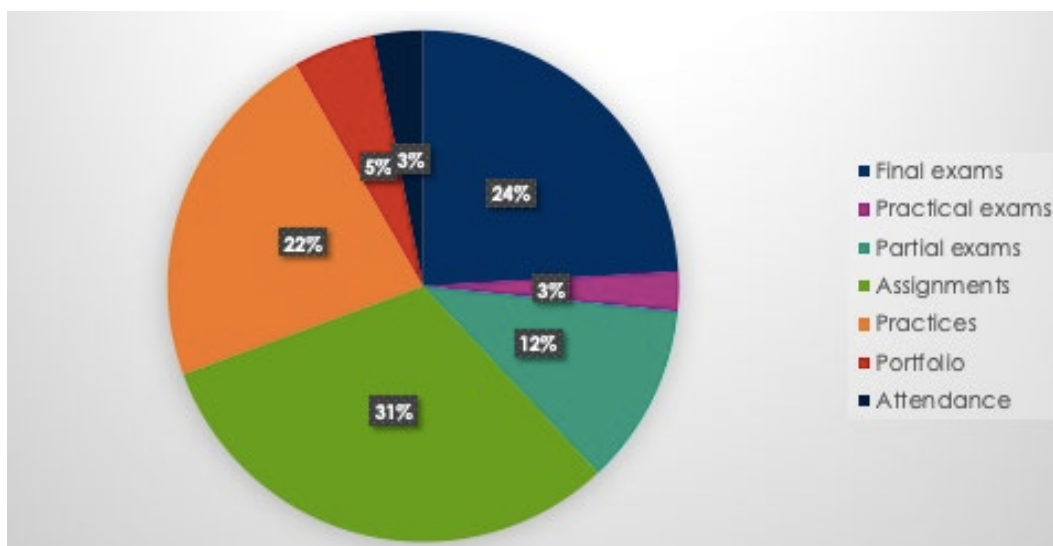


Figure 1. Percentage of the total grades obtained through each assessment evidence, Degree in Sports Sciences.

In the degree in Medicine, on the contrary, there is a high use of final exam, which it is weighted more than 50% of the final grade (Figure 2). The remaining percentage, however, is balanced among the other assessment evidences, highlighting the use of practices (13%) and partial exams (11%).

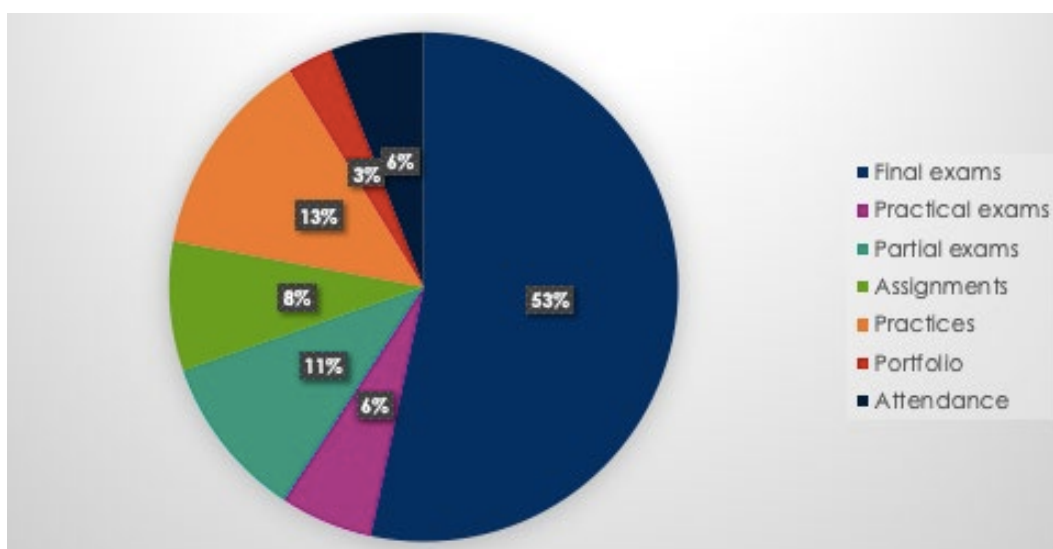


Figure 2. Percentage of the total grades obtained through each assessment evidence, Degree in Medicine.

In the case of the degree in Mathematics (Figure 3), a total predominance of both final (63%) and partial (26%) exams is observed. It should be noted that these two evidences

are the only ones that are used in the first three academic years. Only in the last year there is a marginal presence of practices and assignments.

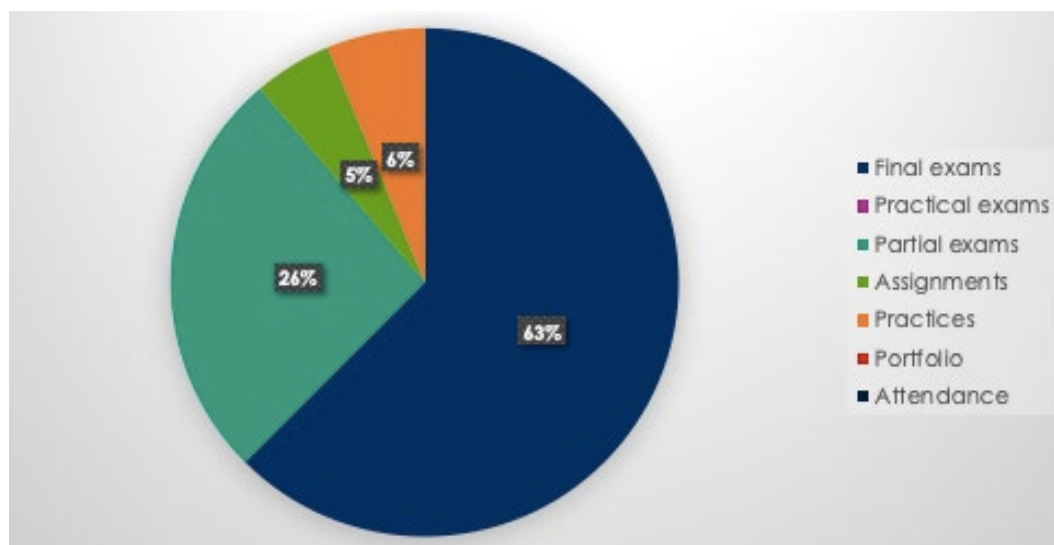


Figure 3. Percentage of the total grades obtained through each assessment evidence, Degree in Mathematics.

The teachers' responses collected at this moment show the influence that the Bologna process had on their assessment methods, signalling it as an "impetus for change" that, in all three degrees, forced teachers to rethink their methodologies. However, this redesign was conceived differently in each degree, which may explain many of the differences in the results found so far.

In the degree in Sports Sciences, the assessment design is made from an individual perspective, and each teacher has pedagogical freedom to design it according to their instructional goals and style. This freedom, together with the extensive pedagogical training of teachers of this degree, have led to a redesign of assessment methods based on a long reflection process that includes empirical evidence and the influence of their more experienced colleagues.

In the degree in Medicine the assessment design is more coordinated, but still presents different ways of assessing depending on the subject. However, unlike sports sciences, a single assessment methodology is established per subject, which forces all different professors participating in each subject to reach an agreement.

Lastly, in the degree in Mathematics, the situation is completely different. Teachers rotate subjects every three years. Given the workload that would imply if they were forced to design their methodologies from scratch, the design of the assessment methods was

agreed at a faculty level, which causes that all subjects are assessed in the same way, with few exceptions.

4. Conclusions

These results show the influence of academic fields regarding their assessment methodologies, both in the type of evidences used and in the weight of each one in the final grade. The teachers interviewed so far have provided answers that can help understand the way assessment methodologies are designed in each faculty. At this moment, teachers have mentioned many factors to consider when designing their assessment methods, which are also different in each degree (previous training, internal regulation, time management or student ratio). It should be noted that many of the factors mentioned by teachers fit in with those obtained in previous studies (Watkins et al., 2005; Bearman et al., 2017). However, although the assessment methods are totally different in each degree, these differences do not seem to be the effect of disciplinary thinking, contrary to what it was supposed (Norton et al., 2013) but based on the contextual requirements.

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