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Inclusion and Wellbeing for the Data Society

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Using a Student Response System (SRS) to fostering learning: analysis of different types of questioning

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Abstract

In recent times, also following the pandemic emergency period, many universities have moved towards a process of rethinking teaching practices, offering stimuli and support to the teachers in testing new tools and methodologies, especially towards hybrid solutions. Particular attention is paid to digital learning tools that can encourage participation and interaction by students, thus overcoming transmissive approaches. This contribution focuses on the didactic experimentation of a Student Response System, conducted at the University of Florence in the a.y. 2020/2021 and 2021/2022, where 10 teachers from different disciplinary areas and about 300 students were involved. The didactic and participatory potential of this tool was investigated with a view to formative assessment, distinguishing four possible models of use, characterized by different timing, types of questions and purposes. Findings provided by professor experience and a survey among students show the positive value of this tool, which in its simplicity still manages to stimulate student involvement, with possible effects on attention, motivation and learning.

Keywords: Student Response System, formative assessment, feedback, hybrid teaching, Wooclap.

Introduction

The continuation of the pandemic situation has stimulated university institutions to rethink teaching practices and to experiment with hybrid or distance learning forms, also for the following academic years (Carretero Gomez et al., 2021; Salmi, 2020). Therefore, many universities have supported their teachers, both with the expansion of the technological infrastructures available, and with training programs on new tools and methodologies suitable for facing the renewed challenges of university teaching (Cirlan & Loukkola, 2021).

Following this line of action, in September 2020 the University of Florence (Unifi) carried out a comparison of the student response system tools available on the market, and subscribed to an annual license with Wooclap, the only tool that guaranteed integration as a plugin in the Moodle platform. Integration with the institutional platform, in addition to being practically useful, was also a prerogative set by the University guidelines, which aimed to identify Moodle as the fulcrum of all online teaching activities in the recovery and hybrid teaching phase.

As known, the common feature of all student response systems is that they allow the teacher to ask questions in real time to their students and immediately view the results: this dynamic allows students to be involved, even in large classes, and to provide them feedback on any incorrect answers, with possible educational implications (Kay & LeSage, 2009; Wood & Shirazi, 2020). With respect to this basic, simple and traditional mechanism, some authors have wanted to explore the didactic value of specific types of questions, of the moment or of the method of administration (Lantz & Stawiski, 2014; Mayer et al., 2009). At Unifi, the introduction of the new tool was accompanied by training meetings aimed at teachers, in which both the technical functioning and the possible educational uses were presented. In particular, in continuity with previous works (Ranieri et al., 2018), the authors have outlined 4 possible models for questioning with Wooclap:

1. Activation question: administered at the beginning of a lesson in which a new topic is presented, aimed at activating pre-knowledge and making students curious. Does not assign score. This can be a poll or word cloud question;
2. Immediate feedback: administered at the end of the expository part of the lesson, aimed at verifying understanding of the fundamental concepts. Use closed-ended questions, such as quizzes or correspondence, to reveal any errors;
3. In-depth question: starting from a stimulus (case study, exercise, example of concrete application, etc.), one or more open or closed questions are proposed to students to stimulate reflection and in-depth analysis. Of the question types in Wooclap, the brainstorming question or others can be used;
4. Final quiz question: administered at the end of the lesson to verify the level of preparation achieved and carry out any revision or corrective interventions. Typically, it can be done with 4/6 multiple-choice questions in a short time: it also includes the application of the challenge mode, with which after each question the ranking of the participants is presented based on the score achieved.

Once the training phase was completed, a didactic experimentation was launched, aimed precisely at validating the use of this tool from a formative assessment perspective, with the intention of gathering the point of view of teachers and students on the 4 models of use and their educational effects. The experimentation was carried out over the academic years 2020/2021 and 2021/2022 and involved 11 courses in different subject areas. To collect the teachers' opinion, a narrative tool was used, to be compiled following each lesson in which the use of Wooclap was experimented: in total, 42 logbooks were collected, which were subjected to thematic analysis. To survey the students' point of view, an online questionnaire was used which included a series of closed questions in relation to usability, level of participation and involvement, plus a variable section, calibrated on how Wooclap was used in each specific course. The responses to the questionnaire were 368 in all and were subject to descriptive analysis.

The results show a high level of appreciation for the tool, both by teachers and students: the use is in fact intuitive and further facilitated by the integration in Moodle. As far as teaching is concerned, the observations of the teachers focus on the short-term effects, with a certain optimism towards the possible effects on long-term learning. The use of Wooclap also seems to make up for, at least in part, the possible negative consequences of distance learning, recovering an interaction dimension and thus stimulating greater student participation. The perception of students is also that the sessions have had positive effects, not only in terms of involvement, but also of interest in the topic of the lesson and contribution to maintaining the level of attention. The activation question is particularly welcome, as it makes students feel more involved, while the prompt feedback question, useful for teachers to immediately correct any misconceptions, is less appreciated by students: they are more afraid of making a mistake because they have not been able to study. The data collected, even if partial, therefore tend towards a positive evaluation of this digital learning tool, and show its flexibility both in the various disciplines and for different didactic applications.

References

- Carretero Gomez, S., Napierala, J., Bessios, A., Mägi, E., Pugacewicz, A., Ranieri, M., ... Gonzalez Vazquez, I. (2021). *What did we learn from schooling practices during the COVID-19 lockdown*. Publications Office of the European Union. doi: 10.2760/135208, JRC123654
- Cirlan, E., & Loukkola, T. (2021). Internal quality assurance in times of Covid-19. *European University Association*. Available at: <https://www.eua.eu/downloads/publications/internal%20qa.pdf> (accessed 18/10/2021).
- Kay, R. H., & LeSage, A. (2009). Examining the benefits and challenges of using audience response systems: a review of the literature. *Computers & Education*, 53(3), 819-827.
- Lantz, M. E., & Stawiski, A. (2014). Effectiveness of clickers: effect of feedback and the timing of questions on learning. *Computers in Human Behavior*, 31, 280-286.
- Mayer, R.E., Stull, A., DeLeeuw, K., Almeroth, K., Bimber, B., Chun, D., & Zhang, H. (2009). Clickers in college classrooms: fostering learning with questioning methods in large lecture classes. *Contemporary Educational Psychology*, 34(1), 51–57.
- Ranieri M., Bruni I., Raffaghelli J. E. (2018). Gli Student Response System nelle aule universitarie: esperienze d'uso e valore formativo, *Lifelong, Lifewide Learning*, vol. 14, n° 31, pp. 96 - 109 <https://doi.org/10.19241/lll.v14i31.117>
- Salmi, J. (2020). *COVID's Lessons for Global Higher Education. Coping with the Present while Building a More Equitable Future*. Indianapolis: Lumina Foundation .
- Herrada RI., Baños R., Alcayde A. (2020). Student Response Systems: A Multidisciplinary Analysis Using Visual Analytics. *Education Sciences*. 2020; 10(12):348. <https://doi.org/10.3390/educsci10120348>
- Wood, R., Shirazi, S. (2020). A systematic review of audience response systems for teaching and learning in higher education: The student experience. *Computers & Education*, vol. 153, <https://doi.org/10.1016/j.compedu.2020.103896>.