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Teaching Approaches for Blended Learning: Results of the Experimental Phase at University Of Florence

*Isabella BRUNI¹, Maria RANIERI², Francesca PEZZATI¹, Jonida SHTYLLA¹,
Marius SPINU¹*

¹ *University of Florence - SIAF, Florence (ITALY)*

² *University of Florence - FORLILPSI, Florence
(ITALY)*

Extended Abstract

Keywords: blended learning, innovative teaching, flipped approach, active learning, group work

The B-LeAF project (Blended Learning at University of Florence) is part of the process of educational and organizational innovation undertaken after the experience of Emergency Remote Education due to the covid-19 emergency, in order to combine the benefits of in-person teaching with those of distance learning. The project aims to foster the application of the blended approach in different disciplines and courses, to evaluate its learning effectiveness and to provide support and training to the teaching staff. After a pilot phase, the educational experimentation was extensively conducted in the academic year 2022/2023: overall, 45 courses were involved, distributed across 15 master's degree and 3 bachelor courses.

In the literature, the formula 'blended learning' refers to "the combination of instructional formats that date back to two historically separate models of teaching and learning: traditional face-to-face learning systems and distributed learning" (Graham, 2006, p. 5). The idea of integrating face-to-face teaching with distance learning is based on the assumption of obtaining benefits from both teaching methods, i.e. flexibility, customization, greater teaching support and adoption of flipped teaching solutions (Ranieri, 2005).

In the Higher Education context, the pandemic has contributed to strengthening a process of rethinking teaching that was already underway, with a focus on possible hybrid scenarios of integration between real and virtual. As highlighted by some researchers (Gaebel et al., 2021), blended solutions were already quite widespread: 75% of European universities provided programs in mixed mode. At the Italian level (Ligorio et al., 2022; Panciroli, 2020), blended teaching can represent an innovation strategy for conventional university courses, capable of responding to the needs of a new and broader typology of students.

Until the pandemic, the University of Florence had always used elearning to support in-person teaching: the didactic experimentation of the blended modality therefore required a substantial redesign of teaching methods. To support teachers in this task, the Guidelines for the application of blended learning have been developed and 3 possible teaching solutions were proposed:

- 1) flipped approach, in which the delivery part is anticipated remotely and then interactive activities are carried out in the classroom.
- 2) active individual approach, with asynchronous activities directly involving

students, such as production of papers, exercises, case studies, etc.

- 3) active group approach, with activities to be carried out in groups throughout the duration of the course.

A monitoring and data collection action was conducted along the whole experimentation in order to evaluate the teaching effectiveness and the organizational impact of blended teaching, both from the point of view of teachers and students. The three teaching approaches were also investigated to understand their effects on the learning process. An ad hoc questionnaire was administered for each target: the responses collected were 40 for teachers and 1584 for students.

As for the effectiveness of the blended modality, responses are positive for all the actors involved (Fig. 1): the teachers believe in particular that this approach was effective in stimulating student participation, but in general also in improving the teaching process, giving greater flexibility to the workload.

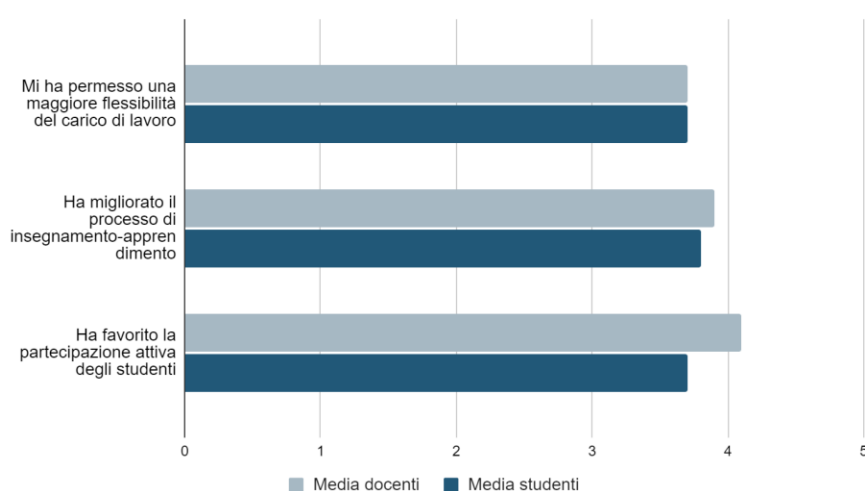


Figure 1 - Opinions on the teaching effectiveness of the blended modality (teachers N=40, students N=1584)

Regarding teaching approaches, all received good feedback. The flipped approach is the one that has been most used: teachers' responses highlight its effectiveness in relation to the possibility of carrying out activities in the classroom that are functional to learning. For the individual active approach, both teachers and students recognize the teaching effectiveness of asynchronous activities. Furthermore, the teachers underline that the distance mode has made possible activities that would not otherwise be possible due to organizational problems. For the active group approach (Image 4), the responses of teachers and students show that the impacts on the organizational factor were captured to a lesser extent compared to the individual approach. However, students' appreciation for group activities is higher than individual ones, as are the effects on learning.

In summary, the three teaching approaches were found to be valid, albeit with some differences between teachers and students. Among teachers, the active individual approach turned out to be the best one because the added value of the technologies emerged more. On the other hand, students preferred flipped and group approaches, i.e. smaller and simpler activities to do individually, or more interesting and engaging work to be carried out with their classmates.

References

Gaebel M., Zhang T., Stoeber H., Morrisroe A. (2021). *Digitally Enhanced Learning and Teaching In European Higher Education Institutions. Survey Report*. Brussels: EUA.

Graham C.R. (2006). Blended Learning Systems: Definition, Current Trends, and Future Directions. In C.J. Bonk, C.R. Graham (editors), *Handbook of Blended Learning: Global Perspectives, Local Designs*, 3-21. San Francisco: Pfeiffer Publishing.

Ligorio M.B., Cacciamani S., Cesareni, D. (2022). *Didattica blended. Teorie, metodi ed esperienze*. Milano: Mondadori Università.

Panciroli C. (editor) (2020). *Animazione digitale per la didattica*. Milano: FrancoAngeli.

Ranieri M. (2005). *E-learning: Modelli e strategie didattiche*. Trento: Erickson.