Blended Learning Approach: How Is the Learning Educational Paradigm Changing? Reflections and a Proposed Framework

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1   Introduction

The evolution of educational paradigms has been widely discussed in literature.

In this context, as it is well known, the use of technology has influenced a lot the evolution of education paradigms.

Although many studies and researches have investigated the role and influence of technology for educational purposes, its actual effectiveness is still an open issue [1–4].

So, a first question we intend to address is "are the current technology-enabled learning models, i.e. e-learning, effective enough or is there a new paradigm in the learning model evolution path?".

The effective use of a learning model typically requires some enabling conditions. How educational institutions are facing the use of technology for educational purposes? How do they have to change in order to be ready for successfully adopting this kind of learning model?

Leveraging on two bodies of literature, online education and change management, this paper aims at contributing to the managerial debate about the technology-enabled learning models. In particular, based on the online educational model literature, we intend to answer the first two above questions; next, referring

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to the change management literature, we intend to answer the third question, specifically providing some recommendations to educational institutions in order to help them understanding how to make the educational paradigm transition happen.

2   Literature Review

Educational paradigms have continuously evolved over the last 35 years. Analyzing their evolution, we can identify three major shifts. The first shift was in the 1980s. Throughout the 1980s, the educational process was mainly led by teachers [5, 6]. The second shift was in the early 1990s, where the education process focused on the relationship between teachers and learners [7]. The third shift can be traced back to the late 1990s. From then onward the educational process is aiming at fostering the learner-centric focus [8–11].

During this time, the evolution of technology has played an important role in influencing the shift of educational paradigms. The use of technology for educational purposes has created new concepts and models, e.g. online and distance education, web-based learning, computer-mediated learning, e-learning [12].

Online education is defined as any form of learning that takes place via computer network [13]. Among these new ways of learning, the e-learning model has gained lot of attention in literature in the last 15 years [14].

A recent study defines e-learning as "a set of models, methodologies, and processes for the acquisition and use of knowledge distributed and facilitated primarily by electronic means" [1]. Compared to the traditional learning models, e-learning offers the following main advantages: the learning process is flexible and can be self-paced; collaboration and interaction are the two most important characteristics of the learning environment; learning materials and resources can be maintained and updated in a efficient way [15–17].

Although many researchers support the benefits of both online and e-learning models [18], others have identified some relevant pitfalls of this model, particularly in terms of its limited capacity to actively engage learners in the educational process, and to make learners feeling to establish a positive relationship with the teacher [19, 20]. These models seem not able to deliver the expected results [16, 21–25], lacking some of their most important key success factors that are the sense of presence, the feeling of immediacy, and the dynamicity and fluidity of the learning environment [26].

Following the above discussion, a formal shift in the educational paradigm has to be identified and recognized, that is the blended model. This is not just a new educational model, but a new wave in the technology-enhanced educational models.

An overview of the evolution of the learning paradigm, from educational and technological perspective is given in Fig. 1.

The blended model provides a learning experience through the integration of different learning methodologies, including face-to-face with technology-enabled
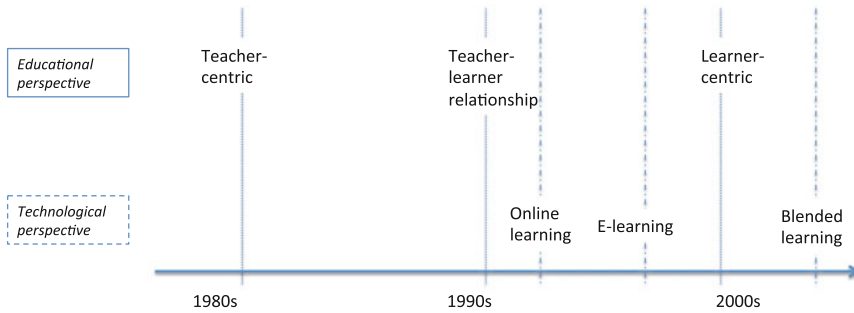
Fig. 1 Evolution of the learning paradigm: an educational and technological perspective

environment [27–30]. In the simplest form, the blended learning model is the thoughtful integration of online and face-to-face-instruction [31].

The blended model is not a new concept in literature, but recently it has received increased attention among academics and practitioners [32–35]. Comparing blended to e-learning models it's possible to identify some relevant differences, as emerge in literature.

Learners in the e-learning model perceive a higher instructional difficulty than those in blended learning model. Moreover, in the e-learning setting, learners experience a significant higher workload for their study than those in the blended learning setting. A third relevant aspect is about the learning support that is perceived higher in the blended learning model than in the e-learning one.

Moreover, a recent study predicts a relevant percentage of learners that will prefer to take courses in blended format respect to courses in face-to-face setting [36]. According to this study, a large part of learners prefers to take courses in blended model. This phenomenon is large as 71 % of learners: from 14.1 million in traditional courses enrollment in 2010 to a 4.1 million in 2015.

Another recent study [37] conducted over one million learners' responses (2008–2011) analyzes the effectiveness of blended learning initiatives with the effectiveness of other ways of learning. The following results emerge: 52 % of respondents rated the blended learning courses they have taken highest as "excellent", while other ways of learning (online and face-to-face courses) were rated as excellent by the 48 % of respondents.

Another important indicator is the withdrawal rate. In the blended courses learners tend to withdraw much lower than they do in other modes of learning.

From a general perspective, learners are positive about the courses that offer flexibility in both time and space. Although this flexibility is maximized with fully online courses, learners do not want to eliminate any face-to-face form of interaction [38, 39]. This challenge is overcome by the use of blended learning model. Moreover, some authors [40] highlight the importance of learning environments to foster interaction, communication, learning enhancements, and constructivism. Blended learning model is expected to enable these elements. Furthermore, this

model has potential to create a much more reflective learner population, and to extend learning far beyond the boundaries of traditional classrooms.

So, let us explore in the next paragraph the critical success factors for educational institutions interested in adopting this model.

3 Adopting the Blended Learning Model: Critical Success Factors

Educational institutions that intend to adopt a blended learning model have to carefully consider the following three critical success factors [41]. These are common factors to any level of education (e.g. undergraduate, graduate, executive), and type of educational institution (e.g. private or public).

The first factor is about the alignment of the blended learning model with the institutional goals and objectives. In other words, all the institutions stakeholders must be in alignment if a blended learning program has to be successful.

The second factor refers to the organizational capabilities to effectively execute and deliver a blended learning program. Among the organizational capabilities we can mention: the role of instructional designers of blended learning programs, the preparation of faculty members to develop and structure contents that are aligned with the blended model, the management of technological infrastructure, the support to both learners and teachers.

The third factor is the represented by the communication process. Adopting a blended learning model requires the engagement of many stakeholders. Thus, it's a useful idea to create a specific narrative for each homogeneous group of stakeholders. This narrative allows creating and using a common vocabulary and definitions, which in turn facilitates the acceptance by stakeholders.

4 Change Process

Following the above considerations, the use of technology for educational purposes is pushing educational institutions to rethink and change the traditional way of designing and delivering their learning programs [42]. And the change process involved in switching from a 'classic' institution based on face-to-face faculty-student interaction to an innovative institution capable of making the most out of the potential of blended-learning environments is far from simple. Partly because faculty members not only face the change involved in learning how to use the technology proposed (e.g. moodle, tokbox…) but, perhaps more importantly, they face the challenge of adopting learner-centered practices, something different research has shown to be far from easy [43].

In order to make this transition possible, organizations and institutions interested in adopting blended learning models must have a clear vision and a strong support from the various stakeholders involved in the change process [38], and be ready to exercise what Garrison and Vaughan mention [44], that is sustained collaborative leadership. Going beyond effective and inspirational communication strategies, such leadership involves the design of an adequate action plan which, among others, have the following interconnected dimensions into account: desired change speed and desired change scope, policy-making strategy and characteristics of faculty body.

We start with the last dimension, the characteristics of the school's faculty body, which we consider key. Faculty are of course one of the essential stakeholders in the process since they will be protagonists in their classes and if they are not convinced of the benefits of the new blended learning approach this will never be adequately explained to the learners (a sine qua non condition for learner engagement). Among the aspects playing a key role in the change management process we find faculty talent (i.e., their adjustment to the knowledge and competence profile the School development will need), their stage in their academic career (the more initial in their career the more flexible they may be towards change and the closer they can be to learners' mindset), and of course their disposition towards change, given their history in the institution and their vision of where the institution should head towards in the future.

Secondly, assessing the necessary speed and scope whereby the change needs to be effected will be essential when making decisions as to the ways to go about change implementation: the more urgent the change, the more top-down the leadership for change need to be, and the higher the connection faculty have with the institutional vision, with more ease will the top-down approach be perceived and experienced. Needless to say, and thirdly, if the scope of change focuses on a reduced number of programs (as opposed to all the programs of the institution), a top-down but also a bottom-up approach in change leadership can be applied, as the complexity of the process is reduced, especially if the sense of urgency is decreased.

Finally, the policy-making strategy will need to have all the above in mind to allocate the necessary resources to provide for adequate faculty support and development and to put into effect incentives for blended learning experiences (e.g., ways of providing faculty with the necessary recognition for their willingness to contribute to the institutional change).

5 Make the Change Happen: A Proposed Framework

In this paragraph we intend to propose some recommendations to educational institutions' decision-makers and/or change agents in order to make the above-described change happen. Specifically, we propose the following educational change framework that is based on the Kotter's eight-step framework [45].

Table 1 Steps in the educational change framework

Steps	Actions
1. Make the need for change visible	• Collect data, facts and evidences that demonstrate how and why the blended model can be more effective than the e-learning one • Make the case regarding the what blended learning will bring to the School's value proposition
2. Create a change team	• Identify faculty members with a high level of credibility, who may be open to explore and innovate, and able to influence other stakeholders in the institution (particularly, stakeholders who are resistors)
3. Define the new educational paradigm	• Elaborate and define how the blended model can be successful in their organization by connecting it with the institution's educational strategy, • Consider which tools would be most useful, • Provide a framework of reference regarding the ways in which those tools may be used in particular classroom settings to enhance learners' learning and, not just any kind of learning but that which connects with the exit profile that aligns with the school mission
4. Design and implement the execution plan	• Elaborate a resource plan that will be necessary to equip the institution with the adequate technology • Ensure there is a team of experts in technology-enhanced learning, and blended learning models and methodologies to provide faculty with the necessary support to make the change possible
5. Communicate the new educational paradigm	• Design the communication strategy to present the blended learning model: how it works, advantages and key success factors • Incorporate in this communication examples of the pilot editions of the educational model run with selected faculty

Our framework consists of the following five steps, which are presented in Table 1.

The first step is to make the need for change visible. The more visible the need for change, the higher the sense of urgency [45, 46]. Creating the sense of urgency is extremely relevant for activating the change process. How to create the need for change? The change agent has to collect data, facts and evidences that demonstrate how and why the blended model can be more effective than the e-learning one and s/he needs to make the case regarding the what blended learning will bring to the School's value proposition.

When the need for change has been demonstrated, it is time to elaborate on what the changed educational model should articulate around. In order to do this, the change agent has first to create a change team whose members have a high level of credibility, are open to explore and innovate, and able to influence other stakeholders in the institution (particularly, stakeholders who are resistors). This team needs to elaborate and define how the blended model can be successful in their

organization by connecting it with the institution's educational strategy. Such model should not only consider which tools would be most useful, but it should also consider providing a framework of reference regarding the ways in which those tools may be used in particular classroom settings to enhance learners' learning and, not just any kind of learning but that which connects with the exit profile that aligns with the School mission.

Moreover, the change agent and the change team must give execution to the educational change process. Indeed, a great new educational model and an execution plan are keys of a change process since, on too many occasions changes remain at the level of discourse. One of the dimensions to have in mind when designing this execution plan is the resources that will be necessary to equip the institution with the adequate technology but also, perhaps more importantly, to ensure there is a team of experts in technology-enhanced learning, and blended learning models and methodologies to provide faculty with the necessary support to make the change possible.

Then, the change agent along with the change team describes and presents the blended learning model (how it works, advantages and key success factors) to all institutional stakeholders. This is a massive and intensive communication process, which will have begun earlier in the process, when some faculty will have been selected to run pilot editions of the educational change. Communication has to be properly designed according to the different targets, and the possibility of using pilot projects to support and illustrate the tangibility of the alleged value brought by the new model will be key. Underestimating the power of the communication can be the reason why the educational change process fails.

6   Conclusions

This paper has contended that blended learning is increasingly gaining support as the model of the future in higher education. As we have seen, blended learning not only provides a series of advantages as compared to fully e-learning education (decreased learners' perception of instructional difficulty or excessive workload, increased perception of blended learning as excellent learning experiences, decreased withdrawal from learners) but it may also contribute to add value to face-to-face live class sessions, by enhancing learners' preparation for those via online activities and resources.

All these reasons suggest that blended learning will increasingly regarded as an approach to be incorporated in higher education institutions, especially in those international ones in constant quest for excellence and innovation in the learning experiences they propose to their students. And these institutions will no doubt face the challenges outlined when implementing the change management processes necessary for blended learning to bring the necessary value to their programs. As Garrison and Vaughan mention [44], sustained collaborative leadership with the components mentioned above will be necessary to introduce blended learning

effectively. Such collaborative leadership should, however, be articulated around a clear and sound change management framework such as the one proposed, which will allow for the educational change brought by the introduction of the blended learning model to become a reality.

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