

UFR D'ÉTUDES INTERCULTURELLES DE LANGUES APPLIQUÉES**Blended learning, analyzing the evolution of a training format**

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With the emergence of online training programs, we have witnessed the emergence of online learning platforms. Some of them are video-based and sometimes offer interaction between participants and teachers. Knowledge management has become primordial for companies. Training programs are flourishing. Additionally, the COVID-19 pandemic brought about reflections on training methods, with blended learning as the main focus.

Thus, in this study, we focus on how businesses implement blended learning in their companies, based on learner and trainer feedback. Surveys and interviews offer valuable information on the state of blended learning in businesses today and highlight the different strategies businesses use when it comes to sharing their knowledge, as well as the strengths and weaknesses of different training formats.

**Keywords : Blended Learning, E-learning, Learning Management System, LMS,
Digital Learning, Face-to-face learning, Training**

Introduction

The electronic and digital revolutions have revolutionized employee training. Over the past decades, we have seen the emergence of new technologies, new jobs and new training methods. Training was initially delivered in person. Trainers and learners were then brought together for days or even weeks at a time to ensure acquisition and maintenance of the skills required to work within the company.

Later, with the electronic revolution came "e-learning". From then on, the goal of companies was to create as much self-learning content as possible in order to save money and make training more accessible to learners. However, these training materials were not known to be captivating or suitable for learners. They were mostly long videos or PowerPoint presentations, created to ensure the transmission of information, but they neglected the most crucial aspect: the user.

In the 1960's and 70's, we entered what is now called the digital revolution. "Digital learning" is part of this phenomenon. The means and objectives of training changed, and the current aim is to focus on the user through a "user-centric" approach, which aims to offer tailor-made training courses adapted to the learners. Learners are now actors in the training programs, and trainers are now coaches assisting learners in their training process.

Blended learning is an integral part of digital learning. This training method aims at taking advantage of the benefits of both face-to-face and e-learning, allowing for the creation of a wide range of training content adapted to the learners and their needs. How blended training programs are built today can vary, but the main claim is that combining e-learning training with face-to-face training is an opportunity to deliver training programs that are more attractive to learners, and this will be the main focus of our study.

This study aims at understanding the various success criteria of blended learning by analyzing data collected directly from learners and trainers, but also from scientific publications. The aim is not to make a eulogy of blended learning or to present it as a one-size-fits-all solution when it comes to developing training programs, but rather to lead a comparative analysis of its strengths and weaknesses compared to other training methods, and to highlight the perspectives and trends that emerge from the collected statistics. Finally, in the last part of the study, we ponder on the state of blended learning in light of the COVID-19 pandemic.

Part 1 - From the emergence of blended learning to examples of uses today

Over the last few years, the rapid development of technology has caused an increase in e-learning practices across multiple areas. We have been seeing more and more learning content going online and becoming available anytime and anywhere on every type of device.

The rapid development of technology over the last few years has led to the staggering development of e-learning practices for companies.

The emergence of blended learning

In the 2000s, e-learning had so much success in the business world that some people thought it would definitively supplant face-to-face learning.

E-learning initially met the needs of the learners but above all the needs of the companies. Companies need to train their employees to, among other things, increase their field of competence, help them improve the skills related to their function within the company, and above all to obtain better results from them. Face-to-face learning was neglected, the cost of training being much higher (room rental to accommodate the learners for their learning session, learners' lunch...). E-learning was deemed far more affordable than face-to-face learning.

However, the limitations of e-learning became more and more apparent over time. What e-learning lacks is interaction. Interaction is the key to a learner's success and satisfaction. Moreover, this interaction is not limited to the "learner-trainer" interaction, although it is the first interaction that comes to mind. Interaction can be categorized into three types, labelled "learner-content" interaction, "learner-trainer" interaction, and "learner-learner" interaction.

Previously neglected face-to-face training courses were coming back into the training world to compensate for the lack of "learner-trainer" interaction. Several digital media formats were created or became more and more widespread such as video networks and CD-ROMs.

Solutions were also found to overcome the lack of "learner-learner" interaction. Social learning was born. At the same time, blended learning emerged.

The main characteristics of blended learning

The main purpose of blended learning was to overcome the “shortcomings” of full e-learning courses or full face-to-face courses by mixing e-learning and face-to-face courses.

One of the main expectations of such a training model was to reduce the trainer's absence and modernize the classroom by bringing innovation and interactivity. Human presence is essential to ensure good follow-up and quality support.

However, follow-up and quality support need to be ensured continuously. It needs to be done during and after the learner's session.

The idea then was to use an LMS (Learning Management System) specially adapted for blended learning. LMS tools were already being used for e-learning, but the need for a type of LMS adapted to blended learning emerged. This adapted tool makes it possible to integrate all the feedback from learners on their training, to keep direct contact with the learners but also to offer a platform on which learners can exchange with each other. Indeed, one of the strong points of an LMS is that it allows for clear communication with learners and in particular regarding their questions, which can be answered directly inside the LMS. The trainer or online assistants who are available 24/7 will be able to answer them. Moreover, it is an analytical tool that can determine, according to its configurations, which e-learning sessions are the most appreciated, how long it takes for a learner to complete an e-learning module quiz or a course certification quiz. All of these features make it possible to know and translate the learners' needs. The following sessions can therefore be better organised.

It would be a mistake to reduce blended learning only to a mixture of e-learning (presupposed modules) and traditional classroom courses. It is not just a question of combining the qualities of these two training formats to solicit interactivity. Above all, blended learning offers a modular solution for interactivity. It can be adapted according to the learner's needs. In addition to the modules, several information supports are also used, such as videos, online self-diagnosis, or video training, and informal learning through collaborative tools (forums or wiki).

This modularity has also made it possible to classify blended learning "formats" that are now commonly used in companies. The "Flexible", "Online lab", "Self-blended model" and "Personalized blended model" formats are among the most widely used models, to name but a few:

- Flexible model: Learning sessions take place through the LMS. A trainer provides additional support through small group settings.

- Online lab model: Learning sessions take place in a physical classroom. An online trainer delivers lessons with the help of on-site professionals.
- Personalized blended model: Both physical and digital learning sessions take place depending on the learners' needs.
- Self-blended model: Learning sessions take place in a physical classroom. The learner then chooses which online classes to take.

We can see that these formats essentially consist of an implementation of face-to-face and e-learning training parts, in accordance with the possibilities and availability of the company as well as the user's expectations. Moreover, among these 4 models, there are two categories. The first offers sessions that are more dependent on the company's operations and the availability of the trainers, while the second is more oriented towards the learner's learning autonomy. It is the learner who gives the trainer his or her availability. These two categories can even be divided into models that favour face-to-face and e-learning training.

Since this modularity of interactions is the main strength of blended learning, does it encourage companies to move away from e-learning and to implement blended learning as their training model ?

For all the reasons mentioned above and for this questioning, we then undertook a methodological approach in an attempt to confirm and refute a possible leading role for blended learning as a flagship training model for companies.

Part 2 - Methodology, survey results and interviews

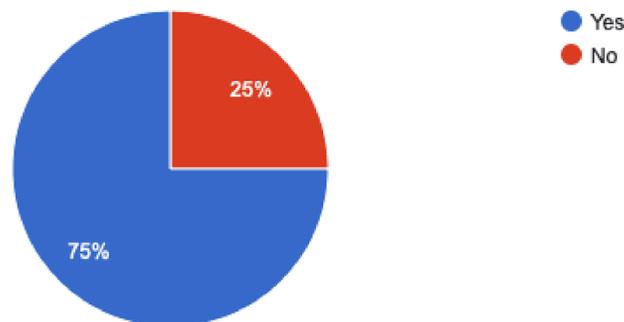
This part is dedicated to the methodology we used, the analysis of the survey results and the interviews we conducted for this study.

The survey

The study we carried out was based on a questionnaire that we sent to our colleagues and friends and on interviews with training professionals specialised in the design of e-learning modules but also in face-to-face training. A total of 48 people responded to our questionnaire and their feedback allowed us to identify trends as well as relevant comments for this article.

According to our survey, it turns out that many company employees have already attended training courses.

48 answers

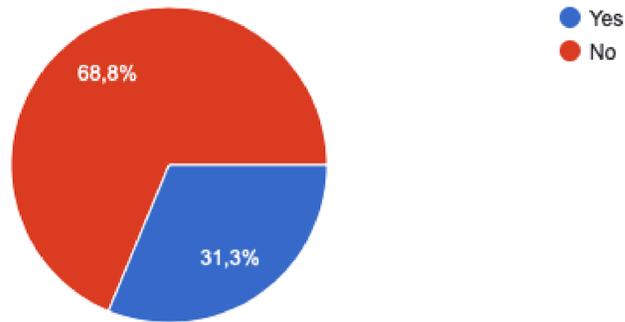


Answer to the question “Have you ever attended a training session in the form of face-to-face learning or e-learning?”

The number of people who have attended blended learning courses is still low, but this can easily be explained by the fact that this is still a recent training format.

Indeed, blended learning has appeared quite recently and can take very different forms. This principle of learning allows the creation of on-demand training courses, in accordance with the desires or needs of a company.

48 answers

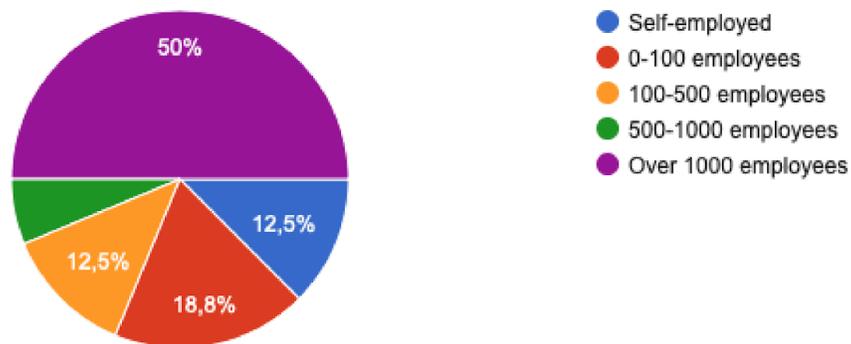


Answer to the question "Have you ever attended a training session in the form of blended learning?"

Moreover, it is interesting to note that the people who have attended e-learning (and blended learning) are often employees of large companies.

Indeed, the interest of e-learning is mainly to be able to train people on a large scale and thus reduce training costs compared to a face-to-face solution more adapted to a small number of learners.

48 answers



Answer to the question "What is the size of your company?"

For the implementation of such training courses, it is then necessary to imagine the design of e-learning modules by company departments and also the presence of trainers during face-to-face sessions. It is important to note that these stakeholders can also intervene as external service providers of the company but that in both cases it is expensive to manage the schedules of these different actors.

Feedback from learners

For learners, the blended learning experience is described as effective and also enjoyable. They generally appreciate the fact that they can be both independent learners and also companions during their training. The various advantages of blended learning mentioned above clearly show their effectiveness when you look at the learners' feelings.

Feedback from trainers and instructional designers

Here is an interview we conducted with a training professional at Air France concerning the feelings of trainers and designers on the different modes of training and on Blended Learning:

Can you explain your role within your company?

I first worked as a face-to-face trainer and then I received training within my company to also become an e-learning designer.

Today, I mainly work on the creation of e-learning modules but I still sometimes train learners in the classroom and I am therefore led to think about creating Blended Learning paths.

What is your take on Blended Learning?

Blended Learning is very effective because it is a solution that combines the advantages of presidential and e-learning solutions. This learning method therefore makes it possible to create tailor-made training paths that are adapted to the learners and can be followed and modified by designers and trainers.

In my opinion, the e-learning modules have a great advantage in the transmission of knowledge and the face-to-face approach makes it possible to carry out more effective learning activities.

Moreover, this training method also allows for optimal exchanges between designers/trainers and learners and thus allows them to evolve together throughout the training.

What is the best training solution?

In my opinion, it is not a question of saying that one training method is better than the others, but rather of defining which one will be the most suitable according to a specific training need. Each form of training has advantages and disadvantages and they must be used wisely.

Thanks to the feedback we received on our questionnaire and a second interview we conducted with a training professional, we can draw the following conclusions:

Blended learning is appreciated by trainers and designers because it allows a good distribution of the work of skill acquisition and leaves the learners with dynamic and clear supports that can be developed and precise during classroom training.

Moreover, the joint work of designers and trainers allows each person to focus on his or her own training area while knowing that he or she will be supported by working within a training team with different but complementary skills.

How blended learning benefits companies

The results from both the survey and the interviews is that blended learning is a very appreciated training format by both the learners and also by the trainers/designers. Moreover, this mode of training is also the one with the highest rate of assimilation of knowledge and skills.

For a company, these blended courses are also interesting because they are very durable. Indeed, the modules and classroom training can always be transformed and adapted to the needs of the company and provide a lot of benefits.

Finally, the digital aspect of these training courses also makes it easier to follow the training work according to several factors: attendance, success, satisfaction or proposals. Recent office automation technologies and LMS tools have enabled companies to revolutionize their training policies and to enter into a much more "user centric" dynamic. Indeed, Digital learning (and blended learning) is defined by a vision that is entirely centered on the user and on the creation of targeted and enjoyable content.

Part 3 - Blended learning and COVID-19, a case study

A headline from forbes.com reads: “The Coronavirus Pandemic Has Unleashed A Revolution In Education: From Now On, Blended Learning Will Be The Benchmark”

During the pandemic, working and studying from home became the new norm. People had no other choice but to change their working habits. As a result, more and more schools and companies had to adapt and offer courses or training programs that were either 100% online, or involved remote conferences.

The public education system, an example for companies?

In 2010, The U.S. Department of Education led a study in which they listed out and then compared 45 studies on online versus face-to-face learning programs. Their conclusion was that “[...] online learning has been modestly more effective, on average, than the traditional face-to-face instruction with which it has been compared.” What stands out from this analysis is that for the studies favoring the online condition, most used a blended learning approach. This again highlights the better results of peer learning compared to training programs that are 100% online, but with the COVID-19 outbreak, schools and companies alike have had to adapt their training programs.

Another study from the university of Barcelona confirms this tendency. In 2007, professors at the university of Barcelona conducted a comparative study, in which they compared exam results of first year biology students.

One group had followed a blended learning course, and the other was given “ traditional teaching aided by complementary material that could be accessed on the Internet.”

Retention of information was higher among blended learning students:

“The average marks presented statistically significant differences (BL 6.3 versus TT 5.0; $P < 0.0001$). The percentage pass rate for the subject in the first call was higher in the BL group (87.9% versus 71.4%; [...])”

Blended learning thus appears as a middleway that yields better results than e-learning and is more cost-effective than face-to-face learning. In 2020, the COVID-19 pandemic forced schools and companies to rethink the way they manage information.

The future of learning

Today, many countries that have eased their lockdown measures have started developing blended courses in schools to maintain social distancing, and it is highly possible that companies will do the same.

In 2019, amidst the COVID-19 health crisis, HSBC's Regional Head of Commercial Banking in Middle East, North Africa & Turkey, Daniel Howlett, hosted a conference online and invited experts from across the education ecosystem. The conference focused on the evolution of online education after the pandemic. The article on HSBC's website reads:

"HSBC's Virtual Boardroom convened experts from across the education ecosystem to discuss the future of learning following the disruption caused by the global COVID-19 pandemic."

The experts concluded that the objective would be to enhance classroom learning with technology and put the emphasis on balancing live online classes and live in-classroom options. "[...] With a more connected world, further disruption is likely over the coming years, so adoption of new practices by the sector is now key."

The rapid growth of online education

In 2019, global education technology investments reached US\$18.66 billion and the overall market for online education is set to reach US\$350 billion by 2025. These figures confirm the rapid growth of the online education market, and this trend is very likely to benefit more companies looking to develop their online training programs.

Conclusion

At the end of our study, what emerges is the fact that corporate training is a sector in constant evolution.

In fact, it is a field that has had to adapt to the appearance of new technologies and thus transform itself to be able to offer more and more developed contents.

We have seen how the different digital revolutions have allowed the creation of more dynamic and targeted digital content for learners. Another new aspect that we discussed is how training content was now supposed to be pleasant and stimulating so that learners could be trained in the best possible conditions.

Moreover, we have also seen that face-to-face solutions are not yet ready to disappear. Our study has indeed shown the importance of learning with a trainer and other learners for the assimilation of knowledge. The human relationship remains essential and digital learning (and blended learning) must fully include this human aspect in its training methods.

Today, blended learning is perceived as an optimal training method because it combines the advantages of face-to-face training and e-learning, and therefore makes it possible to create tailor-made content.

However, what stands out in our study is also that blended learning is not the ultimate training solution but an option among others. Indeed, each training method has advantages and disadvantages and the objective is to find the best training solution for specific needs.

Appendix 1 - the pros and cons of blended learning

Cons	Pros
Blended learning sessions are more expensive, due to the cost of room rental, trainer intervention and e-learning modules implementation in a LMS.	E-learning session lacks the social learning aspect blended learning has thanks to face-to-face training sessions with other learners and thanks to tools such as an LMS.
Difficulties for the trainer to implement a full blended learning session.	Blended learning offers better follow-up and tracking through physical and online interactions with the trainer. E-learning only offers an online follow-up and tracking.
	With the help of our collected data, interviews and general feeling towards blended learning in the world of business, we can assert that the learner satisfaction rate for blended learning seems higher than the learner satisfaction rate for e-learning.

Appendix 2 - The pros and cons of e-learning

Cons	Pros
No “learner-trainer” interaction in an e-learning session.	E-learning only consists of a set of e-learning modules implemented in a LMS. It is thus less costly. For example the company Home Bargains cut their coaches travel time by 20% by focusing on digital learning through the use of a learning management system.
What the learner learns and retains from the e-learning modules depends on his/her motivation.	The learner’s training takes place at his or her own pace independently of the other learners, for instance with blended learning.
Content in e-learning usually stays the same for all learners. There is no specific learning content dedicated for an issue learners had met.	In its nature, e-learning sessions are the most flexible learning sessions. Only the learner is involved.

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