Inno-vation handbook

THE CHANGING FACE OF TRAINING: 7 QUESTIONS TO BUILD THE FUTURE

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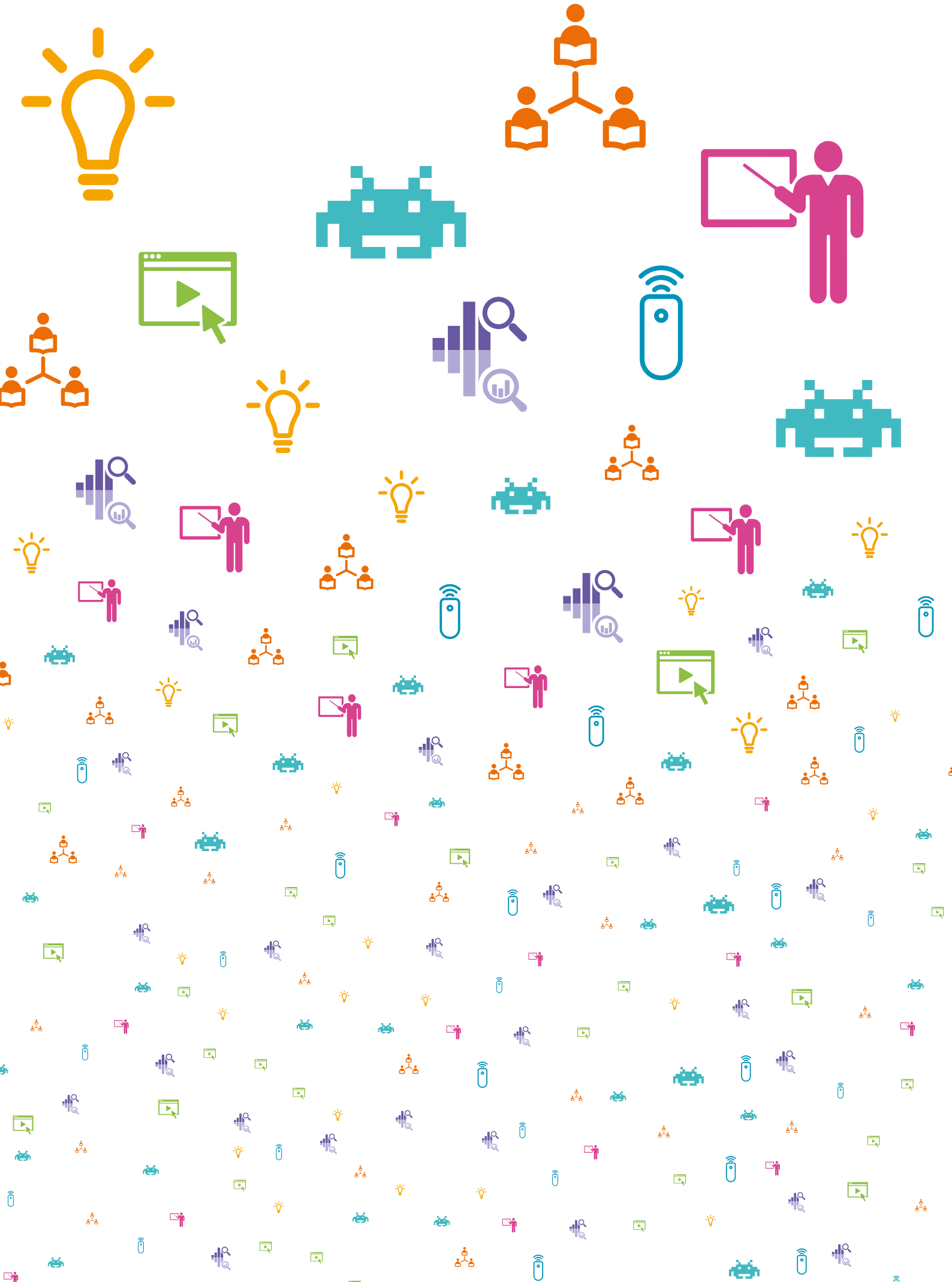
BEYOND KNOWLEDGE*



Introduction

The training industry, like society itself and the world of IT, is undergoing far-reaching changes. Deeply impacted by digital technology, social networks and changes in socio-cultural practices, it is trying to adapt. This transformation inevitably raises questions about how effective new methods such as MOOCs, serious games, mobile learning, etc., are when it comes to learning, and the potential risks they create.

In a broader context, does innovation in training necessarily involve technological resources? This is one of the seven questions that are the focus of training professionals' attention today.
Since its inception in 1926, the Cegos Group has weathered a variety of socio-technological upheavals and always managed to adapt its training practices in step with changing habits.

We have therefore tried to provide concrete answers to these questions, based not only on the most respected research and our experience in the field, but also on our values and our vision.

How to read this innovation handbook ?

Each chapter focuses on a key question and is organised into the following sections:

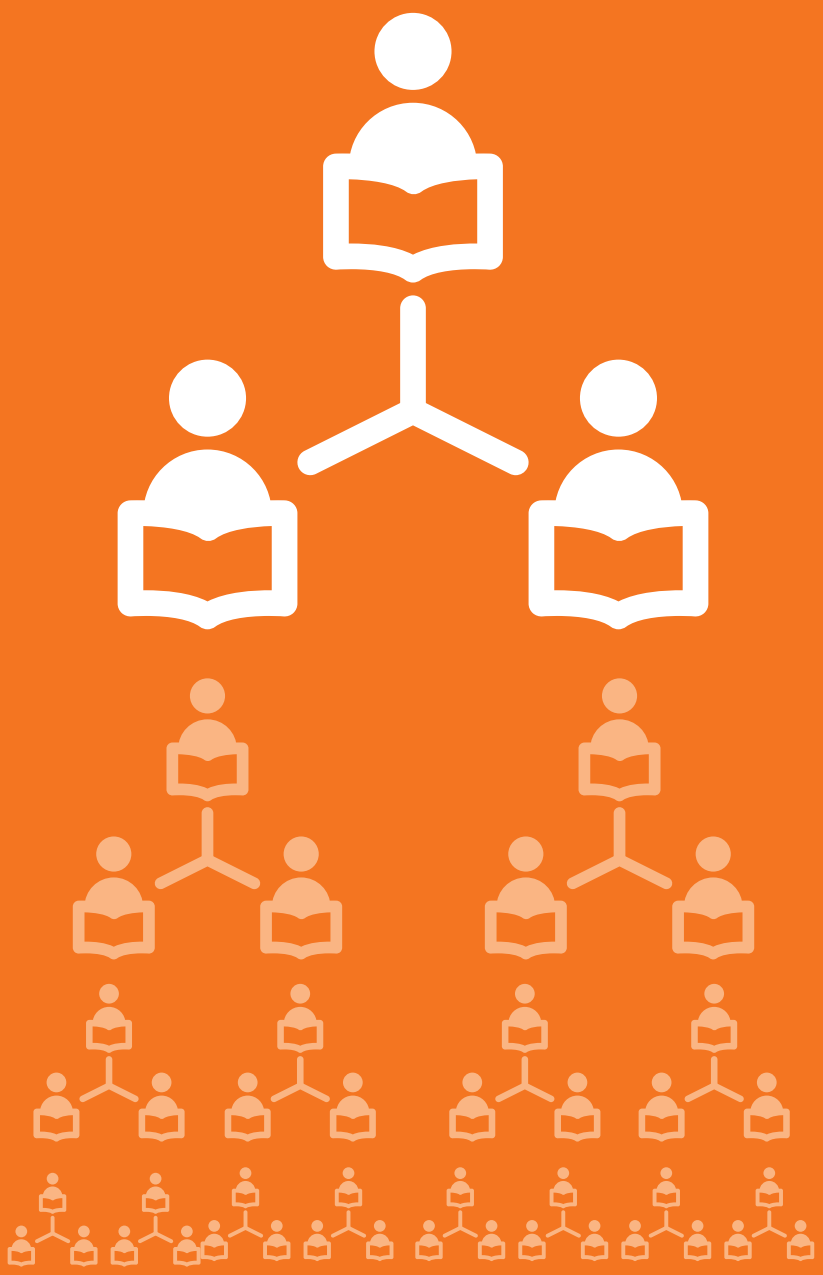
Background: we present the situation that led to this question being asked.

Talking point: we rephrase the question in practical terms.

What we know: we survey the way this question is currently handled in training.

What we think about it: the Cegos Group's point of view on the question, with tangible examples of innovations to back it up.

We have also included hyperlinks to articles that will help you dig deeper into the issues that interest you.



1.

MOOCs: REVOLUTION OR FLASH IN THE PAN?

Background

The acronym MOOC (for Massive Open Online Course) first appeared in 2008 in reference to a course called «Connectivism and Connective Knowledge» run by George Siemens from the University of Athabasca and Stephen Downes from the National Research Council. The course was delivered to 25 students at the University of Manitoba, but was also open and available online, and an additional 2,300 participants took part free of charge. The students were free to participate and contribute to the course with their choice of tools.

In the wake of this experience, MOOCs became very popular at the major US universities (Harvard, Berkeley, MIT, etc.) and around the world.

To avoid being dependent on large private US-based companies such as edX, Udacity or Coursera, the French government decided to launch its own national platform, FUN, on October 2, 2013.

MOOCs are also a hot topic for the media, which see it as a global revolution in training. The french media website Rue89 has even launched its own MOOC to branch out into new business lines and develop a new and promising source of revenue.

The latest competitors of training organisations and in-company training departments have seized on MOOCs: higher-education institutions use them to tap into the stream of potential customers, and publishers use them for diversification and marketing purposes.

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50%

of survey respondents said that launching a MOOC had raised their institution's profile.

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Talking point

+ MOOCs' effectiveness has been questioned: are they really a training solution in their own right, or a tool for making academic material available to the masses?

What we know

MOOC, COOC or SPOC?

The sole purpose of academic MOOCs, known as x-MOOCs, is to pass on content provided by an often renowned teacher. There is a pre-determined progression through the programme. Participants are regularly assessed to validate their learning outcomes. These assessments can take the form of a quiz or more complex deliverables, such as peer assessment.

After participating in this type of MOOC, the participant may be issued a certificate of attendance. Some MOOCs qualify participants for certification, such as the Project Management MOOC run by the Ecole Centrale de Lille.

«Connectivist» MOOCs, known as c-MOOCs, are dedicated to content creation. The progression and objectives are set with sufficient leeway for each learner to be able to work out their objectives and their own path. The teaching team supplies resources, but the participants very soon pool the resources they have found on the internet or even produced themselves, a practice known as «crowdsourcing». Participants are encouraged to contribute, not only by providing content but also by commenting on it and by creating their own Personal Learning Space in the form of a mini-blog (on Tumblr, for example).

COOCs, or Corporate Online Courses, are MOOCs for businesses. These are either programmes purpose-designed for the employees of a specific company, or a public MOOC used by a private community of employees all working for the same company.

SPOCS, or Specific Private Online Courses for

individuals or small groups, were created by Armando Fox, professor at the University of Berkeley. In this case, a small community is formed to use very targeted, work-related content. The idea is that the quality of the comments and interaction amply makes up for the quantity of comments and interaction associated with a MOOC. It is a sort of blended course, as is increasingly common in companies, with an added connectivist dimension.

WHAT COMPANIES STAND TO GAIN FROM MOOCS

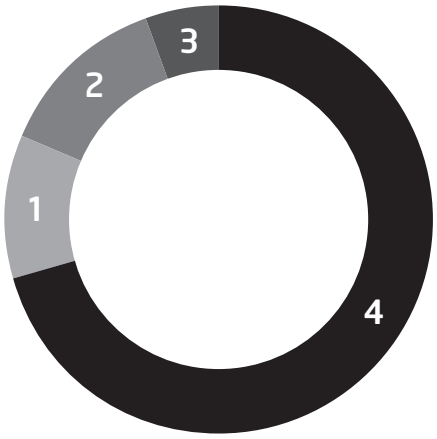
+ MOOCs are undeniably an effective means of making information widely available around the world:

In January 2014, Coursera, the biggest of the online platforms, had a total of 22 million learners enrolled from 190 countries. In June 2014, edX had 2.5 million students, all countries combined. In France, the FUN platform totalled over 300,000 registered users, just six months after opening. This is an excellent start, given the 2.5 million students in higher education in France.

+ MOOCs can also be used as a marketing tool to promote the image of the institution that runs them.

HOW WELL ARE MOOC'S MEETING INSTITUTION'S OBJECTIVES: 2013

1. Meeting most/all
2. Metting some
3. Meeting very few
4. Too early to tell



According to the findings of a survey conducted by the Babson Survey Research Group, Pearson and the Sloan Consortium, which polled 3,000 US schools and universities, this is one of the main reasons for creating a MOOC. For nearly 50% of those polled, the main objective of launching the MOOC was to raise their institution's profile (27% of responses) or recruit students (20%).

Of these, only 13% believed the objectives had been achieved, though it is too early yet to draw any final conclusions because the majority of these courses were set up only recently.

+ MOOC training solutions are convenient for employees.

They tend to be short: three to four hours a week for one to six months. They are also generally asynchronous, accessible over the internet anywhere (at work, while commuting or at home) and at any time. This would suggest that they are flexible enough to fit into any sort of schedule.

+ The connectivist aspect of MOOCs gives them an undeniable edge over other training solutions.

MOOCs open up possibilities for social learning through peer-to-peer exchanges both within and outside the company. Within the company, these solutions have the benefit of building connections between individuals from different business units and different countries. Outside the company, they develop openness and benchmarking.

A number of studies have shown that learning activities based on cooperative learning are very effective. Research shows that learners tend to engage more in learning tasks when they work as a group and when the task involves achieving a common goal, despite the difficulties encountered.

+ MOOCs are a very economically competitive training solution.

Most MOOCs are free, but some offer a «verified certificate of achievement» for a sum ranging from €50 to €400 (according to Coursera, 20% of learners are willing to pay for the official piece of paper certifying that they have passed the MOOC. With Udacity, learners pay US$89 to sit the exam). From a purely financial point of view, this seems very competitive compared to the average €1,500 that companies spend on training per employee and per year.

CHALLENGES TO BE MET

+ Not all subjects lend themselves to MOOCs, and not all academic content is relevant to the actual situation in the company.

For a whole section of corporate training (bringing employees into line with group culture, change management, etc.), the content has to be adapted to the actual situation in the company. The generic content found in MOOCs is not necessarily applicable to the processes, tools or specific vocabulary used in each company. Specific Private Online Courses (SPOCs) were created in a bid to offset this shortcoming.

+ Keeping learners motivated for the long run

In 2012, the Coursera platform estimated that, out of the average 40,000 to 60,000 students enrolled in MOOCs, only 5% would actually complete the course.

In 2014, researcher Katy Jordan reached the same conclusion: out of an average 43,000 students enrolled, only 6.5% followed the course through to the end.

However, another study conducted by the MIT in January 2014 and which polled the 840,000 students enrolled in a Harvard MOOC shows that, although the drop-out rate is high (close to 96%), nearly half of those enrolled followed at least half the course. This suggests that the vast majority of the students did nevertheless acquire some knowledge, which they would not have done without this digital access.

We also need to take into account the fact that not all employees are capable of autonomous learning online (see the ideal MOOC learner). It takes a lot of motivation and organisation to follow an x-MOOC today while continuing to work. The broad accessibility of MOOCs and the drive for maximum enrolments have blurred the notion of prerequisites in terms of skills and support, yet these are key factors in a programme's success. MOOCs' continued development will hinge on their ability to structure their courses more finely by level and by line of business.

What we think about it

MOOCS ARE OPPORTUNITIES FOR COMPANIES:

+ Encourage a self-study culture among employees:

This is one of the core skills defined in the vocational training reform. In today's digital environment, this is a key aptitude for keeping skills up to date, building on skills and contributing to the company's continuous improvement. HR departments need to allow the most autonomous employees (those with self-determination and self-regulation, who can work collaboratively and are at ease with social media and the internet) to train with whatever MOOCs seem the most appropriate. It may also mean going so far as to provide the necessary equipment (the bare minimum would be an internet connection) and allowing them to take the average three hours of personal work required by MOOCs out of their working hours.

+ Add to the resources available for building blended learning programmes:

MOOCs can be seen as learning modules and, as such, included in broader training programmes. In that case, they should be used in combination with other types of learning (classroom and/or distance learning, synchronous and/or asynchronous learning), which will work on adapting the content to the specific company context and putting the knowledge into practice in the learner's work situation.

+ Develop a bespoke COOC to train the company's distribution network, customers or users

A number of American companies have already taken the plunge. Examples include SAP's Open.SAP.com and Bank of America's Khan Academy. The aim is to develop a certain intimacy with customers, to move beyond supplier status to that of talent development partner.

+ Create in-house SPOCs to kick-start job skill changes

The connectivist aspect of SPOCs can be a powerful vector for bonding in-house communities, especially when some job fields are going through rapid change. Instead of providing an e-learning course with standard content, the challenge will be to co-construct the content with the company's employees.

This is what is being done at Orange, for example, as part of the Digital HR project conducted with the Cegos Group, using a Solar Games tool. The latter has produced a 3D virtual world that has the added advantage of being «persistent»: in other words, it continues to exist and evolve. Learners co-construct this parallel world; they consult and exchange resources, communicate and work together.

The MOOC revolution was fuelled essentially by the fact that MOOCs are free and massive. They also owe part of their success to strong support from the media, which gave them extensive coverage.

After using them for a while, it becomes apparent that their effectiveness as a learning method has more to do with the quality of the engineering: the learner experience is not only collective and cognitive but also sensory and emotional, quite unlike anything available up until now.

The feedback from MOOC participants quoted below reflects this.

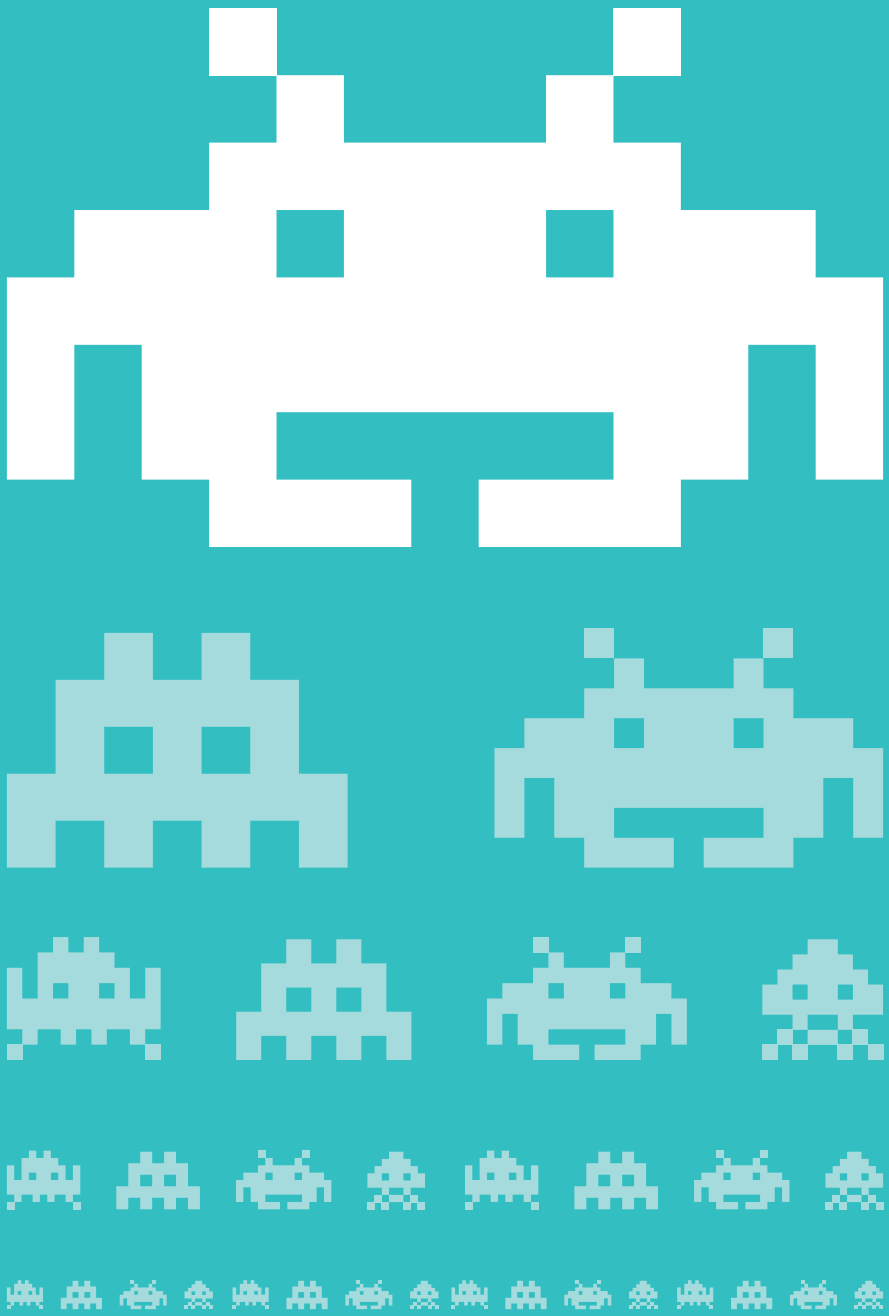
WHAT «SATISFIED» PARTICIPANTS HAVE TO SAY:

«An individualised training course that answered my questions», «effectiveness», «A comprehensive training course, enjoyable, not boring. The future of free online training»; «great fun. It's very convenient. We can get advice and it's very educational». «Very easy to use and very interactive»; «High-quality practice and teaching».

WHAT «NOT VERY OR DISSATISFIED» PARTICIPANTS HAVE TO SAY:

«Too general. The course is far too superficial». «The trainer doesn't explain things enough». «The material is inadequate. The course is too short». «The MOOC is very good and satisfies the requirements. However, I found it wasn't totally relevant to me and I got a bit bored».

We therefore think that MOOCs are not effective training solutions in themselves. However, they are useful methods for acquiring knowledge, providing they are included in blended training programmes. To derive the full benefit from MOOCs, they need to be followed up with modules to transfer the lessons learnt to the workplace and, most importantly, modules to convert the knowledge acquired into job skills.



2.

GAMIFICATION: CAN LEARNING REALLY BE EFFORTLESS?

Background

Between 2003 and 2013, the number of French people who regularly play video games increased threefold to 31 million. Among other things, this figure reflects a general trend in society towards game playing, known as «gamification». This trend is buoyed up by mobile devices and their gaming applications: 26.2 million people had a smartphone in 2013 and 8 million owned a tablet. As a result, all sectors of the population are now drawn to gaming, whether casual or hardcore.

Gaming methods, or gamification, are now incorporated into many of our everyday activities. An example is the reward badges launched by the Foursquare social network in 2009 and which can now be found in many other applications (sport coaching, personal finance, e-commerce, music and culture, etc.).

Quizzes and serious games are proliferating in the media, training and learning in general. According to the Cegos Observatory, 40% of the employees in France who did distance training in 2013 followed an online course involving serious games (an increase of 25% on 2010).

40%

of the employees in France who did distance training followed an online course involving serious games

IDATE (the European Audiovisual and Telecommunications Institute) published a study in July 2013 that estimated the serious games market to be worth €1.5 billion in 2013, a figure that could climb to €10 billion in 2015.

Talking point

By grounding learning on enjoyment, we sustain the idea not only that we can always have fun when we learn, but also that we can only learn if we are having fun. To what extent is this true or exaggerated?

What we know

PROVEN EFFECTIVENESS

Studies into the effectiveness of games for learning purposes show that they boost participants' motivation and engagement (Jacobs & Dempsey, 1993; Hogle, 1996; Prensky; Pannese & Carlesi, 2007; Fenouillet, Kaplan & Yennek, 2009; Ben-Zvi, 2010). Learning games also generate interest in the activity of learning (Randel, Morris, Douglas Wetzel & Whitehill, 1992).

Van Eck (2006) believes that game playing is a primary socialisation principle and one of the learning mechanisms common to all human cultures as well as many animal species.

According to Russian psychologist Lev Vygotsky, it is also a major source of socio-cognitive conflicts, through which the subject is confronted with other people's thought patterns and practices. Lastly, game playing helps bring into perspective an ongoing process of cognitive imbalances and problem solving.

According to the latest ASTD (American Society for Training & Development) study, gamification and serious games are very popular with participants: 49% of learners think gamification very significantly improved the quality of their training, while 53% had the same opinion for serious games.

A MUST-HAVE: HIGH-QUALITY PRODUCTION

Serious games are still expensive to develop, though (between €20,000 and €200,000), because the games' production quality (their sce-

nario, aesthetics, resolution, user-friendliness, etc.) is of the utmost importance for attracting and «onboarding» an audience accustomed to the standards imposed by video game publishers.

These budget constraints, along with the collaborative culture that is reaching the training community (as seen in the development of crowdfunding), have prompted a number of companies to join forces in co-financing and co-development initiatives.

What we think about it

So, can we and must we have fun to learn? Is effort a thing of the past?

EFFORT IS CENTRAL TO THE LEARNING PROCESS

«What is learnt without effort is worthless and transient. You must become what you want to be by working your body and mind into a sweat.» René Barjavel, «L'enchanteur».

Learning implies a more or less deep-seated change of representations, an acquisition of knowledge and a foray into discomfort zones when the lessons learnt are put into practice. Basically, learning always involves working on yourself.

BUT... THE NOTION OF EFFORT IS SHIFTING

The type of effort required of learners has changed! They are no longer being asked to learn raw data by heart, but to be capable of finding knowledge when they need it. Michel Serre developed the notion of «memory outsourcing» to capture this idea. He says «new technologies have condemned us to becoming intelligent».

+ This opposition between effort and game playing is also not as stark as we may think

Game mechanics themselves are often underpinned by effort, frustration and an «exquisite pain» principle. Repeating a game sequence 25 times before making it up to the next level is not enjoyable in itself: it's frustrating, tiresome and annoying... But what is enjoyable and satisfying is, precisely, overcoming this difficulty.

In reality, effort is not necessarily suffering and the way it is perceived depends on each person's moti-

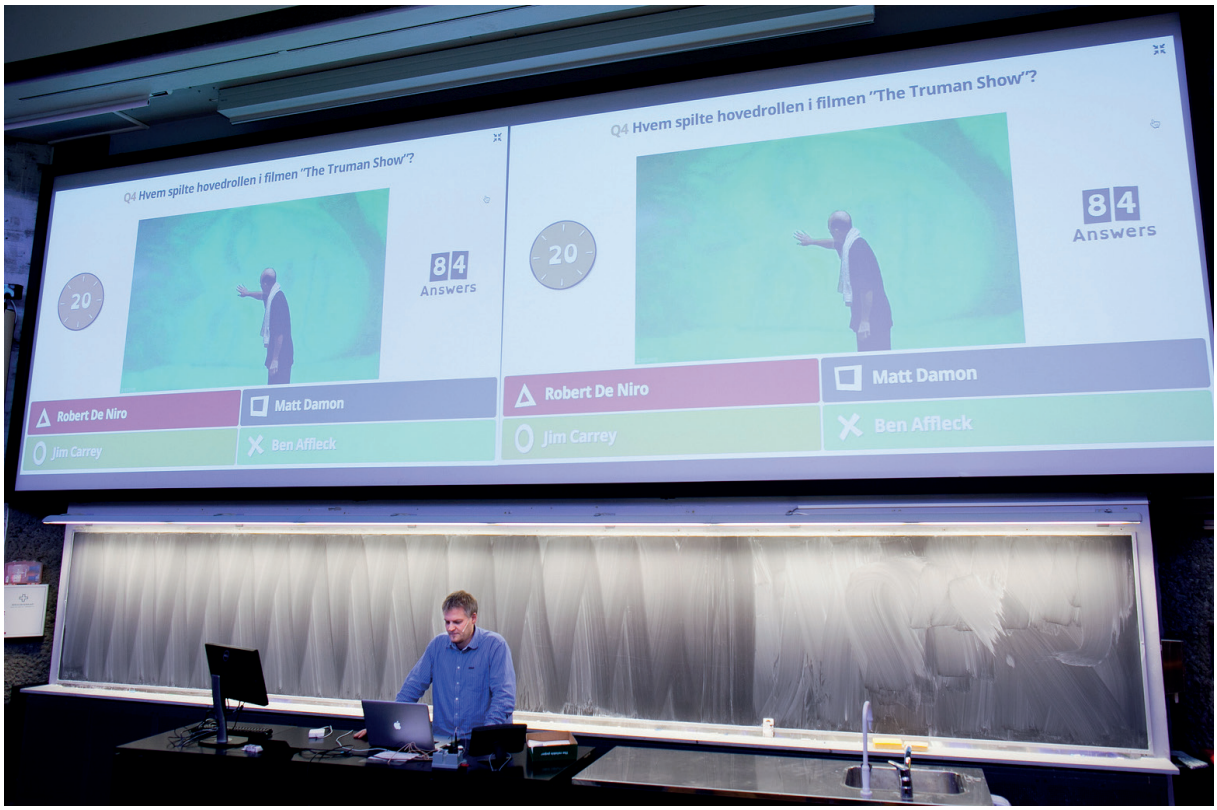


Photo: www.getkahoot.com

vation. A novice guitarist tirelessly practising chords or a dedicated long-distance runner do not «suffer» the same way a non-enthusiast would.

+ Gamifying classroom learning

Game playing is a key learning tool in classroom training, especially to energise a group, step up the pace and get participants more involved. It is particularly effective to use group puzzles to develop the spirit of cooperation, puzzles to assimilate concepts or procedures, and role plays to simulate on-the-job situations, for example.

Some digital tools help make the classroom experience even more fun. For example, digital solutions such as Kahoot or Plickers can be used to test learners' knowledge in the classroom and award points for their performance.

Whatever fun tools or methods are used, it is a good idea to apply the 20-80 rule so that learners don't get off-track in the game, and to avoid falling into the trap of «we had a lot of fun, but we didn't learn much». This means spending no more than 20% of the time on the game and 80% of the training session on analysing and using what happened, and receiving additional input from the trainer.

SERIOUS GAMES: INCORPORATING LEARNING MECHANISMS INTO GAME PLAYING

The success of a serious game depends on several factors. The first thing, obviously, is to meet the criteria for a good video game: an appealing plot, impeccable production (there is no room for mediocrity in virtualisation), a streamlined game interface, and a level of game play that is accessible without being too easy. But for a serious game to be educational, it must also meet the criteria for an effective training programme. This means a scenario that evolves and that transposes the learner's job situation in a realistic or metaphoric way. The plot or the associated mini-games should be divided up into sections that match the learning progression required to achieve the learning objectives (the learning objectives should be broken down into sub-objectives, with regular evaluation of the learning outcomes). Lastly, progress should be regularly charted (not just by awarding points but by explicitly stating the knowledge or skills acquired).

It is a skilful balance between factors that can sometimes be contradictory, so it is absolutely essential to test it on a number of users before launching it.

Screenshot from the 'Time Explorer' serious game.

+ **Time Explorer**: the serious game developed by the Cegos Group for opca-transports.com is a good example of this complex chemistry. Players find themselves accidentally stranded in an ultra-robotised future. To return to their time period, they have to answer quizzes about spelling, grammar and arithmetic. The fun, humorous nature of the game takes the apprehension out of a subject that could otherwise be a cause for anxiety in the target audience.

PERSONAL REWARD AND EMULATION MECHANISMS IN A GROUP

Points, badges, medals... Foursquare-type personal reward mechanisms are good for encouraging learners' efforts and marking individual progress throughout a learning programme, whether classroom or distance. There should be some means for learners to visualise their progress, such as a dashboard, for example.

+ **Playvox** markets a call centre optimisation solution that uses gamification and social interaction. A competition based on each call centre agents' results generates internal emulation and also provides an opportunity to share best practices through the associated discussion forum.

The success factors for these mechanisms are more than ever based on sociability and consideration. If participants are going to be able to compare themselves with and measure themselves against other participants (and sometimes even challenge another learner), it must be done in a good-natured way. Participants must be regularly reminded of the desired learning objective so that learners are not drawn into fierce and ultimately sterile competition.

3.

HAVE VIRTUAL CLASSROOM LEARNING, E-LEARNING, WEBCASTS AND MOBILE LEARNING RELEGATED CLASSROOM LEARNING TO THE PAST?

Background

Classroom training is on the decline (down four points since 2012) and the average duration of classroom training sessions is dwindling: according to the French training and development federation, it has slipped from 89 hours in 2000 to only 30 or 40 hours.

Distance training (e-learning and virtual classroom learning) is gaining ground and now concerns nearly one-third of employees (31% in 2014). There has been a steep increase in webinars (there are over 700 a year at Cegos).

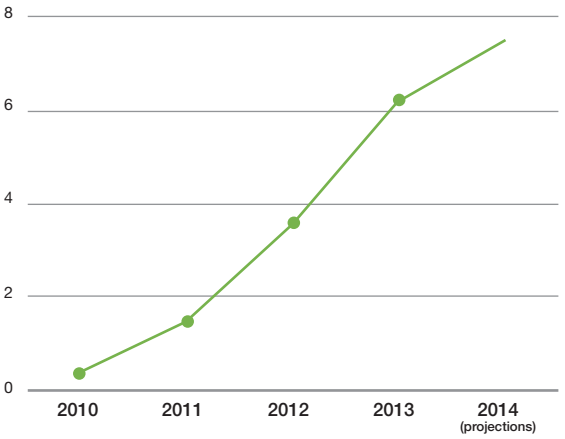
The sudden proliferation of mobile devices and tablets (ownership has increased fifteenfold in three years) ensures distance training of ongoing, long-term development: mobile devices are the essential item for a new generation of e-learning known as mobile learning or m-learning.

Classroom training also incurs logistics costs (venue hire, travel expenses, catering costs, etc.) that many companies would happily forego.

Talking point

Will we be able to do everything remotely one day?

Tablet sales in France (million units)



Source GFK - via ZDNet.fr/chiffres-cles

What we know

+ The gradual emergence of the flipped classroom model

The growing quality of e-learning tools for knowledge acquisition makes it possible to rethink the distribution of knowledge and coaching, and move towards a flipped classroom model. This model combines:

- time spent learning key content or knowledge: through web TV, e-learning modules, online documentary resources or MOOCs;
- time spent putting the knowledge acquired into practice and carrying out applied projects: delivered as classroom training or virtual classroom training, with interaction between learners and between learners and the trainer or tutor.

Over the last two years, hybrid or blended training courses have made spectacular progress in France and now account for 33% of training courses. This equates to a 20-point increase in two years, bringing us close to the European figure (37%).

The aim is therefore to retain a roughly equivalent share of classroom training dedicated to learning content, and shorten the overall duration, if not discard the classroom component altogether.

THE VALUE OF CLASSROOM LEARNING

+ There are several arguments in support of classroom learning

+ Spatial relocation is propitious to the learning process. Stepping out of your everyday work environment is a good way of allowing yourself to think differently, change your representations of a subject and get out of your comfort zone.

+ Temporal relocation helps learners give a subject their full attention in a «sheltered» environment: two continuous days to focus on a subject with no outside demands or interruptions.

+ Group dynamics: sharing the same work-related needs and the same difficulties, and not being the only one in the learner's position helps

create a feeling of mutual trust and assistance, where learners support and encourage each other.

+ **There are a broader range of communication channels available:** verbal/non-verbal/para-verbal on one hand, informative/interrogative/directive/fun on the other. Each learner will respond best to different channels and classroom learning still offers the widest array of interactions.

In fact, there is still overwhelming demand for classroom training in France (91% of the courses delivered in 2014).

IS VIRTUAL CLASSROOM TRAINING A SERIOUS COMPETITOR FOR CLASSROOM TRAINING?

Improved video conferencing technology (video systems and enhanced bandwidth quality) is undeniably making distance communication easier. It has many advantages:

+ **It saves time** by cutting down on the need to travel.

+ **Trainees remain at their workstation**, making it easier to maintain business continuity and handle any work-related emergencies.

+ **It reaches employees** in different geographical locations.

+ **It is more accessible to people with limited mobility.**

+ **It brings knowledge and skills up to date** as soon as new information has to be disseminated.

+ **It lowers the logistics costs.**

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33%

of the courses delivered in France in 2014 were blended courses

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What we think about it

THE CLASSROOM VERSUS DISTANCE LEARNING DEBATE HAS GONE COLD

+ **The real question is synchronous or asynchronous**

The best solution is a mixture of the two in customised training paths that factor in the objectives (work-related and learning objectives), the target audience, the constraints and the resources available.

The choice of the means employed comes at the bottom of the list and should definitely not shape the training programme's design! The array of methods available allows for a multitude of programme designs, tailored to match the type of learners and the course objectives.

The possibility of blending synchronous and asynchronous learning makes it possible to work more specifically on workplace situations. With its '3h chrono' Training solution, Cegos combines these different times and reproduces the classroom ecosystem at a distance to obtain immediate on-the-job results with the learner.

+ **This solution is broken down into three sequences:**

1st hour all together: learn how to use a tool in an immersive, interactive session.

2nd hour one-to-one: apply the tool to on-the-job situations experienced by the learner.

3rd hour one-to-one: consolidate the best practices applied. The trainer gives advice about using the best practices in other situations.

This is a distance-learning solution that reproduces some of the features of classroom learning (interaction between learners and between the learners and the trainer/coaching/principle of mutual trust and assistance).

INCORPORATION OF DISTANCE LEARNING SOLUTIONS PROMPTS BETTER USE OF CLASSROOM SESSIONS

+ Target new objectives

The shortened duration of classroom courses could be dangerous if no changes were made to the training practices and programmes.

If the classroom training is part of a flipped classroom arrangement, the trainer needs to check beforehand that all of the learners have been able to learn the key content. This could be done through an online questionnaire to evaluate the learning outcomes, for example. Otherwise, the risk is that the trainer will have to squeeze both the learning and the coaching into a very tight timeframe.

+ Optimise learning time

Although it is always necessary to work on learner inclusion at the beginning of the course and reassure participants about the objectives, the programme and the course ground rules, these activities can be handled differently so that the learner gets down to active learning more quickly.

CEGOS' «UP AND RUNNING» SOLUTION IS A CASE IN POINT

In a course on creativity, for example, the learners will be asked, right from the beginning, to introduce themselves using one of the five creativity tools provided by the trainer.

+ This will enable them to:

- Discover five tools right from the start
- Practise using one of them, and see how the other learners use the other tools
- Gauge their creativity skills and then set their own individual objectives for the course
- Get to know the other learners and let down their defences straight away, because everyone will have «dared» to put themselves in danger in front of the others, in a benevolent setting.

At the end of the course, they will plan ahead on how to apply what they have learnt, using creativity tools they mastered during the course (for example, some learners might produce a mind map of the actions to take). This forward thinking lets learners finish the course by planning for the future, and prove to themselves that they master the key creativity principles and tools (this will boost their self-esteem and give them the drive to follow through).

In blended programmes, which unfold over a longer period, the classroom sessions will increasingly aim to form or consolidate the community of learners, which will continue to exist outside the classroom course through a forum or some other discussion and crowdsourcing portal. The inclusion and dis-inclusion performed at the very beginning of the course become key moments for this community, because everyone starts to learn together and measure everyone else's progress and hence their ability to contribute.

+ Take advantage of digital technology-enhanced learning

It would be a mistake to overlook the digital learning solutions sold by new market players, often in the form of applications. By bringing them into the classroom, the trainer adds a type of application with which learners are increasingly familiar. This unfailingly streamlines communication and helps learners understand the teaching instructions necessary for effective learning. Including quiz solutions, survey results and QR codes in the classroom session creates new interactions between learners, and between learners and content, building motivation and engagement.

PROVIDE A MEMORABLE EMOTIONAL EXPERIENCE

To enhance classroom training, a new goal is emerging: surprise, make an impression, and leave a lasting emotional imprint. It is no longer a training course but an experience that often uses roundabout methods to achieve its end. This

training method uses activities that help learners achieve their objective by going around the cognitive hurdles and working on participants' representations. Immersive scripting, theatre, role play and metaphorical experience are all applications of this striking training method.

+ **Immersive scripting / story-learning:** Participants are immersed in a highly scripted story or in an imaginary world. Each stage of their adventure is an opportunity to discover or come to grips with new content.

Cegos uses, *inter alia*, these two scenarios:
+ **in iQuest**, participants are catapulted into the medieval world and have to work their way through the various stages of the innovation process, scoring gold coins each time, before they can leave.

+ **in Mad Card,** participants have to build a road between five dolmens, using coloured cards that each have a different cost and a different carbon footprint. The goal is to deliver the road that meets their customer's requirements, on time and within the allotted budget.

+ **Theatre, role play and improvisation**
Learners watch or act out sketches that bear some resemblance to their own work situation, either with professional actors or staged by themselves. For example, during Cegos courses run in partnership with «En Haut de l'Affiche», participants doing a course on sales negotiation take part in a negotiation match. In two teams, they do battle in a real improv competition, using very short negotiation scenarios during which they have to find solutions very fast.

TURN CLASSROOM LEARNING INTO DISTANCE LEARNING... YES, IT CAN BE DONE

As we saw earlier, new digital technologies have not been confined to e-learning solutions. The new technologies have also made it possible to work classroom training into a distance-learning programme. With Cegos Anywhere, Cegos is testing a solution that will enable a learner anywhere in the world to take part in a classroom session.

Embodied by a telepresence robot that can move around in the classroom, the learner can hear and be heard, see and be seen, just as if he were physically present in the room, and enjoy all the benefits of classroom learning.

So classroom training is still relevant today, and we even think it is increasingly valuable because it lets participants get instant answers to the specific problems they are grappling with. The incorporation of digital solutions has also made it richer and more open, and its pedagogical engineering gives the learner a real emotional experience that will embed the knowledge acquired on a lasting basis.

4.

AUTONOMOUS LEARNER: IS THERE ANY POINT IN STILL HAVING A TRAINER?

Background

The array of digital tools accessible to learners is growing. The distinction between corporate and private applications (Google Drive, Dropbox and other personal clouds) is increasingly hazy. The development of BYOD (Bring Your Own Device), where employees use their own devices and software at work, reflects a similar trend.

The 2014 Cegos Training & Development Barometer Survey shows that individuals also train outside the company, using distance learning solutions (MOOCs, blogs, wikis, videos, etc.).

The training & development Reform in France also emphasises learner autonomy. The introduction of the Personal Training Account is aimed at motivating and empowering individuals (and especially young people and job seekers) to train by enabling them to undertake qualifying courses.

Talking point

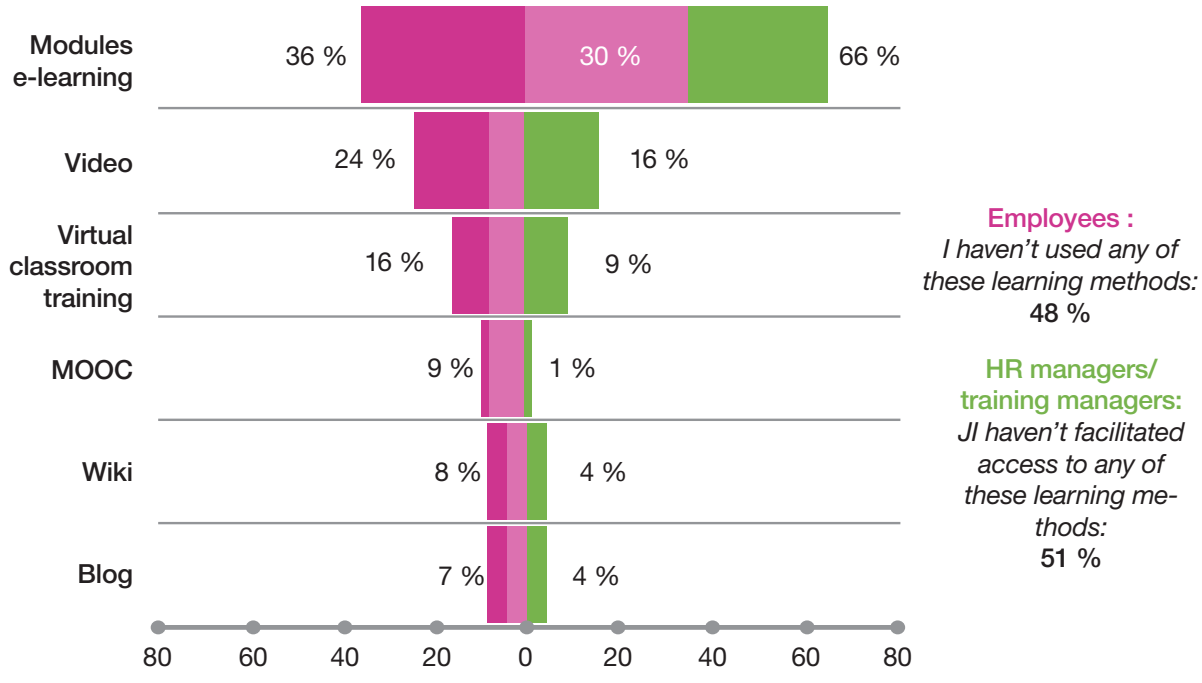
What role can the trainer play in this change? Does the trainer still serve a useful purpose? And if so, what?

What we know

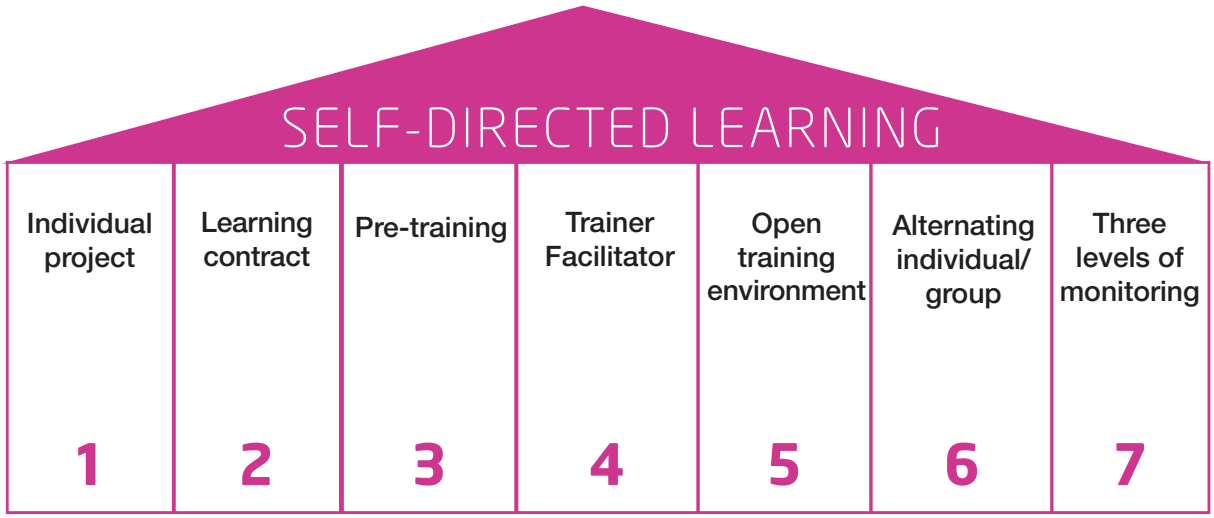
SELF-DIRECTED LEARNING IS A FACT

According to Philippe Carré, author of «Sept piliers de l'auto formation» (Seven Keys to Self-Directed Learning), the learner is both the lead player and the author of his training, and is increasingly autonomous.

Employees: Have you used these learning methods for your work?
HR managers/Training managers: Have you facilitated and/or encouraged the use of these learning methods for employee training?



Cegos Training & Development Barometer Survey 2014



Seven keys to self-directed learning, Pierre Carré.

HOWEVER MORE AUTONOMOUS DOES NOT MEAN MORE SOLITARY

Learning remains an eminently social process. Philippe Mérieux, a university professor and specialist in educational science, believes that «We always learn on our own but never without others.»

The combination of this social factor and the developments associated with digital technology gave rise to the theory of connectivist learning.

CONNECTIVISM, A LEARNING THEORY FOR THE DIGITAL AGE

Georges Siemens and Stephen Downes are the two leading proponents of connectivist theory. The theory's main principles are as follows:

+ **Learning happens through connections in networks:** these networks link up «nodes», which are sources of information.

+ **The purpose of learning** must be to continually obtain up-to-date knowledge.

+ **The connections that enable us to learn more** are more important than the sum of knowledge we have at any given moment in time.

+ **Decision-making** – which relies on the selection of information - plays an active role in the learning process.

+ **It rests on transient foundations** – knowledge is constantly evolving and its useful lifetime has become considerably shorter.

+ **Learning happens in a nebulous environment** whose elements are constantly shifting - it is not always under the individual's control.

+ **Learning may reside not in humans** but in a database.

+ **The most important abilities are:**
  - to be able to distinguish the really important information from what is less important;
  - to recognise when new information invalidates the frame of reference that used to guide decision-making;
  - to look after and maintain the connections in networks.

This is very different to a behaviourist approach, in which the trainer is the only person to hold knowledge and imposes his expertise and his learning pace on the learners.

What we think about it

Trainers are more important than ever in learning programmes, but they must:

+ **Accept** that they will no longer be the sole source of knowledge.

+ **Take into account** the fact that knowledge acquisition will increasingly occur outside synchronous/classroom times, in a «flipped classroom» arrangement, so that synchronous times can be used for applying what has been learnt, interacting, and solving concrete problems.

+ **Broaden** their range of digital technology in order to address learners who have broadened theirs.

+ **Change his temporal paradigm:** the learners' training will no longer be confined to the two days spent with the trainer, but will be a much longer process, in which the trainer can continue to play a role.

+ **Promote** and sustain personal knowledge management by trying to make their learners as autonomous as possible so that they can manage on their own.

NEW SKILLS TO DEVELOP

To fit in with these changes in society and technology, trainers today must be:

+ **More perceptive of psychological aspects:** they must be able to provide situational support and adapt to each learner (not only in the group dynamics).

+ **Humbler:** sometimes the learners will be better informed than their trainer. Trainers must be able to take a critical look at themselves and welcome what the group can contribute.

+ **More digitally aware:** trainers must know how to use digital tools and tap into their potential to up-date some of their practices and successfully blend digital technology and classroom training.

+ **More aware of what is going on out there:** trainers should monitor and curate the latest developments. They need to be very organised and thorough in their monitoring, then share the results with their learners (blogs, Scoop.it, etc.).

+ **More concerned about marketing:** trainers should make the effort to develop their personal brand. Be not only competent but «visible». There is a natural tendency to select «star» trainers. Which is why trainers should be increasingly meticulous about their «personal branding».

> "We always learn on our own but never without others."
>
> Philippe Mérieux
> University professor and specialist in educational science

+ **The @expert solution developed by Cegos meets these objectives**

Using rich media software, it records the trainer speaking as if during a classroom session, in the form of a video recording synchronised with a slideshow.

The advantage for learners is that they have access to the trainer's live speech, but can work independently at their own pace (browsing by theme or by keyword), and use the supplementary resources available through hyperlinks or attachments. This allows trainers to produce whatever distance-learning module they like. It might, for example, present the theory to be learnt beforehand so that the classroom session can focus on coaching. Or the detailed case study used to anchor the knowledge acquired, in this case once the classroom session is over.

5.

THE NEW TOOLS: CAN THEY REALLY MEASURE TRAINING ROI?

Background

The training and development Reform in France, combined with concern about the effectiveness of training programmes, is boosting demand for training evaluation.

Satisfaction surveys, which are widely used today, are a vital part of instructional engineering and can prove invaluable if the right questions are asked.

However the emergence of new approaches and new tools suggests that training professionals may be able to go a step further to demonstrate the value of the programmes they offer.

Talking point

Can the new statistics tools and data really measure the effectiveness of training programmes?

Is it strictly necessary to measure the return on investment (ROI) for training courses?

What we know

CAN DATA PROVE ROI?

Today there are increasingly efficient tools for measuring the time spent and the attention given to online training programmes. The Tin Can API and other «learning analytics» can capture data about course participants' activities in relation to the programme, and observe their interactions with each other.

Automatically calculating interactions makes it possible, for example, to measure the number or frequency of online users' connections to the training portal, the type of documents they shared, the average duration of their visits or of the interactions among participants...

Naturally, the data has to be de-identified first to ensure privacy and CNIL ("Commission Nationale de l'Informatique et des Libertés", a French independent administrative authority, responsible for ensuring that information technology remains at the service of citizens) data protection compliance, but it is a boon for the industry.

What we think about it

FOCUS YOUR EFFORTS ON THE SUCCESS FACTORS

Admittedly it can sometimes be relatively simple to assess a training programme's ROI. For example, Cegos conducted a training course for salespeople in a retail phone store. By comparing the performances of two groups of salespeople, one of which had been trained and the other not, it was possible to identify the impact of the training on the sales figures.

But, even if we know how to assess ROI, we also know that an accurate assessment often costs far more than the training programme itself.

Measuring the ROI for a company starts with asking «what will happen if we don't do anything?». This means weighing up the risks of not doing any training: a lack of understanding of corporate strategy, inertia, resistance, individualism, apathy, staff turn-over, etc.

Moreover, it is often more cost-effective to focus on the success factors for a training course rather than on its evaluation afterwards:

+ **Prepare beforehand:**
introductory presentation, seminar, course notebooks, teasers, etc.

+ **Get the learners involved:**
get them to think about what they stand to gain from the training, the objectives they can set themselves, help them if necessary to compile an application for certification, etc. When the time comes to evaluate the course, ask the learners what they got out of the course, about their level of

confidence and engagement about putting what they learnt into practice: “do you feel comfortable about applying these new tools on the job?”»…

+ Set up post-course support and guidance in the workplace by making it easy for the front-line manager or an in-house or outside tutor to get actively involved.

USE THE DATA TO FOCUS DEVELOPMENT EFFORTS

+ Statistics can be misleading: the course attendance rate does not measure the extent to which the knowledge acquired is transferred to the workplace, which can only be measured on the job - which is far more complicated.

Even so, the data can also be used for lexical analysis, which evaluates the topics most frequently discussed and the questions most frequently asked, and ultimately shows what learners had problems with in the programme. With this approach, we can look forward to a future in which development work (and budgets) will be focused on the parts of the training programme that most need it.

FROM ROI TO ROE

There is an alternative to measuring ROI, which is to measure ROE, the Return On Expectations. This approach, widely publicised by James and Wendy Kirkpatrick in a 2010 article, shifts the emphasis to achievement of the operational objectives.

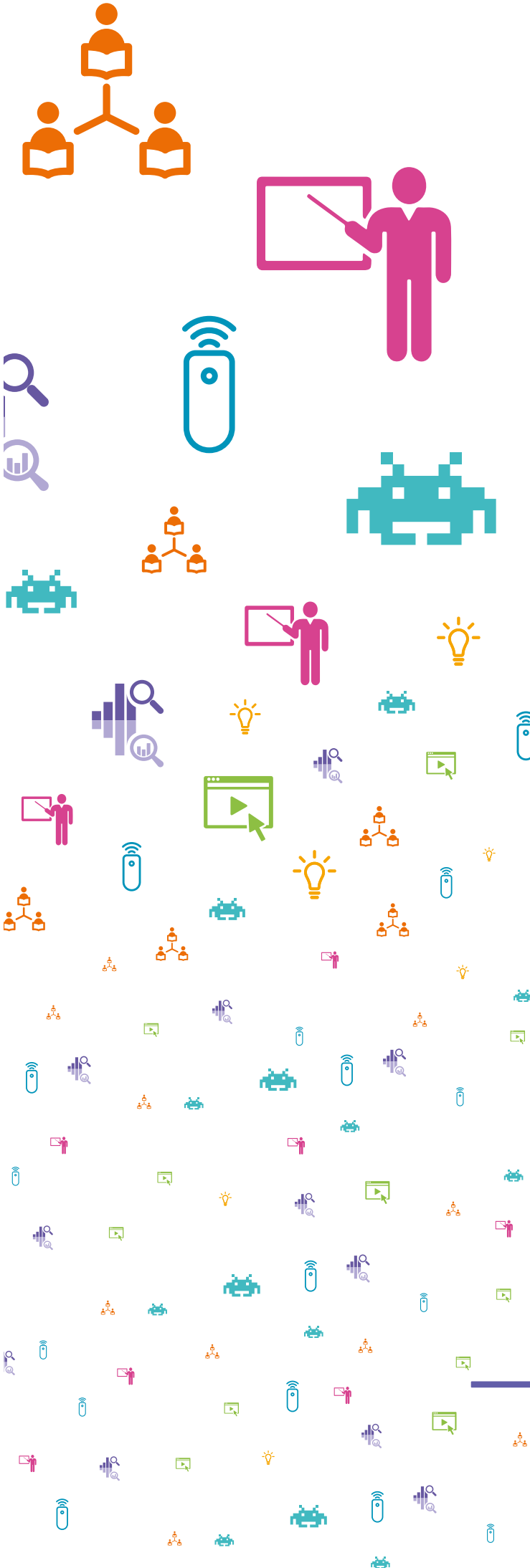
+ ROE can be evaluated on four levels:

1. The «expectations», defined well before the training project, are discussed by all of the stakeholders, from the training manager up to senior management. It is an opportunity to check whether the course was indeed the right solution to meet the expressed needs.

2. The expectations are then translated into measurable results, expressed in clear, general terms. The question asked at this level is: what results will tell us that the course is a success?

3. These measurable results are then used to identify - and ultimately achieve - the critical behaviours expected on the job.

4. Lastly, the behavioural training objectives are defined, in direct relation to the targeted behaviours (they are therefore expressed in such a way



ROE and ROI: differences and complementary features

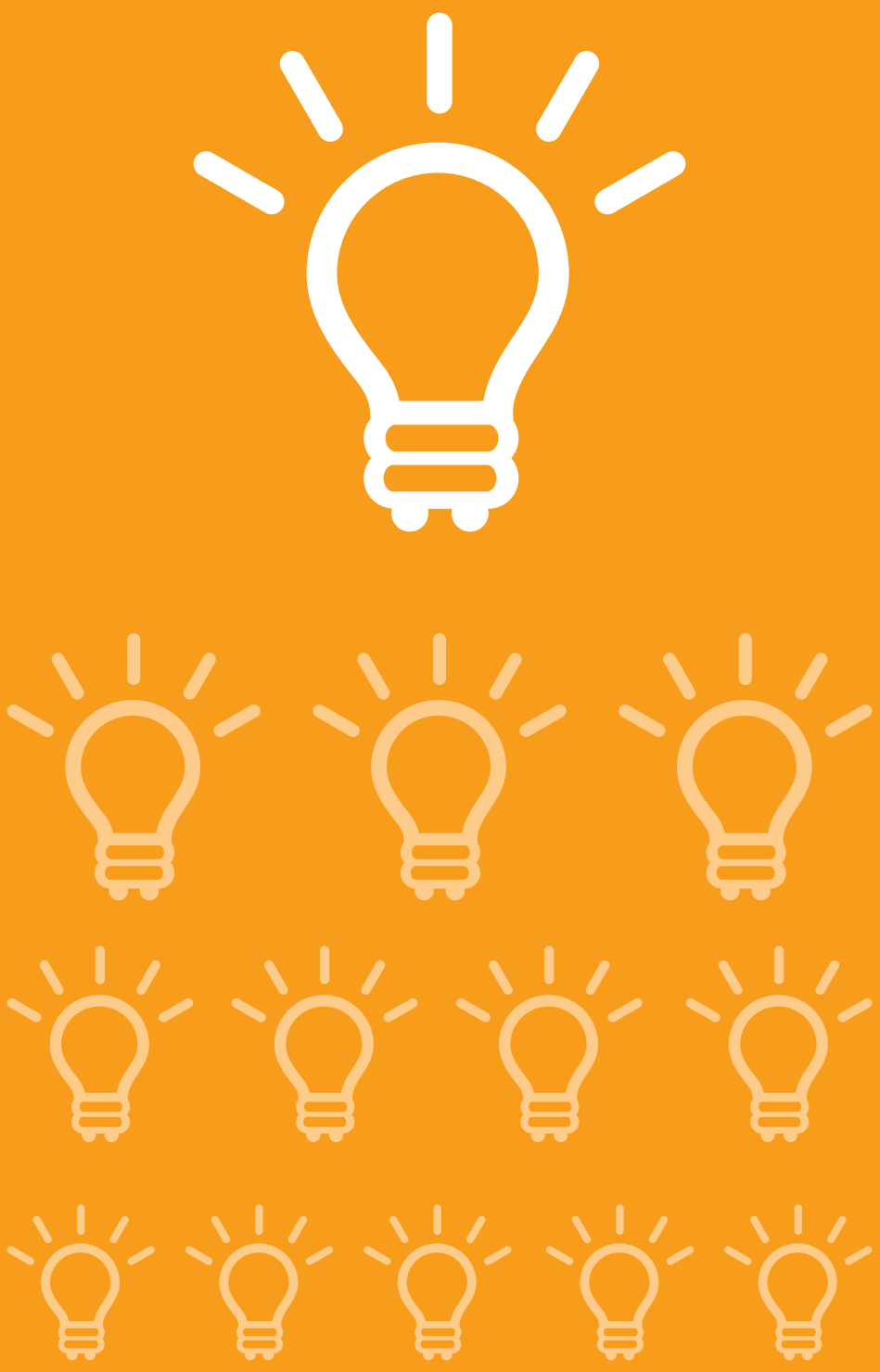
ROE (Return On Expectations)	ROI (Return On Investment)
Return on expectations	Return on investment
Proactive, business partnership approach that unifies team	Defensive isolation approach that separates functions
Defines training as a contributor to key business results	Defines training as an end in itself
Value defined by business stakeholders in cooperation with training	Value defined by predetermined formula
Focus on comprehensive evidence and a compelling story of value	Focus on single metric of numeric proof
Easy to understand, flexible and cost effective	Complex, rigid and expensive

Source: James and Wendy Kirkpatrick (2010)

as to be observable and measurable on the job). These objectives will serve as a basis for designing and delivering the training.

The value of the training is therefore based on concrete proofs, evaluated on the job and in relation to professional behavioural objectives.

Moreover, by getting all of the stakeholders involved beforehand, the ROE approach is an excellent way to elicit their support for the training project: this, in itself, is a powerful factor in its effectiveness.



6.

IS IT ABSOLUTELY NECESSARY TO **INNOVATE** IN TRAINING?

Background

Digital technology has broadened the range of training tools available by introducing such tools as MOOCs, rich media, gamification, serious games and augmented reality, among others. Innovations are coming and going in quick succession, sometimes giving the impression of a frantic race for the latest trendy solution.

Talking point

Should we succumb to the siren call... Or wait until an innovation has proved its worth before incorporating it in our learning programmes?

Do the benefits to be gained from certain innovations cover the risks and the costs of developing and distributing them?

What we know

Learning methods have not fundamentally changed, but the pace, environment and purposes of learning in the professional sphere have. Today companies must tackle new challenges:

+ **Upskill employees more quickly** while minimising the time they have to spend away from their workspace.

+ **Appeal to employees:** the resources available on the internet are often fun and enjoyable, so the training provided by the company is increasingly expected to be convivial, enjoyable and on a par with the resources employees are accustomed to finding online.

+ **Demonstrate the training effectiveness,** if not the cost effectiveness, of training initiatives.

What we think about it

INNOVATION IS NOT AN END IN ITSELF, BUT A MEANS TO BOOST VALUE CREATION

What is the value of a solution? It is the ratio between its usefulness in the beneficiary's eyes (such as a better understanding of a concept) and its cost (all of the means used to enable this understanding).

The key question we should be asking ourselves is therefore: where can innovation create value for the company?

+ Cegos proposes to look at the question from 5 additional angles:

- Innovation in content to capture and disseminate emerging trends, as they appear, in functions whose environment is evolving faster than the line-of-business reference documents.
- Innovation in training programmes : to enable a gradual acquisition of content, at the learner's pace, and at a lower cost to the company.
- Innovation in the training methods: to create even richer interactions between learners and between learners and the content.
- Innovation in the emotional experience: to help embed knowledge for the long term and make learners keen to use it on the job.
- Innovation in services: to make the choice, delivery, administration and invoicing of training courses more convenient, more efficient and less expensive.

It is of course possible to innovate in several areas at once, but in some projects, there is more to be gained from an innovation in data exchange that reduces course administrative costs than from an innovation in actual training methods.

EMPATHISING WITH THE LEARNER

Before trying to address needs that the learner has not yet expressed, it is a good idea to identify the minor annoyances that plague him today and which could be eliminated through innovation.

For example, many learners say they are frustrated by the training materials, which are too heavy, rapidly outdated and difficult to find or re-use on the job. So here are a few suggestions for innovation!

There are new tools available now that let users access resource documents from any device, so that they can get the information they need when and where they actually need it.

Cegos' «My training book» solution lets users not only edit their documents and notes but also access context through audio or video commentaries. Cloud synchronisation also ensures uniform documents by constantly updating documents from one device to another. Focusing on the learner experience and the minor annoyances it generates is a good way of ensuring that the innovation will be rapidly adopted and demonstrate its usefulness.

IT IS OFTEN HARD TO ESTIMATE THE VALUE OF AN INNOVATION WITHOUT ACTUALLY USING IT

Often the repercussions of an innovation extend beyond its original purpose. For example, starting a Twitter discussion thread to accompany a learning path and let learners give feedback on and assimilate part of the content will also be an opportunity for some of them to learn to use Twitter and therefore acquire two skills for the price of one.

On the other hand, occasionally a company will have an exaggerated idea of the utility of certain solutions, which turn out in the end to be far less promising than originally imagined. This was true of the first learner forums. The communities of practice and other forums only really caught on a short time ago, after years of prompting and prodding, thanks, in part, to the emergence of a new job role: community manager.

It should also be borne in mind that you only realise how complicated it will be to deploy an innovation once the process is under way. What will the real costs of implementing it be? How extensive will the change management be for trainers and learners? It is hard to answer these questions until you're actually up to your elbows in it.

But in that case, if there are doubts about the utility and costs of implementing an innovation, how do you decide to go ahead and launch it?

The answer is to run very small-scale trials that will return user feedback without incurring heavy development costs. This is the best way to spot the handful of really useful ideas that will generate lasting value... providing you are failure-tolerant.

OPEN INNOVATION: FAST TRACK TO SPOTTING WINNING INNOVATIONS

Not all training departments have the opportunity (or the critical size) to test innovations and spot the ones that will create value.

This is why Cegos set up a structured innovation initiative in 2012. The Group decided to work in collaboration with its customers, sharing or

co-developing certain trials with them and incorporating tried-and-tested innovations in its solutions.

+ **The initiative is broken down into 4 key stages:**

+ **The intelligence phase** is used to pick up weak signals and trends in technology, science, legislation, sociology and instructional design. International monitors report intelligence information, which might be technological solutions for mediatising content, or emerging trends.

+ **In the creativity phase,** Cegos runs regular applied creativity sessions to convert these signals and trends into learning solutions. Two additional factors make these sessions very effective:

- the use of strawmen: the typical features of Cegos learners of the future;
- the sessions take an open innovation approach and invite stakeholders from both inside and outside the training community.

+ **The testing phase,** also known as the prototyping phase.

+ **The deployment phase** is set in motion once the prototypes have demonstrated their value for learners.

> “Failure comes part and parcel with invention. It’s not optional. We understand that and believe in failing early and iterating until we get it right. When this process works, it means our failures are relatively small in size (most experiments can start small), and when we hit on something that is really working for customers, we double-down on it with hopes to turn it into an even bigger success.”
>
> **Jeff Bezos**, CEO, Amazon

7.

ONLINE TRAINING: HOW TO KEEP MOTIVATION STRONG WHEN ZAPPING IS THE NEW NORM?

Background

Learners are increasingly able to find information for themselves, thanks mainly to widespread use of the internet (Google, Wikipedia, etc.).

There is a huge body of tutorials, how-to videos and discussion forums by line-of-business experts online, making it quick and easy to find the solution to many work-related problems. So what does an ultra-connected learner stand to gain from the distance or blended training courses offered by his company, which are not as instantaneous or fast as his own search results?

And if the learner has to take the training course anyway, how can the trainer get him lastingly engaged in the course when he has to make time for it in his everyday workflow?

To keep learners' motivation strong, many think the answer is to shorten the average duration of e-learning solutions. The duration has been cut down to 10 to 15 minutes, or even much less in the case of videos, whereas it used to be more like 30 to 45 minutes just a couple of years ago.

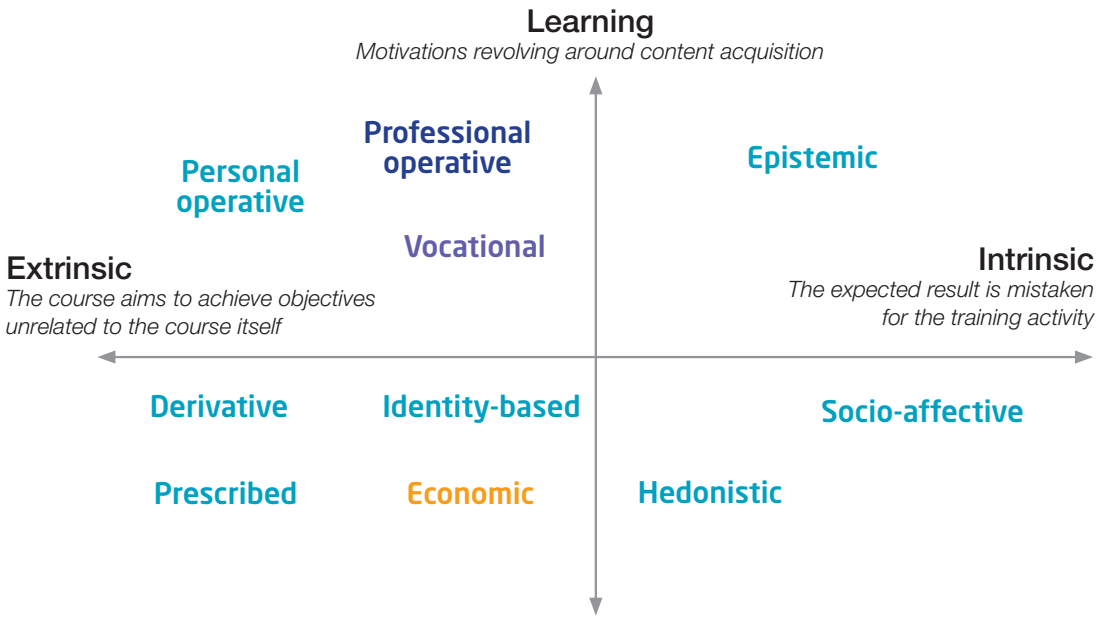
Talking point

Can motivation, which is a decisive success factor for a training course, be maintained from a distance?

What we know

Our lifestyles and our fragmented digital practices increase the risk of diluting our motivation for distance-learning courses, as shown by the high drop-out rate for MOOCs.

Moreover, the question of how to keep school students motivated in the digital age is a broad-based issue that has the French national education system worried and is not specific to the education and training community.



« L'apprenance : vers un nouveau rapport au savoir », Philippe Carré. Ed. Dunod.

Philippe Carré devised a model that presents the different motivations of the learner. These motivations are seldom unequivocal: it is more a matter of working out which of the many motivations is the «dominant» one.

It is easy to deduce from this model that these motivations should always be taken into consideration when designing a training programme, since they underpin the achievement of all of the objectives the learner has set for his training, whether implicit or explicit.

In addition to working out what prompts an individual to train, it is interesting to note that there is often a misunderstanding in companies, which might explain, at least in part, the gap between the course design and the way its users perceive it. In his motivation model, Philippe Carré underscored the difference that often exists between HR departments' motivations and employees' motivation when courses are being organised. HR departments often have economic objectives (cut costs, sell more, etc.) while employees are more motivated by a desire for greater personal fulfilment in their work or a desire to increase their value on the job market (vocational objective). The annual Cegos survey has even revealed the predominance of the «professional operative» motivation (do one's work better) over the career advancement motivation.

What we think about it

MOTIVATION CAN'T BE FORCED

The learner has to be involved and made to feel personally responsible. One of the success factors for a course lies in its «co-construction by the learner himself». The good news is that e-learning modules, more than any other course format, provide ways to engage the learner and support him through to the end of his training:

+ **Needs targeting** can now be refined using the various online evaluation and self-assessment tools. Right from the beginning of his training, the learner can be guided directly to a suitable learning path for his level of competency, with a very clear picture of the benefits he can expect to reap.

+ **Defining learning objectives** is made easier by the use of specific online training modules. For example, a video will show a specific movement, the learner can join an online community to tap into other people's knowledge or obtain explanations, etc.

+ **Answers to specific situations** can be provided more rapidly. Tutoring by subject-matter experts, either online or in classroom situations, and either synchronous or asynchronous, has become an increasingly common feature in companies' blended training programmes. In 2011, tutoring by subject-matter experts was a training method used in 20% of the blended training projects entered in the e-Learning Excellence Awards (a ceremony organized by Cegos which distinguish for 6 years the best multimodal learning systems). This percentage has steadily risen, reaching 60% of the projects entered in the 2014 edition.

+ **There is greater responsiveness to changes in job fields and knowledge,** mainly as a result of intelligence and efficient curatorship of information.

+ **We are finally able to customise training** to suit people's character and psychological make-up. The more the formats offered match the learner's preferred learning channels, the more effective the training will be (one learner might prefer a book, another a series of videos, another articles, yet another quizzes, etc.). Digital solutions offer enormous possibilities in this respect.

This notion of customising learning strategies is one of the essential keys to activating learners' motivation.

This is why training portals are becoming the norm: they offer several different types of training methods, suited to individual learning preferences. Learners are offered a standard training course, but are free to choose to suit their affinities (entry by type of resources), the time available, and the problem they want to address first.

Successful training programmes are those that can cater for each learner's preferences. A good example of this is the CFPB (banking industry

training centre), which won the Cegos e-Learning Awards in 2012. The organisation set up an extensive training programme on the theme of «anti-money laundering and counter-terrorism financing». The programme owed its success largely to the very flexible format of the learning modules in synchronous and asynchronous mode: e-learning modules, quizzes, presentations, classroom learning, etc. Its success also stemmed from the fact that the exercises, which were based on real-life examples, were both fun and serious. And lastly, the highly personalised nature of the practice exercises: participants could choose between three learning styles: «guided», «supported» or «free». The result was a «bespoke» training course, tailored to each participant's level of experience.

HUMAN RESOURCES MUST EVOLVE TOO

Today the role of Human Resources departments and training managers is more to fuel the motivation ecosystem than to build courses. The aim is no longer simply to train people: we also need to create the right conditions for people to learn.

+ Personal Knowledge Management is a key skill, and one of the foundation skills identified in the training & development Reform. Quite apart from the legal requirements, it is a skill that allows the company to benefit from all of its employees' individual initiatives.

It also lets employees go «over and above» the training programmes offered by in-company training departments. Learners no longer train out of obligation but because they see the training offered as complementary (and doubtless more reliable) to any courses done outside the company setting.

To reap the benefit of learners' self-study initiatives, companies need to let out the reins, let learners study where they will, and even accept that they might not follow the course through to the end.

CONCLUSION

Digital technology is not completely changing everything, but it is leading to significant changes in the ways people learn and teach. Classroom training is not about to disappear, but is on the decline today: the focus has shifted to interaction, putting learning outcomes into practice, and experiential learning, rather than simply knowledge transfers. We will always need trainers, but trainers will have to change their role and become more of a facilitator-coach than a teacher-expert handing down knowledge. Human resources must evolve too: support and encourage employees' autonomy and give them a greater say in their own training.

Classroom/distance, synchronous/asynchronous... The trend is currently towards a mixture of genres - blended learning - which makes the most of each type of learning, whether on or off-line. There is no good or bad training programme as such, just different target audiences and time considerations. It is the role of instructional engineering to build a variety of programmes and «tailor» them whenever possible. They should be suitable for the new fragmented, community-centric learning programmes, while still achieving ROI objectives.

In short, the aim is to make the best possible use of the new tools, without forgetting the abiding principles of sound teaching practice, which do not always go hand-in-hand with technology. Central to these principles is the ability to motivate the learner by factoring in his psychological make-up, the context in which he will be learning, the company's constraints and his own objectives, which should be set down in detail.

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Technological advances and changes in society are also creating new challenges for training managers, HR managers and trainers:

+ **Hone the design** of learning solutions, because learners will compare them to what they see every day in their personal sphere: the overall experience has become just as important (if not more important) than the perception of usefulness.
+ **Leverage the strength of communities,** which are a powerful vector for motivation and content assimilation, if they are well organised and managed.
+ **Make smart use of the data** on employees' individual learning behaviours, to give them more customised, more efficient solutions.
+ **Explore the possibilities** opened up by advances in artificial intelligence, as tools for seamless device-enabled learning and coaching across learners' mobile phone, tablet or PC.

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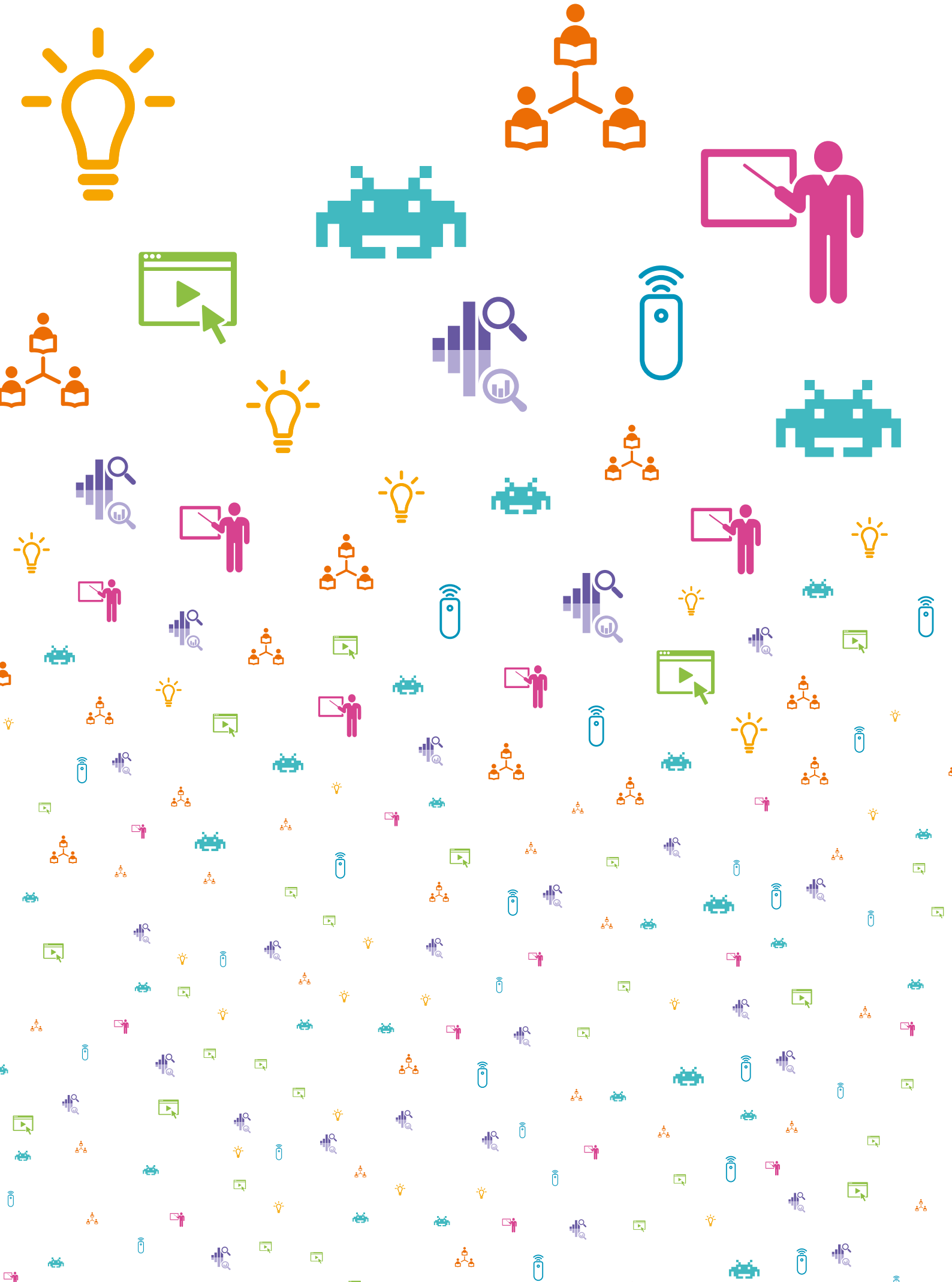
Join us on this journey. Since its inception almost a century ago, Cegos has taken numerous technological and cultural changes in its stride, while keeping its sights firmly on the essential: the learner.



About the Cegos Group

Almost a century of experience

Turnkey and tailored learning solutions (classroom / e-learning / blended learning)

Operational consultancy - Managed Training Services

€200 million in revenue

1,000 employees and more than 3,000 partner consultants

Operating in 50 countries

€25 million invested in R&D since 2000

Training 250,000 people a year, a network of 1 million learners

12,000 bespoke training projects a year for our customers

1,600 distance learning courses, in 12 languages

Discover our e-learning expertise

elearning-cegos.com

Keep yourself informed of the Group's activity

cegos.com