Reflective Learning in Large Companies – can it work?

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Abstract: A growing number of universities and companies are now becoming focused on promoting learning that is not merely instrumental. These aspirations refer to deep learning, transformational learning, critical learning, intentional learning, reflective learning and lifelong learning. Our primary goal is to present several ways in which lifelong reflective learning can be effectively and consciously promoted within large companies. The term reflection is used with two meanings. One would be the process by which an experience, in the form of thought, feeling or action is brought into consideration (while is happening or subsequently) and the other the creation of meaning and conceptualization from experience and the potentiality to look at things from another perspective (critical reflection). We propose the following solutions: modular classes, open engagement lectures, online live learning, virtual classrooms, action group learning, immersive e-learning applications, project-based e-learning and any valuable combination of these. As industrial experience shows, integration of these models and methods to create a learning and development program and to incorporate it in the daily working schedule provide a consistent solution for education in the long run.

1. Introduction

A growing number of universities and companies are now becoming focused on promoting learning that is not merely instrumental. These aspirations refer to deep learning, transformational learning, critical learning, intentional learning, reflective learning and lifelong learning. Our primary goal is to present several ways in which lifelong reflective learning (RL) can be effectively and consciously promoted within large companies. The term reflection is used with two meanings. One would be the process by which an experience, in the form of thought, feeling or action is brought into consideration (while is happening or subsequently) and the other the creation of meaning and conceptualization from experience and the potentiality to look at things from another perspective (critical reflection).

Learning contexts in higher education or other education forms are social constructs. Knowledge therefore is socially constructed. Essentially, the context of learning and what the learner perceives, consciously or not, as the ability to think, feel and act in any situation is crucial to the means by which that person becomes a transformational learner. Transformational or critical learning requires conditions that enable the learner to reflect upon her/his learning not only by oneself but also along with others. Moreover, given the socially constructed nature of knowledge and the fact that meaning is created

in relation with others, reflection and creation of meaning are inevitably a social process. We create the conditions for reflective learning through reflective dialogue with others. In this new context of learning, which is student-centered, the teacher becomes a facilitator of learning and a creator of the conditions leading to reflective dialogue.

This transition from teaching subject content or demonstrating experiments to facilitating reflective dialogue is not a straightforward process. It is difficult for both teachers and learners because of the traditional process of instruction. People waste huge amounts of time attempting to memorize facts, procedures, and ideas. Such memorization does not have a great impact on behavior and definitely does not translate into learned skills. In addition, many times the expertise is unconscious and it has been obtained in years of practice and experience.

In this paper we present possible solutions for starting the construction of reflective instructional environments as combinations of modular classes, open engagement lectures, online live learning, virtual classrooms, action group learning, immersive e-learning applications, project-based e-learning etc. The paper is organized as follows: Section 2 is a brief summary of the theory of reflective learning, Section 3 presents some solutions for reflective learning from an academic point of view, Section 4 introduces industrial perspective on this matter, and, finally, we present some conclusions.

2. Reflective learning – the theory

There is little agreement among researchers about what learning is and no theory of learning includes all the activities involved in human learning. Early research on learning, which has been dominated by behaviorism and cognitivism, limited itself to measurable, observable behavioral results. The learner has been seen as a black box, fed with intellectual input. The outcomes of the knowledge passing through process have been reproduced in order to be measured. Later research have tried to improve things by acknowledging the individual differences between learners and by emphasizing the importance of teaching methods and techniques, as well as recognizing that learning and knowledge is created within a social context [BM98].

Research goes even further and consider categories of learning (quantitative increase in knowledge, memorizing, acquisition of facts, methods etc. which can be retained and used when necessary, abstraction of meaning, interpretation to understand reality and development of person), learning strategies (serial, holistic), and learning approaches (surface, deep) [BM98]. Learning can be seen also as being multi-level [BM98]:

- *First order learning* is confined learning, in which facts or skills are defined by the context, for example the classroom;
- *Second order learning* takes the learner outside a restricted framework enabling connections and comparisons to be made, encompassing both the objective material and subjective factors. Learning by doing is on this level of learning;
- *Third order learning* involves discovering the ability to doubt on validity of previous perceptions, taking a meta-view both of the content and of the process and being constructivist and reflective. This ability to contextualize the learning process and to de-construct it in a dialogue with other is an important component of reflection [BM98, LC01].

Educationists identified that various domains of learning cover three aspects: *cognitive* (knowing), *conative* (doing), and *affective* (feeling). Of course these must be considered as integrated in the socio-political context. These abstractions may be presented in terms of outcomes of learning in each domain, respectively: knowledge, (inter-) actions, and emotions. Traditional learning systems have been emphasizing on cognition and neglecting development of conative and affective intelligence.

Thus a teaching and learning environment can be seen as a "critical" matrix [LC01] between contexts (support, independence, interpersonal) and dimensions (intellectual, practical, personal, social). Its aim is not to suggest that certain contexts are closer to specific dimensions, but to point out that these contexts relate to and subsume all dimensions and that they may usefully overlap within the learning environment.

Other very interesting finding in the literature is the concept of single- and double-loop learning. Single-loop learning leaves the theory unchanged and has been described graphically in the well-known diagram of Kolb, where aims are established on the basis of theory, action is taken, and, on the basis of this experience, a new action or plan is devised. Double-loop learning instead challenges the established assumptions and the underlying values are changed.

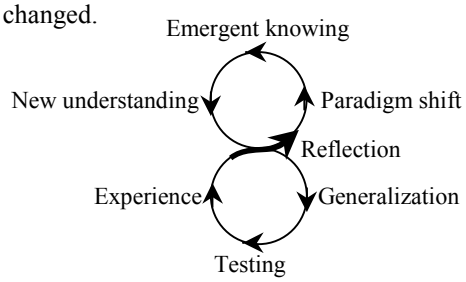

Fig 1. Single- and Double-loop learning – adapted from [BM98]

The curved arrow from the joint point represents the reflection point where the learner becomes aware of doubt or disturbance in relation to an existing paradigm. The double loop paradigm offers the potentiality for paradigm shift through reflective dialogue, in terms of knowledge, self and action. The energy to fuel this change of trajectory is emotion. The combination of a thinking neo-cortex fuelled by powerful emotion represents the source of energy required for many endeavors, including learning [BM98].

The key requirements for reflection are dialogue, intention, process, modeling and the personal stance. Knowledge is not just a static product; it comes up through the communication between educator and learners and between learners themselves. Prior conditions for reflection require the educator to be aware both of the process and intentionality to promote a transformatory learning instead of transmissive learning, and of the fact s/he is modeling this process. An understanding of learning as a human activity is influenced by the philosophies held about the humans. Such philosophies are present and influential in the stance of every teacher, whether or not s/he is aware of it, and may therefore significantly affect one's teaching approach [BM98].

The learner, by engaging in an active process with the educator and his/her co-learners through reflective dialogue, begins the journey to greater agency, autonomy and independence rather than remaining dependent and passive. These relationships must be

mutual [BM98, LC01]. In facilitator's role is embodied knowledge, self and world, the three domains of expression incorporated in critically reflective learning, as opposite to traditional teaching which has been focused only on knowledge.

Reflective dialogue can take place on five levels: action (here we have propositional knowledge - that refers to things, concepts, ideas, which can be in action and/or in use), reflection-in-action, description of reflection-in-action, reflection-on-action and group reflection on the reflection-on-action [BM98]. Reflection of a learner's practice may take place within/following actions, either by oneself or with others.

3. RL for large companies – from an academic point of view

Open engagement model for lecturing

Traditional transmissional lectures, may they be in universities or companies, are a good way to deliver content to a large number of learners cheaply, but they do not provide for genuine learning [Sc02, LC01]. If lecturing is to be justified educationally, it must be done in terms of the one overwhelming advantage it has over all other methods of teaching: the unique experience of live, face-to-face contact with a large number of learners. Being "live" provides a great opportunity for engagement and dialogue. Being "large" gives to the dialogue the potential for a tremendous sharing. These should not be underestimated or devalued. They create the premises for a broad mutual intellectual experience of "being where the action is" [LC01]. A possible way to benefit from this view implies that traditional lectures need to be re-envisaged as a large-scale dialogue in which both lecturer and learners are really being engaged.

A new model for open-engaging lectures can be used also as a reflective approach for learning. The traditional model focuses on the information of the lecture. The lecturer acts generally as an instrument for transmitting the information ("get it out") to the learners. The implicit way in which information is being sent is a linear monologue. The focus of the engaging model is on the process in which the lecturer is committed to engage the learners in a real dialogue and to communicate the knowledge ("get it in"). Designing a lecture from the perspective of this engagement model is essentially a question of human encounter design. To create conditions for reflection one should provide time for students to:

- digest the material, to reflect upon it and to begin to construct their own personal knowledge from it. This may consist simply of few minutes out for reflection, e.g. around a specific question;
- share important ideas and points of current part of the lecture with neighbors which could result in pertinent questions for lecturer;
- form small groups to take the material further, as for a free-flowing discussion or to set a task to be addressed together (including outside the lecture).

These activities for encouraging reflection can be used separately or combined. Of course, learners need some preparations for acceptance and development of such interaction techniques. Lecturers as well, need to develop and practice their creative skills to manipulate them properly. In addition, curricula and syllabi must be designed accordingly.

Action learning

Action learning (or Learning Set) is a group-based approach to learning. A learning set is a process by which the group identifies common learning needs and meets them within the group through shared learning or through external expertise or facilitation. As learning sets are based on self-directed learning, participants can decide the particular topics they wish to cover and how they wish these topics to be covered. It provides a confidential forum that assists participants in testing and clarifying ideas and provides additional motivation for each individual to take action as well as a support network to try out ideas with. The set will generate explicit ground rules for operation in order to ensure effective work environment. These must refer confidentiality, honesty, empathy, the fact that one person speaks/is-presenter at a time etc. Learning sets can comprise of multi- or uni-disciplinary groups.

Each set member, other than the facilitator brings a real issue/problem/project to the set and the whole set works on the issue for the benefit of the person presenting it. The goal for each individual presenting their issue is to be able to take action on some aspect of the issue, to reflect upon and to learn from the actions as the issue is progressed. A typical learner set meets for three to four hours every four to six weeks for a cycle of meetings over an agreed period (for example six months or one academic session).

In case of a company the frequency with which the set meets depends on the target group. If the group is concerned with a particular learning issue (an application software package, a new procedure etc.) probably the learning period is shorter and the meetings have to take place twice a week. For a managers' group, if the training period is over a longer period of time, these meetings can be every other week.

The group meetings are supposed to be interleaved with regular training sessions that can be traditional or online. The group can also take advantage of being all the time online with the other members, via a chat facility in order to get help just-in-time when they need it. Moreover, if the anonymity is an issue this can be fixed easily by using fictive users for the chat sessions.

The facilitator enables participants to use reflective dialogue to take ownership and responsibility for their learning with other learners as colleagues. S/he creates a learning climate, while share responsibility for it with set members, and ensure periodic reviews, feedback and reflection. The set member, by taking turns, will present their specific problems and will get support from the group. The aim here is, as in all the interactions and dialogues in the set, to enable the presenter to understand her/his issue, to own it, to take responsibility for it and to learn during this process. In addition, set members will help the presenter to take some specific actions on the issue that have to be clear and feasible. In subsequent meetings the presenter will be invited to report on the results of these actions and to reflect upon what actually happened. The object of the interleaving cycle of action, reflection and learning is not only to enable progress for learner's project but also for the learning process through the changing situations [BM98, LC01].

What is different in action learning from usual learners' interaction is that the presenter is given time and attention by the set members and the facilitator. The other members of

the group are not expected to say what the presenter should do, but to give her/him some ideas to help re-frame and re-conceptualize her/his own situation [BM98, LC01].

Immersive e-learning applications

The beauty of e-learning is that, in theory, it lowers and even removes the two biggest traditional barriers to a workforce's continuous learning and improvement: time and money [Sc02]. The hope driving e-learning when is applied to companies is that every employee is only one mouse click away from acquiring new skills that will propel his or her productivity to higher levels. In reality, of course, e-learning – as any other learning experience – is frequently derailed by flawed methods and materials. But, with proper design and implementation, e-learning applications can overcome such danger.

Despite the unavoidable risks, the benefits of well-done e-learning, wherein students can safely and repeatedly test out a variety of assumptions and scenarios to progress rapidly toward learning goals, has very much caught the attention of corporations for some time now. There is still some resistance to e-learning, which is seen as a threat to the very well established world of lectures, seminars and training manuals. This is due to some earlier attempts to use computers in corporate training, known as Computer Based Training. Basically, this meant digitization of most of the existing training materials so that employees read monitors rather than a printed page. This approach actually had replaced people with monitors, as now learners were supposed to sit in a computer lab and to key in responses to quiz questions instead of interacting with a teacher who could motivate interest and create conditions for reflective dialogue.

This way has been lost one major advantage of using computer for learning: its potential as a social simulation device which can be used to learn employees to sell by selling, manage by managing, to deal with customers by dealing with them etc. If these kinds of interactions with software packages for e-learning can be simulated veridicaly, close to the experience one has into a flight simulator, then can be created a virtual e-learning environment in which learning is more enjoyable and lasting.

Learning-by-doing instead of learning-by-being-told has been proved to have better results in anybody's experience so it is almost axiomatic. It works because it strikes at a deep level the basic memory processes that humans rely upon [Sc02]. People learn how to do things by experiencing wrong and right ways to do them. One learns when the rules apply and when they must be modified, when they can be generalized or they must be eluded them, and also when they are domain bounded or they can be used independently. We learn all these by continually having new experiences and attempting to integrate them into our existing memory structures and functionalities. Learning-by-doing in the real world is not always feasible as it can be dangerous, expensive or it can fail to provide all the relevant cases. That's way e-learning simulation packages can be a better solution for reflective learning.

Special care must be taken in order to deliver sound e-learning applications (built according with instructional design theory and best practice). To have textbooks and quizzes online is not e-learning. E-learning is cheaper not because all training manuals are on the web, but due to the fact that it provides for many students to experience training that was built once and then continually delivered. The saving is also in ease of

access, maintenance and updates. One should not assume that savings is to be achieved by failing to spend time on devising sound training procedures.

Simulations, online or not, make the participants to experience the event as if it is really happening and therefore the learning experience is more dynamic and relevant. They can be used for a large range of learning needs from particular skills to abstract conceptualizations or management/leadership issues. A good simulation can satisfy a variety of personality types and preferences both for the roles inside the e-learning package and for the learner. It can offer also the possibility to deal with the unexpected and to fail without undesired consequences, given that we learn from our mistakes. In addition, a simulation must provide opportunities to think about what are the reasons for committed failures. Computer simulations offer some extra advantages with respect to failure: it can be controlled to focus on learning targeted skills, it can be explained by experts and it is private. Moreover, good simulations have potential for providing community interaction and collaborative learning. If a simulation is done well, it seems real and becomes a labeled memory asset that will be triggered by a similar experience, provided that the experience has been made emotional. People remember strong emotions and if these are related with learning experiences, they are very valuable.

Reflective e-learning, as any other form of learning does not work if learners lack motivation. That's way the simulation must help them achieve the goal they are ahead to. So the simulations have to rely on goal-based scenarios, trying to help employees to perform a better job in the real-world context where they are supposed to work. The learning goals may have to do with financial rewards, with promotions, with achieving a performance target etc – any tangible, valuable reward will do. Whatever the goals are, there is a need to incorporate them into learning systems or else the trainees will not take the time and energy to figure out their failures.

They must offer a covering number of different ways of following through according to most common patterns from the real working situations. In addition, e-simulations can be used as many times and one needs, exactly when and where they are needed. Chat rooms around normal or delicate issues can provide for creative and reflective thinking with a plus in anonymity. In addition, the availability of a human facilitator can increase the benefits of using e-simulations and create further opportunities for reflection. A possible scenario for building reflective e-simulations is presented below [Sc02]:

- Establishing of the most pressing training issues;
- Identification among above of the jobs that require well-defined repeatable skills;
- Finding the best subject matter experts inside (preferably) or outside the company;
- Gathering of (expertise) stories that can reveal what lies under the surface;
- Identifying the set of relevant scenarios to the learning aims;
- Designing a well-articulated model that incorporates all these scenarios;
- Implementing this model according to user needs and abilities;
- Testing, deploying, and maintaining the e-learning application.

Summarizing, we start with the learning needs and then try to create the best possible and most realistic experience in which these needs can be fulfilled. Technology, cost and time enter into the scene later. With the rate at which WEB technologies are maturing, the possibilities are growing almost faster than we can devise ways to benefit of them.

4. RL for large companies – an inside point of view

The second author of this paper is working in a large American company in the training and education department. One of her responsibilities is the creation and implementation of the training program on computer application subjects for all company's employees. Considering the permanent changes in the training and education area is obviously part of her job. The training programs she is implementing have to provide state-of-the-art teaching and learning techniques and methods, and they are in a contiuous change. Some of her points of view and reflections upon these experiences are presented below.

Our society is in a continuous change. Schools, universities, companies still use instructor-led training as the classical way to deliver the knowledge, or to improve the quality of work provided by the employees. However, especially in companies, the traditional methods have become less convenient in the last 10 years. Why? Technology advancement, too many and too quick changes in the working environment, time pressure etc. Therefore, people in the learning and education field have come up with more convenient methods of training delivery.

Long, three to five day instructor-led classes have been replaced with modular classes. Learners may pick the specific modules they are mostly interested in. This is a time and money saving solution both for the company and for the individuals. The advantage is that while people still benefit from the advantages of the classroom training (live interaction, spontaneity, question and answer session) they can save time (and money) by not having to listen and work on subjects that are not of interest for them. The modular training can be successfully applied to any training subject.

Another idea has been also born. What if we bring the training to the individuals, company's employees, in this case, instead of having them come to training. Computer Based Training on intranets, online training, training by tutorials, all these concepts had the teacher replaced by a computer. Still. The live interaction was missing. This is how the online live training has become a fact. While working at your desk, in front of your computer, you can still benefit from the live interaction with a teacher, interaction made possible by nowadays technology (e.g. BlackBoard, Centra etc.). When on-line live training is used, each student accesses the content of the course (so there is no unique presentation) and the questions or comments are exchanged in chat rooms. A timeframe is allocated to each course. BlackBoard is one of the systems used for online classes at Mission College.

Project-based e-learning applications are widely used in her company for a variety of skills from practical skills to so-called soft skills (management, mentoring, accounting). These projects use a combined method for training: learners can use the e-learning applications by themselves or they can work together in working groups in the classroom. Each group gets a concrete problem to be solved (e.g. sistem for water delivery) using only the givens offered by the training team. Inside the group there are frequent debates on what the members and the team have done well or on the contrary, on the errors made during the problem-solving process.

Virtual classroom is also being used to deliver training, to hold meetings, etc. A virtual classroom is like a normal classroom except participants can be thousands of kilometers away. It encompasses image, sound, video, communication in a chat room, etc. It can

even have an electronic whiteboard. Just like a classical training room there is a teacher, called a facilitator, and students, called participants. The teacher presents the subject and all the participants can communicate questions or comments with the facilitator and among themselves.

The main shortcoming of e-learning in her experience resides in the fact that if the learners do not have an immediate need for the knowledge to be taught they tend to ignore it or to approach it superficially. A concrete prove in this direction is a major project in the company that included 110 courses, which have been considered very useful. The learners almost have not approached these courses. If we want to benefit from e-learning we must integrate it in the daily working schedule, otherwise it just does not seem to work. Small modules, no longer than one hour, are the most appropriate for really reaching the learners since they seem to be unable to concentrate longer than that on a particular learning issue. In addition, the training with e-learning applications has to take place in separate places, other than people's offices. Otherwise, besides their normal duties, they are very tempted to make phone calls, to chat with their neighbors, to browse on the Internet for personal purposes etc. Integration of various methods to deliver learning and to incorporate it in the daily working schedule provide a consistent solution for education in the long run.

Below we present some examples of reflective solutions to training problems in her company (which has more than 2000 employees):

Example1: *Leadership Skills Class (in the soft skills category)*
Audience: the technical staff from the Information Systems Department;
Goal: develop leadership skills, present and understand better the team work concepts, communication skills and customer services abilities;
Teaching methods: lecture, discussions, examples, e-simulations of various leadership scenarios, with role-playing that include the learner and some simulated characters (each learner decision, within the simulation, can lead to another direction within the scenario – pros and cons are considered each time and hints are also provided);
Reflection techniques: self-evaluation surveys, share past experience discussions, group exercises (case study), keywords technique (facilitator asks the audience, at the end of each training session, to think about four keywords from the day's session and then discuss about these main ideas), lesson learned technique (apply knowledge from the class in real life and then meet with the group to discuss what went well and what didn't)
Training conclusions: the used reflection techniques were very efficient:

- the self-evaluation survey provided at the beginning described, very well, each participant's level in the subject taught;
- sharing past experiences had a double effect: it was a very efficient ice breaker and, at the same time, provided a clear answer to the "Why are we here?" question;
- to apply the concepts presented in the class, group exercises were very efficient. Case studies were provided, problems were presented and the audience had to find solutions working in teams (groups);
- the keywords technique makes each individual in the audience think about all the information presented or discussed in the classroom, separate the four most

significant experiences for them, and define each of these experiences (concepts, techniques, terms, etc.) using one word;
- lesson learned technique is an after class experience. The learners much easier remember concepts that have an immediate application in real life. Six weeks is a critical period of time. If learners do not apply what they have learned in a class over the next six weeks, they will probably forget all the concepts. Therefore, our group met after 4 weeks and discussed about their experiences.

Example 2*: Windows 2000 certification program - 24 Computer Based Training classes*
Audience: computer support personnel from the Information Technology Department;
Goal: become Windows 2000 certified (installation, configuration, administration, network design and implementation, and migration);
Teaching methods: 24 e-learning courses provided by an external training provider;
Reflection techniques: pre-assessment, e-mail support, live support (chat room) 24 hours/7 days per week, bookmark technique, course navigation technique;
Other observations: learners obtained management approval for allocating 8 hours a week (10 weeks) for this certification program.
Training conclusions - the used reflection techniques were efficient as follows:
- the pre-assessment helps learners to realize what is their subject knowledge;
- 24 hour e-mail and live support are important because interaction is very important for a learner. Learners have questions and the faster the answers are received, the smoother the learning curve is. Otherwise, if they have to wait two or three days to receive the answer, the learning curve is obviously abrupt, and the main concepts learned so far forgotten;
- bookmark and course navigation techniques allow learners to save time by opening the exact module they are interested in.

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5. Conclusions

We identify in Plato's dialogues an early recognition of the importance of dialogue as a key to reflection, and therefore, to critical thinking. Aristotle's development of Plato's thought includes the idea that learning is achieved by doing. Much closer to us, Dewey saw all humans having the ability to learn from experience. He has stated that education is development and life is development therefore life is education. He also comments on reflection as a required ingredient for education success: "methods which are permanently successful in formal education depend for their efficiency upon the fact that they go back to the type of situation which causes reflection".

Despite the tensions that have been determined when technology is considered for teaching [LC01] (costs vs. quality considerations, global vs. local classroom, open vs. closed learning, technology-mediated or not), information and communication technologies have a lot to offer to learning. It would be an important loss not to take advantage of these opportunities by building sound collaborative combined (e-learning, real world) instructional environments.

Lifeless manuals and lectures are almost instantly forgettable. It is needed the emotional intensity of (simulated) experience for learning to last. Good e-learning solutions are

more than purely cognitive exercises – they evoke emotions. These solutions can train thousands of people all over the world simultaneously, if needed, but learner can use them also on request. In the new online collaborative learning and working environment creative thinking may emerge.

Action learning helps people to take and active and responsible stance towards learning and to overcome the tendency for passivity of many learners in traditional learning situations. Learning sets create the conditions for integration of knowledge, self, and action in the world. They act on the for dimensions of teaching and learning: intellectual (cognitive understanding, considering and appreciating others' perceptions and points of view, changing conceptions, questioning assumptions, developing oral skills, feedback), personal (providing opportunities for practice in self-expression, encouraging autonomy and commitment, developing self-awareness, weakening defensive attitudes, improving attitudes to the subject), social (encouraging co-operation and awareness of others, developing the sense of social identity and belonging to community), and practical (solving practical problems, carrying out specific tasks, developing teamwork skills).

Stories, goals, simulations, practice, role-playing, fun and failure are all critical to any e-learning system [Sc02, LC01]. Simulation-based e-learning enables safe practice and this is an important step to learning. But change comes sometimes hard in the business world both because of our strong inertial trust in traditional ways for training and learning and due to related costs.

Sound e-learning have aims to expose the learner to enough situations that s/he becomes sufficiently curious to take the learning process into own hands and also to reflect about it. In other words, e-learning is supposed to open up interesting real-world problems and to provide tools for solving them by trial and error, supported by valuable feedback from facilitators, may them online or not.

E-learning is not the only way to provide reflective training solutions. It offers cheap, safe, realistic, learn-by-doing opportunities, while they are giving users a consistent, but individualized message. Other instructional mediums and delivery mechanism can complement use of e-solutions for reflective instruction. Live training can provide social relations' opportunities, while covering skills that are difficult to coach using current technologies, like intonation. For complicated, creative tasks, such as writing, a live tutor is often needed to provide the detailed feedback and special attention learners need. Performance support systems that can be used on-demand can provide learners also with just-in-time help while they work, in addition to support for uncommon situations and auxiliary information ought to be at hand. Mentoring enables learners and mentors building of human bonds and enhancing career development.

Solutions presented here take into account much better than traditional training, personalized learning issues, regarding personality and learning styles. Some learners like to just dive in; they do not want or need long introductions and other preparations, they want just to start. Others need road maps before starting and lot of other additional information. Another category of learners prefer to be hand held during their complete training experience or until they are confident enough. No matter which category one lies in, a learner who is in control of his/her learning experience is likely to learn more than in rigid traditional way. The presented solutions provide also for preserve corporate

enterprise and for delivering it in a easily navigable system, which is a very important benefit in the fast-changing world of the global economy.

The approach and the results of the learning process may be totally different in a large company (over 1000 employees) than in a medium company (500 to 1000 employees) or a small company (under 500 employees). The employees of a large company have the tendency to forget about "the big picture". They stop seeing very clear what the common goal is. In a small company, even a medium one, the common goal is clearer. This is one of the reasons learning is perceived differently. In large companies not having very clear in mind what the common goal is often leads to employees not feeling (seeing) the importance of learning. Moreover, people do not like the change very much. Learning new things means having them adjusting to the new concepts to be applied. All of these are negative aspects not as frequent in smaller companies. Reflective learning, however, minimizes these negative aspects, and provides a new and improved image of the learning process. Learners can now relate to the real life for examples and can apply immediately the concepts taught in class. On the other hand, large companies can afford to invest more in advanced hybrid learning solutions developed in accordance with reflective learning theory and best practice. Small or medium size companies usually use third training providers, therefore their control on the teaching and learning process is not direct. Important is that all companies, no matter what their size is, want to have a Return on Investment (ROI) as big as possible and reflective learning can provide for that by increasing the productivity of learning. Furthermore, by using reflective e-learning solutions we can get both the transition from dependence to independence in learning and interdependence, which derives from the nature of reflective dialogue, and implies collaboration in learning and development. These solutions take into account approaching the learners as whole persons, not only as intellects, the change with respect to knowledge in terms of approach, conception, attitudes and behavior, and the achievement of transformation skills, self-evaluation and creation of learning communities. The combination of the presented solutions in appropriate ways provide for a rich and effective learning environment, so our answer to the question in this paper title is affirmative.

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