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Teams in virtual classes:
an experiential perspective

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1. Introduction

To undertake an online course there is a basic computer and Internet use literacy that the student must acquire in first place. An introduction to the specific platform is like the guarantee that there is the right bus to arrive in classes on time. So, he or she is seated in the class. In a live situation that is enough to be there to participate. Even if you don't intervene in any activities, that is your participation. You cannot not to behave: you are there and everything counts as participant behaviour. Online classes require more than just being there. The student must do something. The contents and the materials of the course can be delivered in many ways. Several activities can be proposed to the student to do in order to learn. That means to respond to finals examinations to get a positive evaluation. In live situations you can do all this by yourself, even without the help of the teacher. But you need a lot of self-regulation skills. Self-regulation is paramount in e-learning. In the first place you must allocate time in your life to enrol in the course. Then, you must have the skills to manage the computer and platform access. After that, you must have the skills to manage the activities proposed and to study the materials. Also included should be ways of sorting the huge amount of not so huge quality information on the Internet. In the end, you must be able to write down in essay or test what you have learned. Around all this, you have to motivate yourself to keep going. Essentially, you must believe that you will be able to succeed or to have self-efficacy, as Bandura (1997) defines it.

In online learning you can have school facilities at a very convenient distance: a mouse click. This can be a very lonely experience. But this can be like the old distance courses by mail. The postman delivers the print materials for you to study and prepare to tests that you post back. In the end of the process the postman brings the diploma to you. Learning in a platform can be a fancy way to do the same. You have a lot more information and the messages are instantaneous, but the spirit can remain the same.

Of course, there are many possibilities to design activities that mimic a real classroom. The social presence (Short et al., 1976) of online technologies can be similar, if you talk about videoconference. However, it is uncommon that a free platform like *Moodle* has those capacities. So, mainly, the medium is text-based. Such medium lacks all the non-verbal information available in a live face-to-face classroom. Thus, participants must behave textually to be felt as present. If you enter in a chat room or a forum, unless you say/write

something, you will be absent. For some timid people it can be advantageous, allowing more time to think before answering. But, because *scripta manent* (writing remains), others may feel inhibited with the extra caution.

To be really flexible, synchronous activities are the most problematic. As the greatest part of the participants in these courses are adults integrated in a professional life, there's always a risk of people staying apart from the platform and only entering them when it is strictly necessary (to extract manuals and exercises, for instance). Time is a real disadvantage for the most of the people, with many referring lack of free time to make the exercises and reflect on the themes. Nevertheless, the schedule flexibility this type of course allows is frequently considered one big advantage, with people accessing the platforms early in the morning or late at night when children are already sleeping. So, e-learning can be a very solitary experience and without a strong self-motivation you can be easily lost in cyberspace.

E-learning is not easy for college teachers also. Some are not very keen on computers and technologies and all must depend on technical administrators. According to May and Short (2003), this is the first of several difficulties. The text-based activities force teachers to put everything in words. Thus, they need more time to explain the tasks and to read and respond to students questions. For the reasons stated above, it is crucial to help motivate students, although many times the teacher delegates this function on an e-tutor. A less obvious, but also important, fact is that the online teacher practically loses the joy of performing before an audience (May & Short, 2003). Except with videoconference, almost all the non-verbal information essential to social relationships is lost. Again, the teacher must relinquish most of the control of classes to the students.

But, like contrasting the engraver's work with photography, instead of representing the reality "as is", e-learning classrooms can create new realities.

2. Teacher education

My emphasis (João) in teacher education is always in the relational side of teaching (Nogueira, 2008). I agree with things like "you won't have your students to learn unless you have a positive climate in your classroom". It is difficult to learn from someone whom you don't like. To care for the students is so important that Beidler and Tong (1994) say that "an unskilled teacher can set a student back - that's for sure - but an uncaring teacher can cause a student to abandon the race altogether (p. 113)". The nature of caring has a developmental story. The younger ones value the affective teacher, but in secondary and higher education, caring for students means helping to learn the academic contents (Pajares & Graham, 1998). So it is possible to be exigent and also be preoccupied with the personal aspects of teaching. To become a caring teacher, students must learn everything about his or her subject plus the didactics associated to it. To know about learning and development principles or models is the reason why Educational Psychology courses were designed for. But I always tried to help teacher students to deal with one of the main sources of stress in the practicum: discipline problems (Kyriacou, 1998). In their three-dimensional discipline model, Curwin and Mendler (1980), specify what can be done to prevent discipline problems: 1. Be aware of self (teacher); 2. Be aware of students; 3. Express genuine feelings; 4. Becoming knowledgeable of alternative theories. 5. Motivate students to learn. 6. Establish social contracts; Implement social contracts; 8. Reduce stress (Curwin & Mendler, 1999, p. 34). Along with this preventive behaviours, there are also action (what to do when problems

occur) and resolution (resetting contracts negotiation) dimensions. Including these points in teacher training programmes can satisfy the needs of novice teacher to manage the classroom and, as I argue, to become a caring teacher.

In 2007, with changes needed to adjust the curriculum to the Bologna Process, I begun a course named "Psychology and Interpersonal Communication" in the Master in Educational Sciences. In this course I incorporated all the things that I had identified as basic needs for student teachers. Then, I bought Goleman's new book (2006) and I tried to incorporate it in the syllabus. "Social Intelligence" gave a more comprehensive view of the relationships that I used as a transversal support of the course, asking for an individual short paper and a presentation of a chapter of that book. The task was to give a personal illustration of a theme included in one of the 21 chapters (2 or 3 per session). The debate after the presentation was very enriching to all participants, and I was pleasantly surprised with the intimacy felt in the sessions. Some of the papers were really personal.

3. "And now for something completely different"

In November, I was asked to begin a new course that was planned to begin only in March 2008. The name of the course was "Managing virtual groups of learners". I became a virtual teacher of virtual teachers! Is this something completely new? Maybe not. The initial group of 63 Portuguese students is quite homogeneous. Mostly are already teachers, with ages between 23 and 45 years old and many had already had some experience with e-learning either as designers or facilitators. So, I had been confronted with a "huge" group that I had to divide in a manageable way. As you know, to attend a virtual class a student must do something beyond just being there. She or he must write some contribution on the topic which is being addressed. To read and respond to 63 messages individually implies a time consumption that exceeds largely the usual class time. And to chat with all those people at the same time goes beyond the *Moodle* platform capacity. Therefore, the obvious solution was to divide the students in groups and in the third session nine groups of seven elements were created. However, before that, I had to have some criteria for that grouping.

3.1 Icebreakers

In the first session I introduced myself with a short video segment where I appeared just saying my name and function and asked for an exercise about the person I seemed to be. This is the usual way (based in Salmon, 1988) of beginning my first classes in a regular classroom. The attributes the students think I have are the basis for a debate on expectations and relationships. The importance of first impressions is often controversial, but the conclusion that you don't have a second chance for the first impression is normally achieved. Those initial expectancies canalize behavioural and thinking processes that favour or impede the development of the relationship. So, this particular activity sets a positive climate in the classroom and it is a first ice-breaker. Doing this online in asynchronous mode, results in a one-way video explanation about expectations without that debate. Student reactions can only appear later. Because of that, another ice break activity was proposed: the coat of arms (Smith, 1998). I explained in video the process of doing my own coat of arms, with images about the following topics: three personal positive characteristics, work, hobbies, origins, family, dreams, and a motto. In a classroom, each coat can be placed

on the walls, but only if all the classes are in the same room. In the virtual environment you can place them on the virtual wall and leave them there for everyone to see.

Another icebreaker was creating a social place for students to meet "after" classes:a group in *Facebook* (www.facebook.com). The goal was to post the coat of arms and a photo and use those elements to get acquainted with one another, but many didn't like the idea of going outside the platform. They preferred to put the coat of arms in a general forum and didn't even open an account in the facebook site. Perhaps the blog feature in *Moodle* would work better. In a environment like *Second Life* we could use the walls of the virtual classroom.

3.2 Group constitution, cohesion and functioning

The next activity was for each student to choose 3 colleagues with whom she or he would like to work with. A kind of initial sociometrics, in which choice was based mainly on the description of coat of arms and the photo (some students already know each other, and about 40 of them were in the introducing meeting of the master's at the Faculty in Lisboa). All this gave several groupings of 4. The final arrangement was obtained by trying to respect these choices: Every student works, at least, with one person of his or her choice. The agreement or "team charter" (Palloff & Pratt, 2004) is a contract among members outlining how they will interact together. The discussion was around: 1. Establishing roles; 2. Creating benchmarks and deadlines; 3. Courtesy; 4. Decision-making process; 5. Workload and conflicts; 6. Setting Priorities; and 7. Enforcement of norms (Watkins, 2005). On top of these points, a name should identify the team. This team charter should be published in terms of "We are the (name of the team)..., our purpose is (purpose)..., our deliverables are (products)..., and our operating guidelines are (norms) ... (Palloff & Pratt, 2004) ". To build team cohesion, I chose an activity where they had to do a group biography (Watkins, 2005), a mixture of the biographies of team members. This was a very welcomed activity ("Look at our beautiful biography!"). The bag of surprises was an adaptation of "Johari Window" (Johnson, 1996) to measure the initial state of members self-disclosure to the team. After these first sessions, we explore the individual conditions for e-learning with a scale of e-Learning Readiness Self-Assessment (Watkins, 2005). The individual results were discussed inside the group and all groups concluded that they had more than sufficient proficiency to have success in an e-learning course. Team and group variables were also discussed before the presentation of Goleman-based papers. For the assessment of team behavior, I used the Robert Bales' Symlog - System for the Multiple Level Observation of Groups - as an exercise (Heise, 2000). The members assess and discuss their perceptions of the way each of them behaved. The collective posts reveal that all teams report a significant accuracy of this image of groups. In several teams, they managed to have live encounters, which reinforced the cohesion of those teams. And then, for some members, the team became the most important thing: "I wake up thinking in this week's task". Each team had to present 2 themes in two different weeks. Along the Goleman-based presentations, I included other contents which establish links with Social Intelligence and the virtual classroom. The routine was established in the following way: On Tuesday the tasks were proposed and until Friday the team discussed them in chats, wikis and forums. During the weekend, the team could make short commentaries about other groups' contributions. Only one member per team (the relater) was allowed to post in this specific forum. All individual student personal questions or messages were answered as soon as possible, but the commentaries to the presentations of the week were canalized to the team discussions. So, per week, there are 9 main

contributions and a few more short comments. This partially took the feedback load away from the teacher.

3.3 Assessment and evaluation

Since many students had proficiency in information and communication technologies and were developing it in the others courses in the curriculum (databases, multimedia, etc.), the products were very good. They were very rich in format, with various multimedia resources, and in contents, with lots of additional information. The idea of e-learning supposes a tailor–made feedback by the facilitator. But, in this case, the main source of daily feedback was the team members. The incentive effects of team belonging were crucial in this course. A final reflection on the team experiencing precedes the reorganization of groups. Each member was attributed to a new team with different students, to make another task. The additional reflection about the contrasts between the 2 team experiences was the contents of a final paper-and-pencil exam at a real classroom in February, 2008.

3.4 Difficulties

The problems in e-learning courses stems from the technological media that lack the human qualities of a face-to-face encounter. The absence of non-verbal indexes creates the possibility of misunderstandings and flaming or online disinhibition (Goleman, 2007). Flaming was not a problem, because there was no anonymity in this course. But some e-mails were usually required with additional explanations about the weekly tasks. The course contents were developed along the way. The accessibility to virtually all the online information is an asset that I used to build the learning materials. But, on other hand, this is a liability because too much information can flood your presentations with multiple links. The multimedia facilities can also be a burden: the one line statement can become a 5-minute slideshow or youtube video. Besides, the quality of the available information on the Internet is very variable. The asynchronous mode makes it so that everything you say (in this case, you write) stay permanently available. And this was the most difficult thing for me. The advantage of thinking before talking/writing can became a problem, in the sense that you have to be careful with what you write, and thus loses some spontaneity.

4. Communication in the online learning process

A large variety of communicative tools can be at our disposal to promote active learning and real interaction among the participants. The tools can be **asynchronous and synchronous**. The asynchronous means of training and communication are used for some time now but they lack the spontaneity of the synchronous although they allow deeper reflection and research on topics which are the ultimate goal of the online teaching and learning process. The two most used asynchronous tools are the electronic mail (and mailing lists) as well as the discussion forums. On the one hand, they both allow for a deeper study and reflection although sometimes e-teachers or e-trainers (we use the terms teacher and student also in reference to the trainer and trainees in professional training company programs) don't prepare these tools meticulously and they tend to become too informal which is not recommended. On the other hand, when using these asynchronous communication tools – for instance, the forum - the e-teacher must be careful not to participate too much or too

early because this behaviour can disturb and even stop the discussion taking place among students. Learning online through platforms allows students, amongst other things, to interact asynchronously through discussion lists which are capable of archiving the products of their interaction. This in turn leads to the creation of new and shared understandings about the topic under study.

Using e-learning platforms demand clear regulations and a correct use of the different facilities available: (a) Schedule – includes the day-by-day orientation notes for each session as well as the course outline and assessment details; (b) Media Centre – is the place for tutors and students to access files, web links and class notes; (c) Course Room – is an online discussion forum; (d) Profiles – contain biographical information about tutor and course participants; and (e) Assessments – a separate module enabling online quizzes and exams.

There's a challenge ahead which is how to create the right motivational conditions for students studying online. Interactivity involves synchronous and asynchronous discussions with other students and tutors using e-mail. The social and academic benefits of this type of interactivity have been well documented (Jones, 1999). Since computer supported communication is lacking in human presence (Berge and Collins, 2000), the context is devoid of important visual and spatial-temporal cues that are important for message validation and, therefore, the building up of trust. Time is needed to develop the necessary social protocols before successful collaboration can take place but sometimes there's not enough time to establish this relationship and connection, when specially working with trainees in enterprises.

As for the synchronous tools, the great advantage is the simultaneous interaction among everyone. They vary from the most used chat and instant messengers to the most sophisticated audio and videoconferences. As an e-trainer, I (Carmo) am particularly at ease with these synchronous tools to connect trainees from different parts of the country working together in a specific training course. In fact, although in the beginning the older trainees may feel some difficulties accessing the platforms and staying online for one hour or more, the experience tells me that when they gain confidence, motivation increases and they really profit from this online teaching learning experience. The synchronous communication is a great help to reduce the transactional distance between trainer and trainee. Many positive synchronous experiences have been narrated since they put people together, work as important ice-breakers and, above all, promote the entanglement and compromise from the ones involved. The immediate feedback is also a great advantage of the synchronous tools as well as the direct interaction among trainees, provoking questions and answers, laughs and comments near to the classroom atmosphere. So it is the variety of activities proposed which provide opportunities for the students to learn a variety of new skills.

Of course, some training in chatting is necessary because the velocity used to chat is important: too much velocity may cause too much confusion; believe: chaos can be real! Not enough writing velocity can cause a lack of motivation and people may be left behind. To avoid this disadvantage, planning is essential. There must be an agenda. Trainees must be informed of it in advance. Activities and topics for discussion must be launched so that trainees can be prepared, may research and have something to say and discuss. There is a tendency to exist what Edwards (1997) calls "frozen moments" if the synchronous sessions are not efficiently prepared in advance; it might also occur if the teacher lacks motivation.

When I (Carmo) remember my first synchronous session with a group of sixteen trainees I immediately got aware it was difficult to handle it because it was impossible to answer to

everyone and to keep everyone alert and motivated. The key was to divide the group in two parts, with eight elements each. This proved to be the ideal solution because smaller groups are essential to develop a good interaction. Then, everyone receives the chat transcription so that it can be read by all and the trainees know what different perspectives arose during discussion.

Sometimes, before the delivery of assignments, tests and other evaluation tools, the synchronous can be used for individual purposes, helping specific trainees to solve certain doubts. Having various synchronous sessions per week, I feel prepared to give you some advices: (a) Plan the session carefully; create an agenda and write the questions you want to ask; (b) Inform / Warn / Schedule the session in advance so that trainees can be prepared and organise their personal and professional lives; (c) Set specific participation rules (one I particularly like is that I write using Caps Lock all the time, so that the trainees can clearly see/read my words); (d) Define the synchronous chat session duration: we advise no more than 60 minutes because these sessions can be very intense and tiring; (e) Respect the schedules and ask trainees to access the chat some minutes in advance; generally, because trainees have a working life, it gets difficult for them to be available; some tell me they have the family waiting for them to have lunch or dinner; others participate in the chat from the most distant and mysterious places; others stay online after the end of the session, just chatting and having fun; (f) Keep focused on the settled topic since it gets very easy to introduce new subjects; (g) Send the chat transcription to the trainees as soon as you can and publish it in the platform as well.

In order to facilitate effective collaborative learning interactions, as well as to promote collaboration in a synchronous distance learning context, we propose effective procedures, such as group welcoming/goodbye rituals, agenda presentations, topics' discussion, asking for participation and feedback, promoting self-reflection, drawing relationships and modelling. An analysis of the chat transcripts and videotapes also provide information about the students learning development. Sometimes, we notice there are elements whose participation is ineffective and we must act in order to understand why and help to increase interest and collaboration. When this happens, particularly in the synchronous sessions, I (Carmo) usually ask these trainees to write a short assignment on the topics being under discussion according to the chat transcription available as well as other information he or she might consider of interest. Students first solve problems individually and then join into small groups to develop group solutions. The initial problem solving helps ensure individual participation and provides differences between students' solutions that form the basis for discussion. The private workspace also enables students to try solutions without feeling they are being watched and this is, according to me, one of the advantages of learning online. I usually act as a coach, helping trainees to understand the richness of their own abilities to learn and reflect on topics based on the e-learning course. I also try to promote coaching process among trainees, helping each other in pairs or groups according to their preferences and availabilities. The knowledge for coaching collaboration consists of the ability to recognize relevant learning opportunities and to provide advice that encourages students to take these opportunities.

According to Salmon (2002), the function of the teacher as interaction developer is essential to the whole process or the student will not reach the upper levels of the learning process, staying in the socialization level, most of the times. In fact, the e-teacher must be aware of this process development if he or she wants to achieve a high level of interaction, students

self-confidence and ideas promotion and exploration. Furthermore, whether we create and facilitate a deep connection among students or not might be fundamental for the success of any e-learning process community environment.

5. Becoming a virtual teacher in e-learning courses

As Marc Eisenstadt said "The bottom line is that learning online is a soul-destroying experience. It really, really stinks. It's always second best" to face-to-face learning (Hamilton, 2001, p. R32). But learning online can be more than the translation of the traditional classroom to the Internet.

Synthesizing from various authors, May and Short conclude that learning online is a problem to many university teachers because of the time and effort expended in writing; the need to motivate students; the loss of power, authority and control to the students and technical administrators; and the loss of a most joyful part of teaching, that of performing in front of an audience (May and Short, 2003). These authors propose a gardening metaphor: you cannot grow plants but just proportionate the conditions for them to grow. So the online teacher must position the plants in the sun or shade (i.e., address individual differences), fertilizing (i.e., preparing and motivating the student), and watering (i.e. providing feedback) them, and control weeds and pests (i.e. avoiding information overload) (May & Short, 2003).

What do you need to succeed in an e-learning course? To be competent in something is not enough to do such thing. You must have the sense that you are able to carry out the desired behaviour. The sense of power (Aleksiuk, 1996) is the basis for an effective action. Bandura (1977, 1986, 1997) coined the term "self-efficacy" to designate the beliefs about one's capabilities to learn or perform behaviours at designated levels. Self-efficacy is defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 1) or "people's beliefs in one's capability to organize and execute the courses of action required to manage prospective situations" (Bandura, 1997, p. 2). A frog dies of starvation surrounded by dead flies. He just can't see them. So, a competence must be recognized or acknowledged by is owner to be functional.

If we have capability and a belief in that skill, the motivation came from the outcome expectations. These outcome expectations are the "judgments of the likely consequence that behaviour will produce" (Bandura, 1986, p. 391). They can be an incentive, but says nothing about the capability to do that behaviour.

Believing that I can do behaviour is as important as having the capability. An objective measurement of ability and the measure of self-efficacy are at the same level to predict the performance. Extensive research shows the importance of self-efficacy in different areas. In a meta-analysis, Stajkovic and Luthans (1998) assert that self-efficacy is strongly associated with work-related performance. The importance in education is stressed by Bandura (1986) who says that "students who develop a strong sense of self-efficacy are well equipped to educate themselves when they have to rely on their own initiative (p. 417)". Self-efficacy influences academic motivation, learning, and achievement (Pajares, 1996; Schunk & Pajares, 2002). Students with confidence in their academic skills anticipate higher grades than those who lack that confidence. The same effect is apparent in the social domain, with students who believe in their social skills expecting successful social encounters (Pajares, 2006). High

self-efficacy students reported higher academic aspirations and pursuits than low self-efficacy students. They also spent more time in homework, and primarily associate learning activities with optimal experience (Bassi et al, 2007).

Self-efficacy beliefs influence motivational and self-regulatory processes. Self-efficacy influence choices: people choose the things they think they are able to do. The effort they will expend on an activity depends on that belief. They persevere when obstacles appear and they are able to recover from failure. Stress and anxiety will be less if they believe they can. Where self-efficacy comes from? The source of personal efficacy beliefs are mainly success: personal success (mastery experiences) and the successes of others (vicarious experiences). Also the social persuasion (Yes, you can!) can boost confidence. Finally, the physiologic states determine the activation level: it is hard to attend to a lecture after lunch…

Self-efficacy is roughly the same as self-confidence (Hollenbeck & Hall, 2004). There is only a paragraph that explains the difference, were Bandura says that "Confidence is a nondescript term that refers to strength of belief but does not necessarily specify what the certainty is about" (Bandura, 1997, p. 382). Although, the items to assess self-efficacy ask to "rate your degree of confidence you are certain that you can do …" Using self-confidence instead of self-efficacy, Hollenbeck and Hall (2004) proposed a formula

$$SC = PC - PTR \qquad\qquad (1)$$

in which (SC) is Self-Confidence, (PC) is Perceived Capability and (PTR) is Perceived Task Requirements. What the formula implies is that self-confidence is modifiable! You can either change the competence or the requirements of the task or the perception of the competence or the perception of the task. Learn more or perceive your actual competence in a better (but realistic) way. Or change the requirements by dividing in subtasks or getting help from others or revaluate the dimensions of task.

As the main source of self-confidence is success, you can promote one or another in a cycle that can be entered at any point (Figure 1).
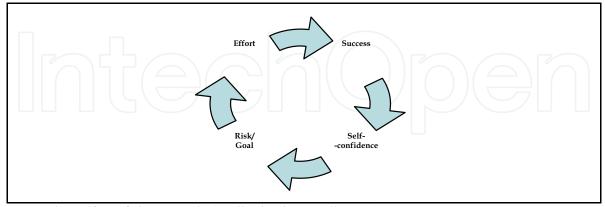

Fig. 1. The self-confidence cycle (Hollenbeck & Hall, 2004).

You exert some effort and you succeeded. You gain confidence. So, you set higher goals. And will exert more effort, because you believe you can. More effort turns more probable the success and so on.

5.1 E-learning self-efficacy and computer self-efficacy

Computer self-efficacy is a belief of one's capability to use the computer (Compeau & Higgins, 1995). Therefore, participants with little confidence in their ability to use computers might perform more poorly on computer-based tasks. But e-learning is more than being able to deal with computers. Zhang (et al., 2001) propose a distant learning self-efficacy scale that was related with overall attainments in distant learning but not with computer skills. In another research (Sharma et al., 2007), authors found that computer self-efficacy has no relation with performance. Even the more specific online technologies self-efficacy scores were not correlated with student performance (Puzziferro, 2008).

Introducing the concept of e-learning self-efficacy (ELSE), Mungania and Reio (2005) found a small inverse relationship between barriers that e-learners encounter and ELSE. Sharma (et al., 2007) found that e-learning self-efficacy as well as self-efficacy for self-regulated learning is related with performance in e-learning. The later concept is similar to the efficacy of well performed self-regulatory mechanisms such as self-observation, self-judgment and self-response, the self-regulation efficacy (Bandura, 1986). In e-learning, the teaching–learning method is assumed to be self-directed learning. So, it is expectable that, as Sun and colleagues found, self-regulation efficacy's higher learners had a theoretical high self-study power and perceived learning strategy (Sun et al, 2008).

The high dropout rate in the higher education is increased by 10 or 20% in the e-learning environment (Berge & Huang, 2004). How to increase retention in e-learning courses? Self-motivation is one factor that is often said to be essential to endure the cyberspace solitude. That is a characteristic that you can select, but you cannot do much to improve it simultaneously with the coursework. The other factor you can control a bit is information overload. And to assure that the learning activities are sequenced and paced in a way that turns success more probable and promotes self-confidence.

5.2 Can anyone be an e-teacher?

Well, there are a group of personal characteristics he or she must possess or the whole process may be unsuccessful. From our experience, enthusiasm is essential to keep students involved; the e-teacher must also be proactive to make things happen, patient to understand the individual needs as well as the group needs, being flexible enough to adapt the whole process when necessary; persistency is an essential characteristic since it is needed to keep focused, avoiding the students/trainees from staying apart.

To be an e-teacher demands particular skills not only adapted to this training e-learning model but also adapted to the new technologies and communicative services in use; the implementation and dynamics of these courses look for a highly motivated and specialised professional who will develop the pleasure of learning and acquiring new knowledge and competences in the students. These professionals must prepare their e-students to interact in a digital network of people and ideas, promoting virtual specific relationships for information sharing, cooperative learning involvement and the creation and development of knowledge.

6. "With a little help from my friends"

To be more than the delivery of content, learning online requires a new form of pedagogy, centred on collaborative processes (Palloff & Pratt, 2001). Besides, the interaction that occurs

between adult learners is a critical factor in maintaining the motivation of participants. The collaboration with peers is fundamental (Puntambekar, 2006). In school, the group work outside the classroom has many obstacles. Students live apart and have different jobs and schedules and have difficulties to meet. So, the virtual world, without physical constraints, can be the privileged place for working in groups.

Face-to-face contact can be helpful to orient students in introduction to the online technologies (Palloff & Pratt, 2007). For team work with people from different places, Goleman (2007) suggests a first meeting for socializing over dinner, and the work begining the next day. However, periodic face-to-face meetings with virtual teams can detract from online work (Palloff & Pratt, 2007).

"Onlineness […] did not "cause" communication; people did. The technology […] is not the 'independent variable' that much of the literature implies it is" (Ham & Davey, 2005, p. 260). The same can be said about information. The information-centeredism (Bronfman, 2006) is the classical vision of education as information transmission. Very well "packed" and "explained" information is what really matters. Just know something is not the same as be able to do that thing. Furthermore, the teacher is not the only source of knowledge. The former power based on knowledge becomes more the power of care. Above all, this power should be applied to facilitating the development of collaborative teams that support and promote collective learning. And this can be done in virtual environments. One of the most often cited quotes from E. Forster' Howards End - "Only connect! […] Live in fragments no longer" - is a sum up of our vision of e-learning courses: Connect to your colleagues and you will never be alone. Group assignments become the key to the incentive of being with the others of the team. This evokes the concept of collective efficacy, a shared belief of the group, an extension of Bandura's original concept that captures a member's beliefs about the capacity of a group or organization. A sense of collective efficacy is a group's shared belief in its capability to attain their goals and accomplish desired tasks (Bandura, 1986). I think a cohesive group with strong collective efficacy exercise empowering and vitalizes influences in their constituents. The punch line is that you should create conditions for building cohesive teams because it is a good way to increase their e-learning self-efficacy. Just connect... and you will be able to learn much more.

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Technology Education and Development

Edited by Aleksandar Lazinica and Carlos Calafate

The widespread deployment and use of Information Technologies (IT) has paved the way for change in many fields of our societies. The Internet, mobile computing, social networks and many other advances in human communications have become essential to promote and boost education, technology and industry. On the education side, the new challenges related with the integration of IT technologies into all aspects of learning require revising the traditional educational paradigms that have prevailed for the last centuries. Additionally, the globalization of education and student mobility requirements are favoring a fluid interchange of tools, methodologies and evaluation strategies, which promote innovation at an accelerated pace. Curricular revisions are also taking place to achieved a more specialized education that is able to responds to the society's requirements in terms of professional training. In this process, guaranteeing quality has also become a critical issue. On the industrial and technological side, the focus on ecological developments is essential to achieve a sustainable degree of prosperity, and all efforts to promote greener societies are welcome. In this book we gather knowledge and experiences of different authors on all these topics, hoping to offer the reader a wider view of the revolution taking place within and without our educational centers. In summary, we believe that this book makes an important contribution to the fields of education and technology in these times of great change, offering a mean for experts in the different areas to share valuable experiences and points of view that we hope are enriching to the reader. Enjoy the book!

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