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Dossier: "The virtual environment student"

The virtual environment student. An initial approximation

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Abstract

The quote at the start of the "Introduction" ("Education follows an agricultural timetable, has an industrial structure and operation and is set in an increasingly digitalised society") illustrates the need for an in-depth understanding of training in virtual environments. This understanding rests on knowing its central element: the student.

This article invites the reader to take a look at the figure and the performance of the virtual environment student. One of the features of the twenty-first century is that of leading increasingly to a learning society, where citizens learn, formally or informally, throughout their lives. Technology sustains many of the behavioural and attitude traits of these citizens, although technology is only the first step; beyond this, the attitudes, skills and motivation required for successfully performing in a virtual environment are necessary.

Keywords

virtual student, virtual environment student, virtual environment, learning society, virtual training

Resum

La cita amb què s'inicia la introducció («L'educació manté un calendari agrícola, té una estructura i un funcionament industrial i està emmarcada en una societat cada vegada més digitalitzada») il·lustra la necessitat d'una comprensió profunda de la formació en entorns virtuals. Aquesta comprensió requerix el coneixement del seu element central: l'estudiant.

Aquest article invita el lector a aproximar-se a la figura i a l'acompliment de l'estudiant d'entorns virtuals. Una de les característiques del segle XXI és la de portar cada vegada més a una societat de l'aprenentatge, on els ciutadans aprenen, de manera formal o informal, al llarg de la vida. La tecnologia sustenta molts dels trets de comportament i d'actitud d'aquests ciutadans, encara que la tecnologia només és el primer pas; a partir d'ací són necessàries les actituds, les destreses i la motivació adequades per a moure's amb èxit en un entorn virtual.

Paraules clau

estudiant virtual, estudiant d'entorns virtuals, entorn virtual, societat de l'aprenentatge, formació virtual

Introduction

«We still educate our students based on an agricultural timetable, in an industrial setting, but tell them they live in a digital age.»
Rod Paige
U.S. Secretary of Education
2001-2005

The virtual teaching and learning environment student is not a figure that appears as if by magic, they are not an isolated event or an anecdote in human development. They are a result of their time, in the same way that other types of student, throughout the history of humanity, have been the result of other situations and other needs.

The rough sketch of the figure of the virtual environment student, of some of their traits and of their performance, does not start here with a definition or a list of basic features. First, it is a good idea to understand the situation in which they find themselves as the pupil in a distance education model that is based on Communication Technologies (ICT) and that takes place in a virtual teaching and learning environment (VTLE).

The learning society

Despite the distortion implied by being the protagonists of a process of change, those of us living in the prosperous first world can see that our *post-industrial society* (Bell, 1973), in which capital and labour are gradually concentrating on services and communication, is evolving towards a society with different characteristics.

This new society may be the *information society*, in the sense given to it by Manuel Castells of "informational society" to highlight that the generation, transformation and transmission of information are the source of the economy and power (Castells, 1996, p. 21, note 31). Or it may also be the *communication society*, with means of communication that enable us to be in contact with greater ease and comfort; however, this does not necessarily mean that we communicate efficiently. It is also called the *knowledge society* (Bell, 1973, p. 212), in which the importance of knowledge, through research, development and innovation, acquires ever more weight in society, although it remains to be seen whether with our present knowledge we will survive the inherited ills that we are perpetuating. It is also the *network society*, the embryo of a globalised society, "constructed around Internet communication networks" (Castells, 2002, pp. 127-142, 285-292). Finally, it is also the *learning society* (Hargreaves, 2003, p. 11), in which this is present in every sphere and which will be present in one way or another throughout the life of every human being, not only for working but also for enjoying leisure, relationships, learning to play, to seek, to use different means and tools of communication, etc.

From this point of view of the learning society, the twenty-first-century citizen is the result of specific historical and economic conditions. These conditions map out a type of education, of training and of protagonist that tend to act differently from the equivalent figures of previous societies. In effect, in the learning society, the foundations of the education system are dug up (Caivano, 2007), as the organisation, the operation and the mission of an education system developed according to the needs of the post-industrial society do not meet the needs of the information and learning society, and they do not decisively use the potential of ICT. Also, as Caivano explains, probably neither the students nor the teachers make sense of it. Providing the adequate preparation for the learning society is the great challenge facing education in the twenty-first century, which has to help students, young people and adults to learn in collaboration, to learn throughout their lives, to learn at a distance, to know how to manage information, to have the necessary skills and abilities and to have the right attitudes.

Alongside the social changes and needs, it is logical to think that formal education has changed throughout this century and is gradually leaving behind the physical grouping of students, the physical coincidence of them in a specific time and place, the agricultural academic calendar, the uniform curriculum, the imposition of paces and itineraries, the centrality of the teacher conveying the knowledge, the replication of knowledge and data, the competitiveness, the airtight separation between parcels of knowledge, and the fostering of passivity, reactivity and a lack of autonomy in the students. It could, therefore, be seen that the formal education of the information and learning society works well with the geographical dispersion and non-coincidence in time and place of the students, with a flexible calendar, with a diverse and personalised curriculum, with a variety of paces and itineraries and a student-centred education.

Yet the change in education does not come about solely through adaptation to new social needs, but also through the pre-eminence of the socio-constructivist conception of learning, broadly accepted, whereby the student has an active role in their learning, constructs their own knowledge through interaction between their personal reality, their own experience and their relationships with other human beings. The student is someone "who constructs their representations, who forms concepts and who solves problems" (Martí, 1992, p. 95). This active role attributed to them and which they should use is provided by training in a VTLE. The centrality of the student implies that he or she is ultimately responsible for constructing their learning, for mastering the necessary skills and for displaying the abilities required, and for collaborating appropriately with the others.

Technology and training in a VTLE

Without a doubt, technology is of great importance in the transformation of the learning society, as it permits the existence of the cyber-universe, in which digital technology, with limitations and also with opportunities, conditions twenty-first-century life. As in other spheres, digitalisation is also an important element in the education sphere, especially as it provides virtual teaching and learning environments that are constituted in the space where one is to be present and relate, and in the space where the majority of the resources for learning are available. They are called *virtual environments* because they imitate what is real, what is physical (Bautista *et al.*, 2006, p. 33), and because, even being digital, they allow the students and their teachers to relate and fulfil their respective roles.

Between innovation and the use of digital technologies lies training in a virtual environment. The participants in this training find ease and flexibility, owing to its distance and asynchronous nature (it is not necessary to coincide at the same time or in the same place with the teacher or their classmates), making it a viable means of training when it is not possible to teach or attend face-to-face training. However, it is gradually ceasing to be a substitute to become the type of training of preference due to its possibilities of collaboration and use of resources, because it is a start in ICT for many people, and it also constitutes a strategic and economic advantage for institutions and companies. Training in virtual environments has ceased to be an auxiliary type of training to become the entry point for many citizens to the information society, the training option of choice in many companies, a means of updating training in universities, and a good way of attracting new students and new income. Besides all this, online training enables the twenty-first-century citizen to be involved in lifelong training.

In any event, despite the possibilities offered by ICTs, they are not neutral; technology alone does not bring about change if there is no modification of attitudes and processes in the people using them. With ICTs, it is possible to continue giving "master class" sessions, maintaining the passive role of the students, or ICTs can be used to foster the involvement, responsibility and work of the students while the teacher adopts a role of companion and guide. In these examples, the first constitutes a *primary use*, doing the same as always but with more advanced means, whereas the second is an *advanced use*, in which we take advantage of the possibilities of technology to improve processes and roles, adapting them to the social context in which the students operate.

Changes in the agents of the VTLEs

Logically, a new situation implies changes to whomever participates in it. In reality, however, the motor of change is not the handling of technology. Change does not depend in the last instance on technology but on personal action. This is why the twenty-first-century citizen does not act like their twentieth-century counterpart, neither will they behave in the same way being a student, because:

- Cyberspace allows them to have a virtual identity or cyberidentity different from their real identity, or even several if they want. They have digital mobility in cyberspace, so, for example, they can be a student at the same time as having family and work responsibilities.
- They need to train and retrain throughout their working life.
- Their expectations are increasingly those of a student-customer: they expect a support service, good quality of service, the attention of professionals, technological reliability and to have quality learning resources.
- They have technological, communication, browsing and informational skills; they have some or many of the skills needed in the ICT society.
- They use the Internet in a varied and growing way, to work, to train, for leisure, to be informed, to buy, to relate and to communicate.
- They may become an issuer of information, initiatives, critiques, etc. on a planetary scale.

As the social environment changes, logically the education agents, the means and the environment of the training also become transformed. In the VTLEs, the traditional role of the teacher and of the student changes. On the one hand, the teaching action focuses more on facilitating learning and providing resources to the student, rather than on transmitting knowledge (Gisbert, 1999), and on accompanying the student (Bautista *et al.*, 2006, pp. 76-84). On the other hand, the passive and reactive student of the post-industrial society becomes a proactive and autonomous student in the e-learning environment in which they perform, as in this environment it will not suffice to reproduce the skills and attitudes of learning in a face-to-face environment to be successful in a VTLE (Broughton. In: Murray, 2001). As it is distance learning, with certain possibilities allowed by the VTLEs, and with a teaching action that fosters and expects the responsibility of the virtual student in their own progress, the student adopts a highly notable implication in their learning that they generally demonstrate by participating, communicating, interacting and collaborating. Therefore, virtual students in the twenty-first century become agents of their own training, a central figure around which the institution (which implements a virtual environment for students and teachers, is geared towards an integrated support service for the student, creation and digital publishing of quality resources adapted to the virtual environment) and the teaching action (accompaniment for the student, who is

guided and has their doubts resolved, as the student is the person who is studying and learning) pivots.

At the same time, the effort and investment of the educational institution and of the teaching staff in fostering the students' being autonomous and committed to their training, not as receivers of automated processes but as agents of their own progress, redound to the quality of the institution and its prestige. Also, the institutions and the teachers must meet the quality requirements and the expectations of the students, who, by being more proactive and more autonomous citizens with more responsibility for their learning, will also be more demanding and more certain of what they want (Dziubińska and Opoka, 2007).

However, VTLE students, including adults, are not exactly customers that join a service. Besides their expectations as citizens and as students, the influence of the teaching staff may lead them to a performance that is closer to learning than to "consumption", as the students will perform in line with the teaching (Bautista *et al.*, 2006, p. 34).

Who are the virtual students and what do they do?

Before going into the figure of the virtual student, it is necessary to know the distinction between *digital immigrants* and *digital natives* (Prensky, 2001; 2006, p. 27 et seq.).[1]

The vast majority of the first wave of VTLE students (end of the twentieth and start of the twenty-first centuries) came into contact with computers and ICTs in their late youth or in their adult life, in other words, they are digital immigrants, coming from a style of training in which the teacher was the centre of the education event, the one who set the pace and how and up to where knowledge had to be acquired. These students, with some shortcomings in skills and abilities for learning in a VTLE, usually start their studies in a virtual environment convinced that there will be a teacher waiting for them, ready to transmit their knowledge telematically. When they discover that a large part of the learning comes from classroom participation, from collaboration with classmates and from themselves looking more deeply into the content on the basis of the study material, they may feel disappointed or even "conned". As Palloff and Pratt (2001, p. 108) explain, it is the discovery that the teacher is not "the sage on the stage" but the "guide on the side", whose mission is to help the student in the learning that they undertake, which no one can do without them, and also to foster interaction and collaboration between the students. This is an important change, for which the students should not feel that they are on their own but properly prepared by their teachers or their institution.

The subsequent waves of virtual students are made up of students of a great variety of ages, among whom digital natives will steadily become the majority, still coming from a regulated training centred on the transmission of knowledge carried out by the teacher, but more inclined to proactivity, to collaboration between peers, and to more democratic and less hierarchical telematic relations. However, the fact of having been born and grown up used to ICT does not automatically turn digital natives into proactive, collaborative, autonomous and participative students (Borges, forthcoming publication), meaning that the skills and abilities related to performance in a VTLE will have to be worked on as part of the transverse curriculum.

To perform adequately in a virtual environment, students have to be competent in a series of actions and attitudes (Flores, 2004); for example, in writing in an adequate and organised way, in extensive reading, in communicating by e-mail, in handling the virtual environment and its tools, in the search, selection and dissemination of information (Jiménez, 1999), in organising study and connection time, and in relating adequately with other classmates, organising communal work, contributing, debating and disagreeing.

Although there are logical differences, and needs, among virtual students depending on the field or qualification, they display common characteristics in their identity and in their performance when learning in a VTLE (Borges *et al.*, 2007; Portillo, 2007; Vicent, 2007). Perhaps the most striking coincidence is that they enter into training in a VTLE without knowing what being an online student consists of, what they have to do, what it entails and how to perform optimally, without having received training in this respect. Among researchers and among VTLE teachers there is a consensus on what attitudes students who offer superb performance in a virtual environment display and what actions they take (see, for example, Bautista *et al.*, 2006, pp. 36-40; Palloff and Pratt, 2003, pp. 5-8; and Draves, 2002, pp. 175-181). Good students in virtual environments display the following characteristics:

- They believe that quality learning can take place in any environment, be it face-to-face or distance.
- They know that learning in a virtual environment is not necessarily easier.
- They relate their real life to what they learn and vice versa.
- They adequately handle the ambiguity or uncertainty which may on occasion arise when learning in a VTLE.
- They organise their time adequately in such a way that they make their academic devotion compatible with their work and family obligations.

1. More about this distinction in Spanish in Borges (forthcoming publication).

- They construct their own knowledge on the basis of the study material and also from the relationship with their classmates and the teacher: they learn *from* their classmates and teacher, and they also learn *with* them.
- They display a great deal of motivation and great self-discipline, and they retain these throughout the course in spite of the difficulties that they may encounter.
- They use, if necessary, the help request channels that the institution offers them.
- They help their classmates and are willing to collaborate and to maintain a good atmosphere in the virtual classroom.
- They have a proactive attitude and are autonomous insofar as is possible, they display initiative in their learning and in their performance during the course.
- They communicate with their teacher if they have any doubts or problems.

Yet it is not sufficient to know the actions and attitudes of successful students. Both students and teachers must be aware of what the other may expect, such that the action of one and the other is adequate and measured. With regard to the students, the following may be expected of them (Bautista *et al.*, 2006, pp. 43-45):

- Personal involvement and responsibility in their performance as a student.
- Respect for classmates and their opinions and proposals.
- Reading and writing thoughtfully, with their own judgement.
- They should act honestly, not copy work by others or from other sources and pass it off as their own.
- They should ask, participate, contribute to the virtual classroom.
- They should know what help channels exist and use them if they need help or clarification.
- They should be willing "to explore, to experiment and to learn in another way".

Even when the student is the one responsible for their learning and the one who must put in the most on their part to fulfil the academic requirements of the course, there are also certain elements that it would be wrong to expect of the student (Bautista *et al.*, 2006, pp. 45-47); for example, that they should have advanced mastery of the technology or that they do not experience any lapse in terms of submission dates of their work.

Whatever the case, we should not count solely on the success of online students. Training by VTLE may not be the most appropriate in some cases or for certain types of people; for example, anyone who cannot devote the necessary time to studying and connecting to the virtual classroom. The freedom and flexibility of training in a VTLE also brings with it an involvement and a responsibility on the part of the student, translated into the actions and attitudes mentioned previously, that the student must carry out if they are studying in a VTLE.

Besides this, both virtual training institutions and virtual teachers must take into account the real possibility that the student is in serious problems, some caused by the teaching action or by the institution, in order to prevent or palliate serious frustration and drop-out. Borges (2005) analyses the actions or inactions that may lead to students' dropping out and shows what can be done with the aim of preventing situations of serious frustration that end up in an irreversible situation. Among many, the principal causes of dropping out do not necessarily have anything to do with the distance or the absence of a physical person, but with the scarce or nil information on what being an online student entails, with the absence of time management and with the erroneous belief that learning in a virtual environment is less hard work than doing it in a face-to-face environment.

Conclusion

The figure of the virtual environment student, and their problems, is not an anecdote that can be avoided without virtual environment training being affected, and with it the teaching staff, the institutions and society itself. As Palloff and Pratt put it so well, "Online learning is a transformative experience" (2003, p. 8), as the confluence of the contents in relation to the classmates and the teacher, in a climate of collaboration, of inquiry and of reflection, transforms the students' vision and perspective in such a way that for many there is a before and an after of their first course in a VTLE.

Beyond being the central figure of the teaching action and the institutional action, the online student may be a key figure that sets trends, conceptions, innovations and developments in education in the twenty-first century, in the learning society.

Bibliografia

BAUTISTA, G.; BORGES, F.; FORÉS, A. (2006). *Didáctica universitaria en entornos virtuales de enseñanza-aprendizaje*. Madrid: Narcea.

BELL, D. (1973). *The Coming of Post-Industrial Society*. New York: Basic Books, 1999.

BORGES, F. (forthcoming publication). "Cuando juego estoy aprendiendo. Los videojuegos y juegos de ordenador, aprendizaje fundamental en el siglo XXI". Review of the book *Don't Bother Me Mom - I'm Learning!*. *UOC Papers*. Iss. 5. UOC.

BORGES, F. (2005). "La frustración del estudiante en línea. Causas y acciones preventivas" [online article]. *Digithum*. No. 7. UOC. [Date of citation: 30/05/2006]. <http://www.uoc.edu/digithum/7/dt/esp/borges.pdf>

BORGES, F.; FARRÉS, J.; GALLEGO, C. (2007). "The virtual environment student in Humanities, Language and Literature, and foreign languages at the UOC". In: Federico BORGES (coord.). "The virtual environment student" [online dossier]. *Digithum*. Iss. 9. UOC. <http://www.uoc.edu/digithum/9/dt/eng/borges_farres_gallego.pdf>

CAIVANO, F. (2007). "La educación del siglo XXII". *Mediterráneo*. Also available at <http://www.elperiodicomediterraneo.com/noticias/noticia.asp?pkid=274913>

CASTELLS, M. (1996). *The Rise of the Network Society. The Information Age: Economy, Society and Culture*. Oxford: Blackwell, 2000. Vol. I.

CASTELLS, M. (2002). *La Galàxia Internet.* Ferran Alaminos (trans.). Barcelona: Rosa dels Vents / Editorial UOC. Original publication: CASTELLS, M. (2001). *The Internet Galaxy: Reflections on Internet, Business and Society.* Oxford: Oxford University Press.

DRAVES, W. A. (2002). *Teaching Online.* River Falls, Wisconsin, USA: LERN Books. 2nd ed.

DZIUBIŃSKA, M.; OPOKA, J. (2007). "The online student as a driving force in the transformation of the Polish Virtual University". In: Federico BORGES (coord.). "The virtual environment student" [online dossier]. *Digithum*. Iss. 9. UOC. <http://www.uoc.edu/digithum/9/dt/eng/dziubinska_opoka.pdf>

FLORES, J. (2004). *How to Become a Proficient Online Learner*. USA: Authorhouse - 1stBooks.

GISBERT CERVERA, M. (1999). "El profesor del siglo XXI: de transmisor de contenidos a guía del ciberespacio". In: J. CABERO ALMENARA [*et al.*] (coord.) (1999). *Las nuevas tecnologías para la mejora educativa. Nuevas tecnologías en la formación flexible y a distancia.* Seville: Editorial Kronos.

HARGREAVES, A. (2003). *Enseñar en la sociedad del conocimiento. La educación en la era de la inventiva*. À. Mata (trans.). Barcelona: Octaedro.

JIMÉNEZ JIMÉNEZ, B. (1999). "Formación continua y nuevas tecnologías: una visión didáctico-comunicativa". In: J. CABERO ALMENARA [*et al.*] (coord.) (1999). *Las nuevas tecnologías para la mejora educativa. Nuevas tecnologías en la formación flexible y a distancia.* Seville: Editorial Kronos.

MARTÍ, E. (1992). *Aprender con ordenadores en la escuela*. Barcelona: ICE University of Barcelona / Editorial Horsori. Cuadernos de Educación, vol. 10.

MURRAY, B. (2001). "What Makes Students Stay?" [online article]. *eLearn Magazine.* [Date of citation: 25/11/2003]. <http://www.elearnmag.org/subpage.cfm?section=articles&article=22-1>

PALLOFF, R. M. ; PRATT, K. (2001). *Lessons from the Cyberspace Classroom. The Realities of Online Teaching*. San Francisco, USA: Jossey-Bass.

PALLOFF, R. M. ; PRATT, K. (2003). *The Virtual Student. A Profile and Guide to Working with Online Learners*. San Francisco, USA: Jossey-Bass.

PORTILLO, I. (2007). "Construction of a valid online training model from the point of view of the student as part of their study discipline". In: Federico BORGES (coord.). "The virtual environment student" [online dossier]. *Digithum*. Iss. 9. UOC. <http://www.uoc.edu/digithum/9/dt/eng/portillo.pdf>

PRENSKY, M. (2001). "Digital Natives, Digital Immigrants Part 1". *On the Horizon*. 9(5), pp. 1-5. Also available at <http://www.emeraldinsight.com/Insight/ViewContentServlet?Filename=/published/emeraldfulltextarticle/pdf/2740090501.pdf>

PRENSKY, M. (2006). *Don't Bother Me Mom - I'm Learning!*. St. Paul, USA: Paragon House.

VICENT, L. (2007). "The online student on technical degree courses. Motivation, interests and technical problems". In: Federico BORGES (coord.). "The virtual environment student" [online dossier]. *Digithum*. Iss. 9. UOC. <http://www.uoc.edu/digithum/9/dt/eng/vicent.pdf>

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