eLearning: from social presence to co-creation in virtual education community

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Abstract

Purpose – The purpose of this paper is to present an example of how the synergy of different competences in students’ teams, out-of-the-box thinking style and various motivation factors in a culturally diverse learning environment is the foundation for knowledge construction, driven by the idea generation process and co-creation – the so-called Medici effect, one of the benchmarks for excellence in eLearning.

Design/methodology/approach – Developing this case study in the area of eLearning and Virtual Education Community (VEC) involves passing through various stages: from providing social presence and cooperation of students to co-creation in the eLearning environment by contriving “e-students” in the VEC whose profiles and learning processes are managed by pairs/teams of real students with different experiences and types of behaviour.

Findings – The paper presents outcomes of the research focused on the formation of the VEC for students who are motivated in sharing common passions and principles, in developing good communicator-and-listener techniques, in studying and creating situations of success.

Practical implications – In order to use and promote this pedagogical approach, enhancement of the desk-top technology is needed in terms of a user-friendly interface for creating a VEC where everyone, including people with special needs, feels comfortable, interested, and motivated to communicate, learn, construct, and share knowledge.

Originality/value – The original “4A” (attention, actualization, attraction, and action) pedagogical model applied in eLearning is aimed at ensuring students’ social and cognitive presence through their e-profiles for self-assessment and positioning, adjusting learning trajectories and monitoring learning results, as well as assessing progress and final outcomes of learning.

Keywords E-learning, Cognition, Communities, Educational psychology

Paper type Case study

I. Introduction

Today both Eastern and Western university systems face similar challenges such as working in a culturally diverse academic community, using ICT and new pedagogical approaches to provide excellence and mobility in education. Technology-enhanced learning is viewed in a broader sense, not just as a web-based learning management system and “hardware” for remote access. Social presence and interaction in a

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virtual space (Dixon et al., 2006), cooperative environment, and co-creation (Katerynyak et al., 2008) are the basic learning models that make technology-enhanced learning effective.

The topic of our research was based on investigating the peculiarities of eLearning in different communities, finding differences in learners’ behaviour, driving forces for knowledge creation and dissemination in virtual space, and bringing pedagogical practice to computer science. In order to obtain the maximum list of such peculiarities, we formed two virtual education communities (VECs), members of which behave differently in real life. The first community is focused on the future; it includes people who are able to think “out of the box”, generate ideas, and find value innovations. The second one is focused on the present or the past, and its members can easily adapt to set values, i.e. follow norms and procedures.

II. Creativity in VEC – type 1
Creativity and entrepreneurship are considered to be the general attitude and behaviour which can be usefully applied in eLearning as well as in everyday life. Since everybody at some stage may need to become an entrepreneur, or to display “idea creativity” (De Bono), the objective of our research was to find the nature of young people's personal qualities that form the basis for entrepreneurship, such as creativity, spirit of initiative, independence, and capacity to confront risks (see Figure 1).

Pre-course idea competition “Idea4life” inspired these students to demonstrate and share ideas, and to actually become entrepreneurs.

Our ambition was to create a VEC with the idea competition participants who have different professional expertise (competences) and who think differently. An example of eLearning in this community was the advanced level course (Bologna-ECTS) “Creativity and innovation in theory and practice” launched at I.Franko Lviv National University in October 2007-May 2009. It was an interdisciplinary and cross-departmental curriculum for students majoring in journalism, applied mathematics, philology, psychology, biology, economics, etc., combined in a virtual environment organized by the Mälardalen University (Department of Innovation, Design & Product Development), Eskilstuna, Sweden, and the Ukrainian Distance Learning System: www.idea4life.org.ua/ The purpose of the course was to supply students with knowledge and practical abilities in creative, innovative, and entrepreneurial processes.

Figure 1.
Object of research while forming the VEC
We sought to develop in each member of this community the ability to share experience, the passion to perform creative and effective teamwork in order to upend the status-quo, use imagination, construct new knowledge, find solutions, and promote changes; it was appreciated by the participants:

I can’t even think that something could be better in our study. Now I’ll not just bring my idea into life – I can say that those lessons gave me more than I ever expected. I really enjoyed the course and you, as my teachers.

Idea competition made me really involved in the creativity process. It stimulated me to make some small but decisive steps towards implementation of my idea.

I took most information on theory from books, but the environment of open communication between people who try to reach common goal, who intend to develop their own ideas was very efficient way of developing the characteristics of a creative person, innovator and entrepreneur.

According to the Swedish team: “... Our intention was to involve all participants in a very active way and in a creative – and demanding – process of both business ideas and on personal development level for their future studies and work. We are very satisfied with a high degree of motivation, engagement, openness, communication and willingness to learn and share experiences between our two different cultures.”

Ukrainian students got inspired in developing or realizing ideas, and they demonstrated high demand for having professional business coaches/tutors in order to overcome the fear of “taking the first step” and to start communicating and acting. With this objective, a tutor is able to manage the eLearning process effectively.

A key condition for achieving the effect of students’ co-creation in the VEC is to involve a critical mass of participants in communication and co-operation.

We observed that 75 per cent of the students’ visits on the web-platform were between 17.00 and 22.00 for group activities; certain individual activities occurred from 07.00 to 08.30. That is, the platform was active for about 7 h a day, or up to 50 h a week, and for the rest of the time, it served as an information source for strolling through it. Those students who were active in the co-creation process (and there were eight such students or 30 per cent of the total group) spent, on an average, 5-6 h a week working in the course, while others, who comprised the majority of the VEC members, only fulfilled the tasks and were present in the VEC for about 4 h a week. Simple calculations showed that in order to ensure the intellectual collaborative component of the virtual community as a creativity laboratory, it is necessary either to increase the duration of students’ work in the course by at least three times or to increase the number of active students up to 20.

We came up with a suggestion to introduce a new model of e-students, where one e-student in the VEC was created and managed by pairs (two real students) or small teams (three real students). Those e-students became participants of the eLearning process, and all responsibility for their behaviour, studies, and work was carried and shared by student teams. In such a case, it is enough to have five to six e-students for the co-creation process. The outcome of the combination of students with different backgrounds, skills, types of thinking, and behaviour in small teams was the co-creation process and the "Medici effect". Besides, team responsibility increased the duration and effectiveness of an e-student’s presence in the VEC.

While taking part in the eLearning process, students got familiarized with the main tools of creativity or innovation management as well as being personally involved in the creativity action and idea generation as a source for value innovation, by thinking differently, getting out of the box, and emphasizing their cultural identities.
A special web-forum “Ideas Parade” was created for publishing team-generated ideas on behalf of e-students and for discussing them.

We also experimented when the tutor created an e-student as a negative character. That e-student provoked conflicts when it was necessary to heat up an argument and to push the creativity and innovation process. Creation of situations that require changes stirs up the collaborative work and lays the ground for leadership qualities development.

Thus, William Shakespeare’s message “The world is the theatre and we are the actors” inspired us to develop the aforementioned eLearning scenario and to “stage” actors created, animated, and “second-lived” by students and tutors in order to position and see themselves from outside.

In order to verify and prove the effectiveness of the functioning of such a VEC, we conducted regular interim constructivist online learning environment survey. The purpose of that survey was to show how well the online delivery of a particular topic enables students in a certain virtual community to learn. There are 24 statements with no “right” or “wrong” answers in this survey, that ask about students’ experiences in a course topic. The results helped us improve the way in which every following e-course module was presented. Figure 2 presents the summary of the results of the survey conducted among students in the e-course.

The first item – Relevance – shows how often one’s learning focuses on issues that interest a student, what he/she learns is important for professional practice, and he/she connects well with it. The second one – Reflective thinking – shows how often students think critically about how they learn, about their own and other students’ ideas, and about ideas in the readings. Interactivity shows how often in the e-course students explain their ideas to others, and ask other students to explain their ideas or respond to those ideas. Tutor support demonstrated how often a tutor stimulates students’ thinking, encourages them to participate, and models a good discourse and critical self-reflection. Peer support shows how often other students encourage one’s participation, praise and value his/her contribution, and empathizes with his/her

![Figure 2. Results of an interim constructivist online learning environment survey](image-url)
struggle to learn. Interpretation demonstrates how often students make good sense of other students’ and tutor’s messages, and how often other students and tutor make good sense of their messages.

From Figure 2, we can see that students experienced good relevance and interpretation in the course very often, while they experienced reflective thinking, interactivity, tutor, and peer support quite often. Below there are some other students’ comments:

Innovation is not a solo act but a multiplayer game: I understood that work in a team is very important. Every team member must be responsible. In a team, an important factor is communication and trust.

There were a lot of discussions, communication and even wrangles, which we had to get through to achieve the result.

I liked very much the structure of our meetings, agendas for all events. It was a great idea to divide all of us into the groups, because it helped us to understand and to see different sides of one problem. It helped us to make conclusions and “go out of the box” of only our experience. It was sometimes difficult to agree with a different view of another person, but it teaches us to be tolerant to each other.

Throughout the course these were lectures, tutorials, online tasks, workshops, virtual company visits, meetings with various men of success – this was somewhat of a shocking therapy.

After the course, students developed insights in creativity, innovation, and entrepreneurship – in theory and practice – for individuals and communities.

We observed that the driving forces for the learning process included:

- belief in oneself, in one’s ideas, and in what one is doing; increased self-confidence for the future and self-actualization;
- students’ cultural and background diversities and team spirit – in sharing experience and responsibilities for co-creative achievements (the Medici effect);
- creation of the situations that provoke change – when a learner generates and advocates ideas and feels inspired; a new product or a new outlook or a reinterpretation of traditional things; and
- excitement and fun.

III. Culture values in VEC – type 2

Creative thinking styles and motivation are personality-sensitive notions. During the registration process, every student in type 2 VEC filled out his/her personal e-profile. We observed two main motivation factors: willingness to experience success/satisfaction (group 1) and willingness to feel an involvement in something new and of common value (group 2). When students’ motivation factors changed and new knowledge was constructed during the learning process in the VEC, students introduced changes and added notes to their e-profiles. For this purpose, we used our “4A” pedagogical model (attention, actualization, attraction, and action) (Katernyak et al., 2001).

While creating the VEC for group 2, we involved deaf students, this was because they have a very strong culture and want to feel attachment to it. So, first we learned what deaf students valued the most in their relations with others. The results of the survey are presented in Figure 3.
Thus, we formed type 2 VEC on the basis of the values mentioned by its participants, while paying special attention to the creation of a comfortable, benevolent, friendly, and safe environment support system for the participants of the eLearning network, and to the fair and objective evaluation of the results of every student's work. Those collectively defined “passions” and accepted values and principles underlay the attitude and behaviour of every participant of the type 2 VEC.

By using written speech in the eLearning process, the feeling of inferiority among the deaf was levelled off, though, on the other hand, students with hearing impairments had difficulties while participating in the co-creation process due to insufficient level of the second language (since the sign language is their first language). It was difficult for tutors who worked with deaf and hard-of-hearing learners to overcome the distance and to create a critical mass of communicating and interacting students. Thus, more attention was paid to how well the students understood the instructional material and tasks, and to the creation of a trustful and creative atmosphere. In such conditions, a learner was not afraid to express and defend his/her own opinion. The unique opportunity of forming common values in the VEC conveyed the feeling of trust and responsible attitude towards the learning process and its results. Students with hearing impairments felt the responsibility of their presence in the eLearning environment, and so they tried to present themselves in the best possible way.

In that VEC, the instructional material was adapted thoroughly and divided evenly, according to the recommended schedule; it was presented in comprehensible portions according to students’ readiness to conceive and master them. Students with hearing impairments experienced success when they had an impulse to study.

Those students sought to find clearly defined goals (actualization of their own dreams), which influenced their behaviour while creating new potential and opportunities to achieve the goal (attraction), and to find the way to realize the potential and act using the given opportunities (action). We investigated the creation of the situations of success – situations where every learner feels unique and satisfied, experiences positive emotions after successful performance of a task – as they strengthen motivation and self-reliance as well as assurance of one’s own capacities. Additional factors of attraction to eLearning included the ability to become a part of its community at any time one wished and to have fun (game-based learning).

While developing e-portfolios, we did not make all students finalize their decisions concerning their future, but they had to start thinking about their dream, and to feel the responsibility for finding possible ways and acting on them. Students shared their interests and demonstrated their talents. The results of students’ learning process and progress were presented in the virtual club “Talant@Terra”. A variable part of students’ e-profiles was altered and reinforced by the students continuously.

Figure 3.
The most meaningful values for deaf students

- honesty, trust, understanding
- benevolence, care, compassion
- respect, fairness
- intellect, knowledge, competence
- independence, activity
- peace of mind, obedience
In order to make the facilitation of the eLearning process for type 2 VEC successful, we applied:

- self-assessment tools and a positive thinking paradigm “appreciative inquiry” (Cooperrider, 2000);
- joint community passions and principles;
- social and cognitive presence through e-profiles as well as development of good communicator-and-listener techniques;
- empowering questions for finding and creating the situations of success; and
- “4A” model for maintaining learners’ motivation and artefacts, monitoring learning results, and assessing final outcomes of eLearning.

The VEC for the deaf was focused on the development of their communication and social skills, and personal competences such as computer literacy, leadership, and networked learning skills, where virtual community members exchange information resources and collaborate for knowledge construction and decision-making related to their future and professional development. It quickly became the largest and most valued network for the deaf in this country, Ukraine. The need for a deaf-oriented network is global, and there is huge enthusiasm in the professional community to get involved in this area. Creation of a VEC for the deaf has opened new possibilities for on-going research both in the area of socialization of deaf people and in the field of finding out innovative technical and pedagogical approaches that foster their personality development and vitally important skills.

Our ambitious plan is to create an intellectual system which would automatically adjust the learning trajectory of every individual based on his/her abilities and learning potential. We pay special attention to the expression of feelings, and we are looking for specific technical tools that enable learners and instructors to express their excitement, mimics, gestures, etc. in eLearning, where everyone, including those with special needs, would feel comfortable and interested.

References


Further reading


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