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How do the representations of learners on learning culture evolve via a social network and situational problems integrate with ICT?

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Abstract: Our research aims to join two elements: first, the cognitive power of the construction of knowledge through the use of situational problems; extensively applied in science and economics, these tasks with some constraints put students in an interesting learning situation: that of self-construction of knowledge, skills and attitudes (Partoune 2002). In addition, in group work, situational problems engender socio-cognitive conflicts and seek coordination between team members (Albero, 2004). Second, we consider the exponential growth of a social network like Facebook among our target audience. Indeed, the powerful connectivity of Facebook and its applications have built a network of almost a billion account holders worldwide. In addition, we also wanted to put in a human-centered research approach (Rabardel, 1995), that is to say, one that puts the actor-learning and activities at the center of the formation, so important for an empowerment process elements in our students.

Keywords: ICT, situational problem, social network, social media, socio-cognitive, empowerment, self-construction

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Selection and evolution of Facebook as a platform for learning

In the 1990s sensational book was released in the United States on the decline of sociability and the disintegration of social ties. The book uses extensive data on the evolution of social relations in the United States. A survey conducted on a representative sample of 5,000 Americans followed for 20 years show that in 2003 the Americans had on average more than 4 close

social contacts, 2 friends and 2 people from the family circle, while they were 6, twenty years earlier. In July 2010, 10 years later, when we¹ decided and designed the adapted screenplay for the Facebook platform, there were about 500 million users worldwide for this particular network, with over 100 million Americans and 17 million French, each with an average of 130 "friends." Four years later, in 2014, more than 1.30 billion human beings are connected on this platform. Beyond the number of 150, Robin Dunbar, professor of evolutionary anthropology at Oxford, stated that "this is

¹ Marchal B. & Do Q.H., (2010)

the maximum number of friendships that the human mind is capable of supporting. Dunbar's number - as it is known - is applied, as the Facebook generation. "

We no longer speak of a decline in social skills, but rather the beginning of a new sociability, profoundly transformed and renewed. The paradox of the technical development of the global human communication appears to substantially reduce the lattice exchanges, but greatly increases the written exchanges as Internet and television; another person is in "contact" with a person who is at the other end of the planet. Pierre Merkle states: "The panorama of new relational practices invites rather to consider the Internet, which is a technology that accompanies, rather than cause, a number of these changes in social relationships (weakening links, transformation the concept of group, flattening and informalisation of relationships...)." For us, Facebook has imposed itself as a kind of compensatory sociability rooted in learning the language.

In addition to developing a strong network that touches so many people, we know from the data of several studies (77% of French youth aged 18 to 24 have a FB account, students 86%, with men at 38% and women at 48% students are most "connected." The platform of Facebook social network appeared to us as the most appropriate tool for a number of reasons related: its accessibility, its integrated interaction tools confirmed the potential application of teaching models.

Accessibility and mobility

The platform is free, requires no registration and all key users registering there are thus capable of promoting the construction of the

social network of each. The social network on the net is a medium from which the user can create, define, and build a digital identity. Users are familiar with all the tools. It is not necessary to provide training for the use, either in-class or from a distance. The recent passage of the platform to a configuration in "Timeline" does not in itself provide a plus from the scenario as it was designed, especially as at the time of this writing, everyone has not passed to this interface. It will, however, be a necessity soon.

In addition, applets developed for all operating systems for mobile telephony allow almost unlimited access in time and space. Mobile devices developed with Android mobile devices or operating system specific Apple® offer free Facebook software. For our experiment, we can say that this software has been further improved and that all functions previously available on the application or portable computer, are now on these terminals, which provide near real-time interactions. Having practiced the learning modules on dedicated as Moodle or other platforms, we know that the recovery and monitoring of learners is paramount to maintaining presence and avoiding abandonment in online learning (Charlier et al, 2006).

Integration and traceability

Built-in tools (awareness, Chat, leaving messages, creating internal groups, document sharing) raise interactions valued by Like clicks and comments added. Adding messages and tracking one's conversation can be done daily. It thereby allows traceability of interactions. Facebook offers, on creating pages or groups, statistical tools from simple (filing hours) to the arcane (number of visits per post, per day / week /

month in graphs). Furthermore, a page can be opened to the entire Internet community if permission is given, allowing visibility of changes in learning who wants to connect to the Net.

Learning applications

The third reason is the one that interests teachers such as us the most: the possibility of applying recognized teaching models. B. Joyce, Weil, and E. Calhoun distinguish four main types of teaching models - socialization, information processing, individuality and behaviorists systems. Two of them are particularly suitable to a social network platform: the socialization of a social constructivist model that offers the possibility of developing an integrative and productive interaction on the one hand and on the other hand the development of standards to support learning activities. But a social networking platform is also developing the intellect, whether by learning information retrieval, learning conceptualization, a process designed to generate hypotheses and test them, or creative thinking. We are then in a cognitive pedagogy of information processing.

Socialization

For Van Lier, the language articulates the relationship between the world and the people and therefore, context is central. The emergence of language development is through the interaction of children and learners with their spatial, social, cultural, educational environment, and creates common ground between the development of primary language, children and adults in the learning a second language and language acquisition by robots.

However, linguistic precision is important and Felix called for an approach combining social constructivism and cognitivism so that learners are exposed to a range of activities that support both automatic responses, increasingly complex engagement in independent learning, and the simultaneous development of both cognitive and metacognitive processes.

Ryberg and Christiansen also showed that social networking sites showed language acquisition by the fact signs that they offered opportunities to learn through observation before mastering an understanding. This naturally leads to increased trust and due recognition by the community members and therefore encourages learning through the community and the learner, making him become a kind of “smuggler of information and knowledge” himself.

Data processing

The pedagogy of information processing focuses on the steps to the memory using representations (concept maps, ideators, graphs) according to work by B. Joyce, Weil, and E. Calhoun (2003), the study of the world and society through the development of argumentation and critical thinking. Thus, the models offer inductive thinking, concept acquisition and learning (re) presentation. Based on the model ACT Anderson describes the transition from one form of knowledge to another through the working memory that acts as an activated from long-term memory area (a joint semantic knowledge and procedural knowledge). We will see below in the Scenario part that we are committed to expanding the mnemonic practices and conceptualization.

Scenario

Educational progress from the initial situational problem to the final situational problem

Consisting of a set of complex situations that require concerted action to get out of these difficult situations, the learning scenario proposes motivating micro-objectives and technological tools for both language and the profile of learners. In order to be closer to the concerns of our academic profile of a learner who is twenty and follows a course of BA in French and our Internet social networking profile using Facebook late at night and mobile telephony, situational problems were scripted in what looks like a fun application (applet) micro-world. So Facebook has become not only a network for sharing photos, addresses, filing comments or messages but also a place where you can learn to play in a simulated world in real time where we must. Collaboration and exchanges build collective knowledge from knowledge of each. There have been numerous research studies of situational problems; to summarize their purpose and interest, we can say that a situational problem is a concrete task under conditions that assume that people cross a number of unavoidable obstacles to get there. The situational problem is always a fiction under control and it is part of a pedagogy based on self-building knowledge, know-how, and skills. The barriers are directly related to lack of learners: lack of knowledge, know-how or lack of conduct and proper attitude, the conditions necessary for the work of the task. They can be physical or human resources, the various constraints that will determine the learning of learners and make them indispensable. Situational problems can also be built with cascading sub-problems to solve situations at each stage to advance in the overall process.

Analysis and Results of the Research

Our research aims to develop learning strategies among young students. We have seen progress in three categories of strategies: metacognitive, cognitive and socio-emotional. These analyses are mainly based on the indicators proposed by Paul Cyr and Claude Germain in "Learning Strategies" (Clé International, 1998).

At a metacognitive level, the observed progresses are in skills anticipation, planning, attention, self-management and self-regulation. What is particularly interesting is that the Facebook group may dispose of an awareness tool, that is to say the ability to see group members present - if they want to show themselves - and speak to them directly. All educational platforms do not supply this tool that dramatically facilitates exchanges between members of a group. And this is, in our opinion, the advantage of a social platform like Facebook. Imagine the following scene: a student goes home at the end of the day. He realizes he is late in his group work and decided to turn on the computer. But he is like any modern young person who has a Facebook account: unable to start his work session without taking a look at notifications and the news of his personal page thread. But just arrived on Facebook, his attention is arrested by a fellow who is present on the platform, who calls for help because he is too late in his work and needs help. Then the two are drawn into a purely educational conversation because that's where the misunderstanding, reformulations and explanation, signs of empowerment among learners. This conversation is all the more rewarding if the language is the target language, as was the case in our group. As guardian-observer training, we had fun to

hide from us every evening on the platform to witness this kind of educational exchange between students, particularly abundant before the end of the period of a task.

The second category is about cognitive strategies like practicing the language (the students must take every opportunity offered to them to communicate in the target language); taking notes and classifying ideas, especially through the meeting Chats; and performing information retrieval; translation and comparison; paraphrase, preparation and summary.

The point that seems most interesting as a teacher of French as a second language is the language practice. Among the various ways to "seize" the opportunity to communicate in training, the more convincing are the Chats. Indeed, the first element is at the invitation to participate in a Chat: if the person decides to come and be present, this shows an intention to communicate, at least of reading comprehension; our sample group showed 64% attendance to all Chats that we have collected. If the person is invited, but did not come to apologize, he or she will normally contact the tutor by email or private messaging FB to explain his or her absence. In cases where the learner does not come and apologizes before or after the meeting, this clearly indicates a lack of willingness to communicate.

In contrast, in the copies of Chats we can count the number of times each student participated as well as check their quality by checking whether they wrote sentences or simply by assents, interjections, or emoticons.

In the three Chats we analyzed (early training SP1 - SP4 medium training - and end SP8 training), we find a frequency of

interventions and a increased learner speaking as the training advances, even though the number of times the tutor on line intervenes is important because he answers many questions. Interjections even if they do not have a qualitative nature show proof of presence and monitoring the progress of the Chat.

We now turn to the socio-affective strategies, which consist in skills: questioning for clarification and verification; cooperation to interact with peers to accomplish the task; management of emotions aware of the affective dimension; techniques to increase self-confidence and motivation.

In distance learning, the geographical distance, cultural distances as well as time differences do not allow instant understanding of emotions expressed; silence or absence may indicate a lot. One can also say that the emotions are often expressed by hyperbole; there is a whole range to express: emoticons, punctuation, rehearsals, games typography. Often the walls are allowed in addition to clicking "like" comments in which one can read the emotions: the joy of success; the desire to win; relief; contentment. In contrast, we read discontent, pressure, guilt, depression, fear of timeout...

One might add that the relational learning - learning, learning - tutor was not only rewarding for the time after training but also because trade occurred, and continued.

Motivation is crucial: the training is not mandatory and does not fit into any curriculum; registrations are made on a voluntary basis (as well as the attachment to the professor who invited them to participate). Despite all the technical problems, few have had the urge to stop if they do, it is often for reasons beyond their

control. One can even say that some have resumed training when their personal problems have been resolved.

Conclusion

On the educational level, the learning experience on a social network platform that matches the natural environment of the learner is different from the proposed landscaped environment on campus. The distance learner is faced with a learning experience that moves away from the traditional socio-academic background, realistic and known, and engages with cognitive and affective solitudes. It should then promote the development of learner autonomy, which will naturally have the effect of the student actively engaging in its approach, to motivate him.

The autonomist media model learning from Deschenes and Lebel (1994) support the broad outlines of this approach. For them, the autonomous model:

- Is part of a major paradigm shift that goes from behaviorism and cognitivism to constructivism, and so from objectivism and observable performance to a subjectivism of knowledge and focus on the mental activity of the individual, often unobservable.
- Wants to integrate all aspects of the learning process: cognitive, metacognitive and affective.
- Based on a conception of learning that gives a key role in the interaction between the learner and the learning object.
- Assume that the learner must be active in their learning process by assuming control himself.

This model, as can be seen, relies on a broad responsibility on the part of the learner, particularly in regard to the awareness of mental activity. In doing so, it would promote the development of autonomy described as the ability to manage their learning process (Deschenes, 1991) or, in other words, the ability to identify ways to implement to achieve its objectives.

However, and this goes to the point of view of Tardif mentioned above, all learners do not begin the learning process with the same level of autonomy:

Autonomy is not a simple but a higher quality integrated line (a métaconduite) and, for most individuals' mode, this conduct does not form a natural part of their repertoire; it must be learned. If distance education wants to support this autonomy, which determines its existence, it must help learners develop the measure; it must be learned (Linard, 2006, p 2). Thus, for Linard, it is not enough to empower the learner but he must be able to fulfill the responsibilities imposed on it; in other words, teach him to learn more effectively through systematic reflexive analysis of his own way of learning.

Metacognition is somehow the ultimate measure of the development of autonomy, which could also be called an empowerment process. It is for the learner to self-evaluate on an ongoing basis the learning process as it rises above itself to hear oneself think, act, and be aware of the mental process that engages in managing this process. This exercise, when used in the context of a real process of knowledge construction, will act positively on the planning, execution, control and regulation of the learning process (Lafortune, Jacob and Hebert, 2000).

This way of interacting is driven by the ability of the learner to understand the mechanisms of this interaction and adjust. It is therefore not accessible to all age levels but is intended for university students. It could be adapted to ongoing training but it requires a considerable investment in time (3 hours / week). Moreover, considering the strong consensus culture in Asian countries playing positively in reports and social-cognitive conflicts, we hope to offer this model to integrate into university curricula, alongside more traditional platforms in distance learning.

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