Steps Towards socially aware students: extraction and use of hot cognition in academic communities

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Steps towards socially aware students: extraction and use of "hot cognition" in academic communities

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Abstract. *Today the business world claims for professionals able to interact in society in an emotionally intelligent way. In the last century the Universities around the world did not address the issue in an explicit way: often "socially limited" students were injected in Society awarded of diplomas. That means, students technically competent, but not necessarily emotionally competent, sometimes unable to interact or collaborate in a professional community. This poster describes how much "hot cognition"[1] can influence the process of knowledge creation. We propose to register the subtle and tacit knowledge allowing academic communities to improve the way to develop systematically the psychological students' abilities during their graduation experience.*

1. Introduction

Knowledge is a vital source of survival advantage in a professional space. The reason of being of academic communities is to continually create knowledge. Academic Environments have the purpose to literate and prepare their students as future successful professional citizens. Many Universities and Colleges give, at the moment, no importance to the development of subtle[2] "knowledge" like personality, emotional intelligence and soft skills. This occurs partly because those abilities are difficult to teach by traditional methods, and partly because of a conservative educational system[Goleman et al. 2002].

The creation of knowledge is influenced by human rationality during the decision making process, which is influenced by human psychological aspects [Simon 1983, Damasio 1994, Goleman 1995]. Damasio also proves that feelings are typically indispensable for rational decisions. When people are not emotionally stressed they are unable to make the "hard"/right decisions[Goleman 1995]. Some "serendipitous" important decision / sudden discover, as Simon [Simon 1983] describes "AHA" experience, tends to evoke emotions ("hot cognition"). Actually, "AHA" experiences happen only to people who possess the appropriate knowledge. Inspiration comes only to the prepared mind, and "emotions keep the problem in background processing of our minds" [Simon 1983].

Simon said that the effectiveness of reason as a tool for making decisions depends critically of the fact that takes at the input (data, knowledge). For these reason it is important the feedback described in Goleman: "without feedback people are in the dark, they have no idea how they stand with their peers or in terms of what is expected of them".

People level of emotional intelligence is not fixed genetically, nor does it develop only early in childhood. Emotional Quotient seems to be largely learned and it continues to develop as we go through life and learn from experiences. Some competencies from emotional intelligence distinguished the most successful from those who were merely good enough to keep their jobs[Goleman 1995].

Considering that, we propose to extract cues leading to the assessment of psychological knowledge. That knowledge may allow teachers to find gaps in the evolution of psychological aspects for students. Gaps found may allow an adequate development of the personality traits, emotional intelligence and soft skills.

2. Flow and creation of Knowledge in Academy

Let us simplify Academy. Academy is a community. It may be real or virtual. Its members are scientists (researchers), teachers and students from a specific University, Center, Association, etc. Its members can be also members of others

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[1]cognition colored by affect - emotional intelligence, personality traits and soft skills.
[2]affective information which comes with a hot cognition process.

communities. Academy aims to create and transfer the knowledge (tacit or explicit) to literate citizens for their professional life. It creates dynamic knowledge by means of interactions of his members during the communication process in a teaching/learning environment.

The flow of knowledge is created by an Academic community in a situated[3] and shared[4] context [Clancey 1997]. Any Academic community forms smaller communities internally where the new knowledge will be created. An academic scenario can illustrate the allowed relations among members of the Academy. There are *students*' communities and *teachers*' communities. Many others communities from Academy derives from these ones. Each member of each community can participate of many communities (internal or external). There are no restriction. They participate to a community according to the definition of the Academy administration. Communities can change during the Academy life cycle.

Knowledge, during its process of creation, is influenced by the environment, the community and the time. Knowledge is created through community interactions, converting tacit into explicit knowledge. We can say that *tacit knowledge* is more related to human emotional state, traduced by subtle information and cues. transformed in subtle knowledge as soft skills, emotional intelligence abilities and personality traits. While *explicit knowledge* is more related to rational processes, traduced by hard skills (formal knowledge expressed by formulas, manuals, systematic language). The explicit knowledge can be also represented by the tacit knowledge crystallized (formalized). The last one is the definition chosen by us.

We propose a workflow to manage the extraction/acquisition of subtle soft skills information in an Academic environment. The subtle information is extracted from daily interactions among students and teachers. Those behaviors are related with the Personality, Emotional Intelligence and Abilities (soft skills) of their actors (students and teachers). Actors interact in the situated context of an academic environment generating a flow of dynamic subtle[5] knowledge. The flow is composed by the conversational exchanges between teachers and students.

3. Towards User Psychological Profile

Instead of merely transferring knowledge, Academy creates and redefines knowledge based on members action and interaction in a situated context during a period of time. Considering that, we agree with Goleman when he considers emotional competencies twice as important as purely cognitive abilities. Humans with poor emotional competencies may be put in a margin of the normal social life. They are technically competent, but limited to communicate and interact in their work group. These factors blocks the flow of knowledge creation which is the *life* of a dynamic enterprise.

According to the knowledge creation process, the Academy does already manipulate and extract their explicit (conventional) and tacit (psychological) knowledge. That knowledge should be stored to be used as a feedback of academic interaction among their internal communities.

According to Goleman [Goleman et al. 2002], each person has a representation of "his ideal self", and also each person has a representation of "his real self". The difference between "ideal self" and "real self" gives us the "*learning agenda*" of personality traits, soft skills and emotional abilities which should be improved. The Boyatzis model [Goleman et al. 2002] is described as: 1)MY REAL SELF: represented by: a)Who am I? (How Academy sees someone's psychological aspects? and, b)What are my strengths and gaps? (What are member's gaps identified by Academy?); 2)MY IDEAL SELF: represented by: a)Who do I want to be? (Someone's transformation in *ideal* psychological model desired by Academy); 3)MY LEARNING AGENDA: represented by: a)How can I build on my strengths while reducing my gaps? (What is the protocol to transform a specific member from Academy into a "*socially skilled person*"?).

Aiming at the creation of a "*learning agenda*" we propose first the development of a user psychological profile (UPP). The UPP may allow Academy social help aiming to eliminate or minimize their "socially limited students".The UPP will be fed by each user in the community. It must be fed manually, the user will fill the personality, soft skills and emotional intelligent tests (in development [Barchard 2001] [Kantrowitz 2005]). The UPP will be accessible from a web-based interface or by using an enhanced presence tool. The Academy members' interactions will be supported by a web/grid enhanced presence tool called BuddySpace [Eisenstadt et al. 2005].

The "*learning agenda*" is created during the first Academy members' interactions occurring when using the tool. Therefore, in order to allow a dynamic feedback to Academy members, the "*learning agenda*" must be automatically fed by computer based on a UPP and user reputation. The user psychological reputation for each member will be

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[3]It means physically situated in the space (specific environment) and time. All human activities are influenced by their perception, their conceptions and their real actions in a situated environment.

[4]It means a situated context shared by a community.

[5]subtle knowledge is the emotional information expressed by humans during their "hot cognition" process. This information is rarely stored or registered, consequently it is lost even if it is extremely important to humans decision making process.

fed by others users who have been interacting with him/her in the community. So, community members should RATE the user who they are interacting with. The rating will be based on the UPP categories extracted from personality, soft skills and emotional intelligence tests. We propose the creation of a Reputation Workflow because we need a measure of individual's "lively" personality as opposed to the individual's self rating. Many times the Academy members (every human) do not know exactly about their own *real self*. Generally, a person has not a complete representation of himself, because many aspects of his personality do not pop up at the surface before his interaction with others [Allport and Allport 1921][6]. So, consequently, during the Academy creation of knowledge process, the members' psychological knowledge (personality, emotional intelligence and personality traits) are gradually created considering their gradual interaction in the community. The tacit knowledge, thus, is being created. That knowledge can be perceived also gradually by the others members of community and, after that, it can be registered in a database as a reputation [Nunes and Cerri 2006]. The reputation is fundamental to show the user psychological image perceived by others members of the Academy community. The reputation of members grows up according to their interaction in the active life of Academy.

4. Conclusions

We want to stress the importance of the *member's feedback* in a community during an interaction process, as previously indicated [Goleman 1995].So, if we have *no* or *poor feedback* when we are in some community we have no capacities to measure the quality of our skills (hard or soft), emotional intelligence or personality traits. We always have our own representation of ourselves, but that representation can be a poor representation. We need a social feedback to give us the security to grow up and improve our "social limits".

As we discussed before, our scenario was presented by means of an academic community who can give us feedback about how our skills are ; what are the gaps of our emotional growth; how the academy can give us better stimuli; how much we can improve our own emotional properties by acting in our academic environment. This process of making people aware of their emotional intelligence abilities, personality traits and soft skills by using the user psychological profile and reputation, can help communities within Academy to contribute substantially to the development of *"socially skilled persons"* what goes in the direction of current request from our Society.

5. Acknowledgements

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[6]classical definition in a Personality traits area.