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Paper

This study departs from a sociocultural comprehension of motivational phenomena during the learning process. We understand that the individuals' inner activity cannot be extracted from the actual context of interaction, if we intend to find ways of improvement of motivational processes, so that dropouts are minimised. We present an innovative proposal designed for improving collaborative work competence in teacher education. The proposal grounds on enhancing the individual as well as the group awareness of motivational processes. For such purpose a particular online version of a motivational questionnaire was applied (QWIGI), which provided the participants with visual feedback of their own motivational processes in contrast with the small group to which they belonged. The study is designed with a mixed-method approach. Quantitative results of the study have been presented previously, so the main goal of this paper is to compare and contrast the quantitative results of the study with interpretive results of qualitative data, such as open evaluation questionnaires, group self-reports, and interactional data in online forums. The course was developed with a problem-based learning methodology, which challenged the students in the need of organising their own collaborative learning strategies. The interpretive analysis allowed the identification of different working cultures that were either productive or unproductive in terms of maintaining the group members' motivation in balance and their basic psychological needs satisfied. Particular differences were found with respect to the use of the online tools the students were offered to use at free choice.

Motivational regulation in small group work: looking for balance

Extended summary

Background

Educational research stresses the importance of careful instructional design in order to enhance e-learning chances and prevent from dropouts and unproductive learning behavior. This affects complete online courses as well as blended learning practices (Lajoie & Lu, 2011; Strijbos, Kirschner, & Martens, 2004). In order to overcome such perils, research points to the promotion of collaborative learning as a key instructional strategy that enables the regulation of motivational processes in groups (Järvelä & Järvenoja, 2011; Järvelä, Järvenoja, & Veermans, 2008; Volet, Summers, & Thurman, 2009). In this study, the development of competencies for collaborative work was a main instructional goal, inspired by particular contextual circumstances: teamwork is mandatory for teachers in the national school system where the project is developed. As a result, this innovative proposal was designed with the goal of improving collaborative work by means of enhancing the

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individual as well as the group awareness of motivational processes, that in turn could be discussed and monitored by the lecturer and, more important, the students themselves. The instructional goal, thus, was to improve collaborative working competence (Martínez-Fernández, Duran, Corcelles, Fuentes, & Cerrato, 2009).

Aims of the study

To improve our understanding of basic motivational processes in small groups working collaboratively.

To compare and contrast the quantitative results of the study with interpretive results of open questionnaires of group motivational processes and individuals' evaluation.

Methodology

Both quantitative and qualitative instruments were used to gather the complex phenomenon of motivational processes. In this paper, the results of the qualitative, interpretive analysis will be presented (quantitative results have been presented at previous conferences).

The instructional design was developed over two semesters, that is, during one entire academic course, corresponding to semesters 1 and 2 of the Teacher Education Grade curriculum at the institution. The course was designed in a blended format, with a LMS (Moodle) complementing two weekly f2f sessions of 90 minutes. Altogether 75 students and one instructor participated in the study. The students worked in teams of 3-5 students, forming a total of 15 teams. They worked under a *problem based learning* approach to solve complex collaborative learning tasks. They were given the choice of using an electronic small group forum within Moodle to communicate and carry out the tasks.

While performing the group tasks, each student has to respond a motivational questionnaire provided through the online platform once a week (Quality of Working in Groups Instrument –QWIGI, Boekaerts & Minnaert, 2003). The questionnaire consists of eight items measuring Interest and the three basic psychological needs proposed by Ryan and Deci (2000): Perceived Autonomy, Perceived Competency and Perceived Social Relatedness. They used an online version that provided a visual feedback of individual scores contrasted with group mean scores.

Additionally, group self-reports were handed in, together with the task; in these reports the groups were asked to describe and reflect about their working strategy and their group learning process. Twice in the course, after finishing two group activities, special meetings were held to discuss each group's motivational situation and so increase motivational awareness. In these meetings a particular standardized questionnaire for collaborative working style, together with a questionnaire on students' attitudes towards collaborative work were administered.

In this paper, results of the interpretive content analysis of group and individual open questionnaires, plus LMS use during the course will be presented. Data for the interpretive analysis are provided by different open-questionnaires and self-reports during the course, plus the forum interaction stored automatically in the LMS.

Findings

The qualitative analysis of the students' perception of the QWIGI, in particularly with respect to its usefulness, reveals a great diversity of motivational processes that usually remain hidden when evaluated only by means of quantitative instruments. The students' self-reports reveal different levels of engagement in the motivational discussion, which also leads to different levels of awareness and regulation.

The results of extreme contrasting groups were analysed in detail. The e-learning tool use of these groups differed in as much one of the groups voluntarily decided to use the small group forum that was provided in the LMS platform, while the other group made no use of

technological tools in a regular and purposeful manner during the course. So, the first group relied on their own access to previous asynchronous interaction, which was automatically stored at the LMS, while the second group, which did not develop any particular memo-procedure, depended on their own recall of oral communication during f2f meetings. Hence, the working culture of these two groups led the first one to develop strategies for warranting interdependence and mutual accountability, while the second group presents a symptomatic lack of engagement during the learning activity.

Theoretical and Practical Implications

From a sociocultural perspective, the individuals' activity cannot be extracted from the actual context of interaction and the historical development of the activity, if we intend to understand it and to find ways of improvement. However, this is exactly what usually happens if only quantitative analysis procedures are performed. Thus, the results of this analysis contribute to put previous quantitative results of the study in balance with the actual developed activity in the context of the course and with the perception and evaluation of the participants. Co-regulation of motivation in the group is indeed a matter of finding the balance between the satisfaction of one's basic psychological needs and the others' needs.

The results of this study are very informative for teacher educators as far as they refer to the motivational processes that accompany the development of competence for working in groups; hence, they provide elements for supporting and facilitating the development of this professional competence from a motivational point of view.

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