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Learning Experiences of Engineering Students Related to Cultural Differences in group work

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Conference Topic: Engineering Education Research

Keywords: Learning experiences, Project work, Cultural differences

Increasing mobility of international students in western countries has created the learning environment cross-cultural in context. In a Project Based Learning (PBL) curriculum these students are expected to work in intercultural settings. In the projects, collaboration and communication among students are a major factor influencing their learning experiences. In the context of engineering education this experience is an important contribution in the preparation of professional practices. The objective of this paper is to explore the influence of cultural differences on collaboration and communication by investigating the experiences of engineering students during their learning process in intercultural student groups.

We are living in a changing world where events and innovations in engineering along with expectations of stakeholders involved have resulted in the globalisation of engineering. There is broad recognition that engineering education needs to change in order to meet the challenges of the globalised society [1]. Globalisation is creating a context in which engineers from one culture need to collaborate and communicate efficiently with professional from other cultures. In this changing context of the engineering profession, it is important to see what the cultural issues are and how one culture is different from others?

It has long been argued that cognitive processes, just like the beliefs and values held by an individual depends on the social, political and the economic environment in which he socialized [3]. According to Hofstede behaviour, attitude, values, norms of individual are rooted deeply in the culture, from which they originate [2]. Hofstede argues that interactions and communication between student-teacher and student-student are deeply rooted in their belonging culture. It could be problematic during the learning process in such settings.

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The changing context of engineering has put pressure on the universities to prepare engineers for the drastically different workplace of the future. This paper argues that PBL provides just such an environment. PBL is an educational approach to organize the learning process where students are actively engaged in finding the ways by themselves. In a PBL context students majorly work in collaborative groups. The success of PBL is illustrated by the fact that PBL is practiced in different ways in different parts of the world with different names. In PBL settings, the essential components of the collaborative learning are social interactions and collaboration among the group members, where the peers interact with each other in a learning community. However, the major challenge in an intercultural student group is that the member's behaviour on interaction and collaboration is based on the cultural background [2]. So collaboration and communication are particularly important for a student in a collaborative learning experience, cultural differences could pose a challenge and impact in the collaborative learning process.

The faculty of Engineering and Science at Aalborg University Denmark is selected as a site for this research due to the presence of an intercultural environment in PBL context. Nine intercultural student groups were observed three times (each time three hours) during their group work activities. Further, twenty in-depth interviews were conducted for this study

Findings and Conclusions: 1) Language: Contribution to group discussion and collaboration was a big problem for some student. They tend to remain quite most of the time, which is frustrating for others. Efforts to involve all students in the discussion take a lot of time. 2) Time management: Some students due to their previous experience don't want to spend all the time in the group room. Deadlines are often violated, that create a rift among group member. 3) Preconceptions of autochthonous students about the lack of interest by international student in group work. 4) Agreement on group rules: the rules are broken many times, which create disbelief among group members. ■

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