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Construction of a Community of Practice in Undergraduate Physics

Monday, 1 October 2018 15:00 (20 minutes)

This presentation is ethnography of physics lessons at the University in order to analyze how the social interaction among teachers and students construct a community of practice (Lave & Wenger, 1991). The work is grounded in Sociology of Scientific Knowledge perspective (Gilbert & Mulkay, 1992) that studies how physicists make sense of their practices in their own voices (teaching physics, in this case), developing science as a social construction (with their students). I take practice as a mutual compromise in action and learning as participation in social practices (Lave, 2011). A discourse analysis of extracts of three physics teachers' lessons to the same generation of students is done. The analysis shows how they communicate the historical construction of the purpose of physics as a discipline that tries to understand the natural phenomena, giving special importance to the historical context. The teachers make especial emphasis in the personal attributions (a little bit of vanity, fall in love with the research topics, thinking about them day and night, being perseverant) the physicists have to develop in order to be successful. Other results deal with the construction of possible futures for students opening expectations for their trajectories. It is also shown how these teachers explain students some features of everyday job at the discipline as its complexities, and the mutual compromise and responsibility among physicist sharing task that cannot be solved individually. Some final reflections emphasized on the shared repertoires that the teachers communicate to the students about what constitutes the disciplinary practices. This work also presents examples of students work in studding groups that show their appropriation of some of those practices. The community of practice is then constructed as an identity place that provide shared trajectories. This work represents an example of how even expositive lessons centered in the teachers discourse (Rogoff, Matusov & White, 1995) can develop a community of learning when they work with dialogic discourse (Bakhtin, 1982) of the teachers.

Apply to be considered for a student award (Yes / No)?

No

Level for award (Hons, MSc, PhD, N/A)?

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