

Concepts of learning and knowledge among first year students in Estonia

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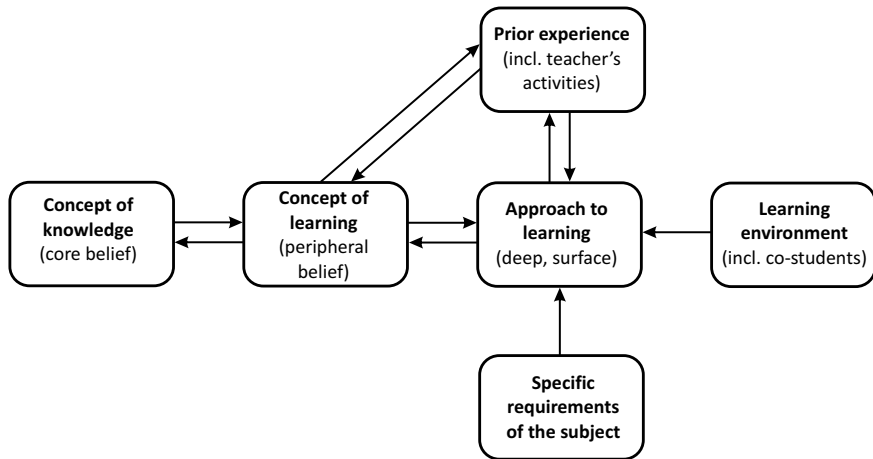
SUMMARY

The concepts of knowledge and learning are interconnected. The character of the two dimensions of epistemological belief – the nature of knowledge and the nature of knowing – determines whether students approach their learning at a surface or deep level. In other words, student concepts of knowledge and learning define whether students prefer teacher- or learner-centred methods of study and whether they would rather learn by themselves or with peers. As their beliefs, thoughts and preferences influence the practice of learning, it also affects the outcome of their learning.

Our research goal was to describe the concepts of learning and knowledge among Estonian first year students. We were driven by the widespread stereotype that Estonian first year students are rather passive, have a fixed understanding of knowledge, and therefore, expect the expert lecturer to deliver ready-formed knowledge. According to this stereotype, students prefer to study alone instead of in a group. This stereotype was selected as the hypothesis for our research. To our best knowledge, there is currently no study concerning Estonian first year students that addresses their concepts of knowledge and approaches to learning. First year students were chosen for this study because their learning skills may still be considered to be in the process of developing. Moreover, when lecturers understand student concepts of learning and knowledge, they can take this into account in the teaching and learning process.

The theoretical concept of the research is expressed in the following figure.

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A pilot survey was conducted with open-ended questions regarding students' (57 respondents) learning preferences and the concepts of knowledge and learning. The answers were categorised and used to design a multiple-choice questionnaire consisting of 11 questions. For the purposes of the analysis, additional questions regarding the background of each respondent were included. The survey was carried out in four different Estonian higher education institutions during the autumn of 2012. The final sample included 405 respondents.

The results indicated that there were no statistically significant differences between male and female respondents. However, several notable differences emerged between students of different fields of study.

The concept of knowledge was predominantly pragmatic – students, especially those who study in the field of technology, preferred the option that knowledge is regarded as a skill. Moreover, knowledge was frequently viewed as an experience and seldom as facts or the interpretation of facts. Learning was mostly perceived as the acquisition of new knowledge and applicable skills. Students in the field of social sciences mentioned more often (in comparison to other students) that learning is a means to acquire the diploma.

If asked how one knows when they have learned something, the most popular answer was that „I have understood it”. In order to determine the students' concept of knowledge, they were asked whether there is one or many correct solutions to a given problem. Most respondents agreed that there are several correct ways to solve the problems of everyday life. Furthermore, one third (34%) of the respondents noted that the correct answer depends on the situation.

The role of co-students was mainly described ambivalently, saying that sometimes they support, while other times hinder learning. Learning in the group was considered a good way to learn co-operation and communication skills. However, the role of peers for improving the construction of knowledge was rarely mentioned.

Almost 60% of the respondents claimed that outside of school they study approximately 4 to 10 hours a week, while one fifth of all respondents said they only study up to 3 hours a week. Students in the field of technology claim to study more than others.

The most preferred activities of the lecturer were giving real-life examples and providing step-by-step explanations. Students who study natural sciences mention less than others that the lecturer's sense of humour and solving exercises are helpful educational practices. In comparison to others, the students in the field of technology appreciate the following aspects less: the organisation of discussions, highlighting key points, formulating clear conclusions and enthusiasm in the lecturer.

Among those who prefer teacher-centred learning methods, there are more students who think there is one right answer to real-life problems, and less who think that the right answer depends on the situation. Conversely, among those who prefer learner-centred methods, there are more students who regard knowledge as the interpretation of facts and less of those who think knowledge is a fact.

We also studied some interdependencies between given answers. Students who expressed a surface approach to learning also had a different concept of knowledge. They described it as a skill more than the others. At the same time, students who expressed a deep approach to learning regarded knowledge as the interpretation of facts or agreement of different interpretations. Both groups believed that there are a number of correct solutions to real-life problems. However, those respondents who thought that real-life problems have one right solution, preferred more than others to study in a group. Among the respondents who did not value learning in groups there were more who considered knowledge a fact.

The hypothesis (or in our case, the stereotype) was largely confirmed. The results indicate that the majority of the students regard knowledge as a skill or an experience. The process of learning is believed to be obtaining new knowledge from the lecturer; the contribution of peers to provide new knowledge is considered marginal. The surveyed students see the lecturer as an „authoritative expert” who provides real-life examples and step-by-step instructions.

The results indicate that the majority of first year students have surface concept of learning: they regard knowledge as facts, experiences or skills,

and prefer to study alone in their pursuit of „one correct answer”. On the other hand, they perceive knowledge in a pluralist manner. The authors, however, acknowledge that this might also be an effect of students answering „correctly” when filling in the questionnaire. In addition, it was found that students with a deep approach to learning see learning as a process and knowledge as ever-changing over time. Therefore, the main contradiction to the initial hypothesis is the pluralist concept of knowledge among first year students in Estonia. This result can be attributed to the widespread understanding in society that instead of unified truth, there exist several concurrent interpretations of truth. For a deeper understanding, there is a need for deeper, qualitative research in the area of the topic.

Keywords: concept of knowledge; concept of learning; approach to learning; first year students; tertiary education