

Students' experiences of the factors affecting their study progress: Differences in study profiles

Telle Hailikari, Tarja Tuononen & Anna Parpala*

Centre for Research and Development of Higher Education,

Institute of Behavioural Sciences, University of Helsinki, Finland

*Corresponding author:

Anna Parpala

Centre for Research and Development of Higher Education

Faculty of Behavioural Sciences

P.O.Box 9

00014 University of Helsinki, Finland

anna.parpala@helsinki.fi

Biographical notes

Telle Hailikari (PhD) is a Senior Lecturer in the Helsinki University Centre for Research and Development of Higher Education, Finland. Her research interests focus on student learning, assessment and factors influencing study progression in higher education.

Tarja Tuononen is a PhD student in the Helsinki University Centre for Research and Development of Higher Education, Finland. Her research focuses in the development of students' generic skills and their relation to learning and work experience in both university and working-life contexts. Tarja Tuononen has also studied assessment of students' learning.

Anna Parpala (PhD) is a Senior Researcher and Project Manager in the HowULearn-research project in the Helsinki University Centre for Research and Development of Higher Education, Finland. She has been developing a research-based quality system at the University of Helsinki since 2005. Her research focuses on student learning and quality enhancement at the university.

Abstract

Many factors influence students' progress in higher education. However, the students' own voices are seldom heard. Using a qualitative approach, the study explored students' own experiences of the factors that have influenced their studying. Research has indicated that students' experiences are often related to their approaches to learning. Therefore, experiences of enhancing and impeding factors were explored here in relation to different study profiles. Altogether 736 open-ended answers were analysed by qualitative context analysis. After establishing the categories of enhancing and impeding factors and creating the student profiles, the differences between the profiles were examined using chi-square tests. The results revealed that the students had experienced a broad variety of factors that influenced their studying. These experiences varied widely with regard to the students' study profiles. In particular, those in the *Students applying a surface approach* and *Unorganised students applying a deep approach* profiles appeared to experience more obstacles in their studies than the students in other profiles. Characteristic of these two profiles was the students' low ability to organise their studies, that is, manage their time and effort. The study suggests that at least part of the variation in students' experiences of the factors influencing their progress is explainable by the students' learning profiles. Whether it would be useful to identify different student profiles rather than concentrate on asking the students directly about their experiences of enhancing and impeding factors is discussed.

Introduction

The past ten years has seen a continuing discussion across the world about students' study progress (Bound, Lovenheim, and Turner 2007; Brunello and Winter-Ebmer 2003; U.S. Department of Education 2013), and thus the factors that either enhance or impede studying have interested many educational developers in higher education (Gaebel, Hauschildt, Mühleck, and Smidt 2012). Studies have mainly concentrated on quantitative criteria, such as accumulation of credits or number of study

periods per year (Duff 2004; Hoffman and Van den Berg 2000; Van den Berg and Hoffman 2005). However, academic developers are more interested in students' own experiences of what enhances or impedes their studying. Thus, researchers in the field of veterinary medicine and bioscience, for example, have conducted qualitative research focusing on students' own descriptions of factors that impede or enhance their studying, and have found that the students emphasised the same factors (Ruohoniemi and Lindblom-Ylänne 2009; Rytönen, Parpala, Lindblom-Ylänne, Virtanen, and Postareff 2012). These studies were conducted in a professional field in the natural sciences. A gap appears to exist in the research regarding factors that influence study progress in non-professional fields, and particularly in the humanities and social sciences, which usually suffer more from prolonged study time than the natural sciences (Smeby 2000; University of Helsinki statistics 2013).

Research has shown that students' perceptions of impeding and enhancing factors are related to their approaches to learning, that is, their aims and processes in studying (Hailikari and Parpala 2014). The approaches to learning have been roughly divided into two qualitatively different categories: *deep* and *surface* (e.g., Biggs 1979; Entwistle and Entwistle 1992; Entwistle and Ramsden 1983; Marton and Säljö 1976, 1997). Whereas students who approach learning at a deeper level aim at understanding, and concentrate on analysing and relating ideas, students applying a surface approach concentrate on memorising and reproducing information (Entwistle and Ramsden 1983). A third approach, *organised studying*, has also been identified and reflects students effectively managing and applying their time and effort (Entwistle and McCune 2004; Entwistle and Peterson 2004). As this approach describes more how students go about their everyday studying, it has also been called as an approach to studying rather than approach to learning (Entwistle 2009).

A quantitative study by Hailikari and Parpala (2014) showed that that the same factors may be experienced as either enhancing or impeding depending on the individual. For example, students who scored high on *deep approach* also showed high interest in and enthusiasm for studying whereas students who scored high on *surface approach* had low self-efficacy beliefs and felt that they

had not received enough guidance in their studies. Students who had high scores on *organised studying* – i.e., they were able to organise their studies, manage their time well and put effort into their studying – also experienced many factors as enhancing, and perceived the impeding factors as having no influence. Similar results were found by Rytönen et al. (2011), also emphasising the importance of organised studying as well as indicating that students' experiences of the factors impeding their studying were related to their time management and self-regulation skills. Furthermore, students who had failed to earn enough credits evaluated themselves as less organised than those who had not. These two previous studies used scales measuring the different approaches to learning and did not take the various combinations of approaches into account. Moreover, they used multiple-choice questions concerning the enhancing and impeding factors, thus the students' own voices were not heard.

In an ideal situation, the combinations of approaches to learning form a coherent study profile in which the different elements fit together theoretically. However, research has shown that the expected theoretically coherent linkages between the approaches fail to appear in practice (Lindblom-Ylänne 2003; Lindblom-Ylänne and Lonka 2000; Meyer 2000; Parpala et al. 2010). For example, a more recent study showed that a deep approach can be related to both organised or unorganised studying. A dissonant study profile, *Unorganised students applying a deep approach*, was found to be common among humanities students in research examining disciplinary differences in students' approaches to learning (Parpala et al. 2010), which also identified *Organised students*, *Students applying a surface approach* and *Students applying a deep approach* profiles. The *Organised students* profile consisted of students who scored highly on the items measuring systematic studying, indicating that they had clear goals and good time-management skills. The *Students applying a surface approach* profile consisted of students with the highest scores on items measuring a surface approach to learning. Finally, the *Students applying a deep approach* profile included those

with the highest scores on items measuring use of evidence, relating ideas, organised studying, and intention to understand.

As the only previous qualitative research into this area focused on a professional field in the natural sciences (Ruohoniemi and Lindblom-Ylänne 2009; Rytönen et al. 2012), our aim in the present study was to explore students' experiences of the factors influencing their study progress in non-professional fields. Moreover, as earlier research has shown that differences may exist among students with different study profiles, we wanted to examine how experiences of the enhancing and impeding factors differ in relation to the profiles. In order to answer these research questions, the present study applied a mixed-method approach using content analysis and quantitative analysis. Our study contributes to the body of knowledge by providing important evidence on the variety of students' experiences on the factors enhancing or impeding their study progress and takes into account different combinations of approaches to learning instead of measuring them at the scale level.

Methods

Participants

The data were collected through an electronic questionnaire sent to first- and third-year students in two faculties (Faculty of Arts and Humanities and Faculty of Social Sciences). Altogether 736 students answered, 432 from the Faculty of Arts and Humanities and 304 from the Faculty of Social Sciences. The response rate was 31% and 25%, respectively. Of the participants, 53% were first-year students and 47% third-year. Nineteen percent were male ($n=137$) and 81% female ($n=599$). Females were overrepresented in both faculties: 84% at the Faculty of Arts and 78% at the Faculty of Social Sciences.

Both faculties are multidisciplinary and non-professional. The Faculty of Arts has various language and literature departments as well as the departments of history, philosophy, art research and cultural

research, among others. The Faculty of Social Sciences has departments of communication, economics, political science, social policy and sociology. Both faculties are not considered to be as career-oriented as others, which may cause uncertainty about future employment among students (Mikkonen, Ruohoniemi, and Lindblom-Ylänne 2010). Furthermore, in the humanities and social sciences, the number of credits students earn in one academic year is below the university average (University of Helsinki statistics 2013).

Materials

A modified version of the Experiences of Teaching and Learning Questionnaire (ETLQ; see Entwistle, McCune, and Hounsell 2003) was used in order to measure students' approaches to learning, their different combinations and factors impeding or enhancing studying. The ETLQ was developed to measure how specific changes in the teaching-learning environment affect students' approaches to studying, and focuses on teaching and learning in course units or modules (Entwistle and McCune 2004). Two sections of the original ETLQ were modified to suit the Finnish context (see Parpala et al. 2013) and additional questions were included (for example regarding impeding and enhancing factors). In the present study, we used two parts of the questionnaire in order to answer our research question: Firstly, the part measuring students' approaches to learning (items presented in Appendix 1.) and, secondly, an open ended question "Which factors have enhanced/impeded your studies? Why?" in order to explore students' experiences of factors enhancing or impeding their studying.

Analysis

In order to examine the variety of students' experiences and how they differ according to different study profiles a mixed method approach was applied by combining quantitative and qualitative research methods (e.g. Johnson and Onwuegbuzie 2004). Open-ended questions about students'

experiences of the factors enhancing and impeding their studying were analysed by content analysis (Flick 2002). The study profiles used in the present study were formed in a previous study (Parpala, Lindblom-Ylänne, Komulainen, Litmanen, and Hirsto 2010). In the present study we examined the differences in enhancing and impeding factors between these profiles by using quantitative methods.

In the first phase, the students' answers regarding enhancing and impeding factors were analysed in an iterative manner, reading them through repeatedly to identify different categories. Firstly, the first and the second authors read and analysed 50 open-ended answers independently, and then formed the categories. Both authors identified similar categories. These tentative categories were then discussed together with all the authors. The first two authors then analysed the rest of the data separately, and together with the third author determined and listed any unclear descriptions. Before the final categorisation, the third author analysed 200 randomly selected open-ended answers in order to cross-validate the categorisations. The final categories were then organised thematically in broader categories to clarify the structure of the findings.

In the second phase, the categories of impeding and enhancing factors were combined with the learning profiles. The learning profiles were formed in a previous study using latent profile analysis (Parpala et al. 2010). Latent profile analysis seeks to identify the smallest number of latent clusters that adequately describe and reproduce the observed continuous variables as manifested in the items (Vermunt and Magidson 2002). In the previous study (Parpala et al. 2010), using the latent profile analysis the students were divided into homogeneous subgroups on the basis of their approaches to learning (18 items). Four clusters emerged from the data. The first, *Organised students*, comprised students who scored highly on items measuring organized studying. These students scored low on items measuring a deep approach to learning and average on items measuring a surface approach as well as intention to understand. The second profile, *Students applying a deep approach*, included students with the highest scores on items measuring a deep approach to learning, organized studying and intention to understand. These students scored the lowest on items measuring a surface

approach to learning. The third profile, *Students applying a surface approach*, included students with the highest scores for items measuring a surface approach to learning and lowest for items measuring a deep approach to learning, organized studying and intention to understand. Finally, the fourth profile, *Unorganised students applying a deep approach*, comprised students with high scores for items measuring a deep approach to learning and low scores for items measuring organised studying; these students had achieved close-to-average scores on items measuring a surface approach to learning and intention to understand (Parpala et al. 2010). The learning profiles according to the approaches to learning are presented in Table 1. In the present study focusing on enhancing and impeding factors, the largest number of students (34%) belonged to the *Organised students* profile, whereas 14% belonged to the profile *Students applying a surface approach*, 29% to *Students applying a deep approach* and 23% to *Unorganised students applying a deep approach*.

Insert Table 1. about here.

After establishing the categories of enhancing and impeding factors and creating the student profiles, we examined the differences in these experiences by student profile. To do this, the categories were coded as dummy variables and entered into the data that contained the profile information. Chi-square tests were used to establish any association between perceptions of enhancing and impeding factors and profile membership.

Results

Students' experiences of factors enhancing and impeding their studies

Our first research question concerned students' experiences of the factors influencing their study progress and to answer this question students' experiences of factors impeding or enhancing their studies were analysed. The analysis revealed six main categories that were the same for both enhancing and impeding factors; however, they comprised a number of subcategories that differed from each other in terms of enhancing and impeding factors. The main categories were *Course planning*, *Teacher's role*, *Guidance*, *Social factors*, *Student factors*, and *Life situation*. Two additional categories emerged regarding enhancing factors that did not emerge from impeding factors: *External Pressure* and *Facilities*. Next, we will describe the main categories and their subcategories by comparing the differences between the enhancing and impeding factors.

Comparison of the categories of enhancing and impeding factors

Course planning. The first category, *Course planning*, included descriptions of the factors that students experienced as either enhancing or impeding their studies at the curriculum level. When these factors were described as enhancing, the comments also mentioned the benefits featured by the faculty, such as *Flexibility and freedom of choice* in choosing courses, *A good number of courses* to choose from, a *Pre-set timetabled study plan* and *Interesting course content*.

Regarding the impeding factors, *Course planning* comprised ten subcategories that emphasised restrictions posed by the design of the courses: *Overlapping courses*, referring to how different courses are held at the same times; *Problems related to course supply*, there not being enough courses and having difficulty getting into them because they are full; *Unbalanced study schedule*, final exams/essays/reports accumulating towards the end of semesters causing high workload and thus

hindering studies; *Low availability of course material*, difficulties in obtaining textbooks, for example; *Lack of information*, problems in information flow at the department; *Lack of alternative methods of assessment*, how the few alternatives limit the ability to pass courses thus slowing progress; *Obligatory attendance*, problems caused by having to be present during class; *Lack of face-to-face teaching*, not having enough contact teaching or group work and having to pass courses only by sitting for extensive exams; *Workload*, the discrepancy between the number of credits and the required workload in courses; and *Curriculum reform*, confusion caused by the curriculum reform and not knowing how the old and new curriculums match, insufficient information about this, etc.

Teacher's role. The second category, *Teacher's role*, included descriptions of the characteristics of the teacher that were experienced as enhancing studying. Its subcategories were delineated as follows: *Teacher approachability* in terms of encouraging students and being available, helpful and flexible; *Teacher Enthusiasm* towards one's own subject which helps students become interested in the subject as well; *Teacher's expertise in his/her own field*; having good *Pedagogical skills*, e.g. applying good teaching methods, setting high-quality tasks for students and giving constructive feedback to them; and *Teaching practices* or how different teaching modes, such as lectures and group work, enhance studying.

When teacher-related factors were described as impeding studying, the comments described the role that the teachers play in slowing the students' progress. It included two subcategories: *Problems in teaching skills*, such as lack of presentation and interaction skills and unclear study materials, and *Problems in teaching practices*, such as lack of alignment in course design (e.g. descriptions of wrong assessment methods, teaching methods that were not aligned with the assessment demands, or teaching that did not take students' prior knowledge into account) and lack of feedback for students.

Guidance. The third main category, Guidance, included two subcategories that enhanced studying: *Availability of guidance*, which included descriptions of how guidance and information was easily available, and *Personal study planning*, which referred to making a personal study plan with the help of a personal tutor.

When Guidance was mentioned as impeding study progress, it included descriptions of how a lack of guidance increased confusion and uncertainty in studies in different ways. Two subcategories were identified: *Availability of guidance*, which referred to not getting enough guidance regarding study planning, difficulties in finding a person who could help or who had a good understanding of the overall picture, and *Lack of career counseling*, which referred to the need for guidance related to career options and future perspectives and how different choices in studies influence one's employment opportunities.

Social factors. As with the previous categories, Social factors could also be perceived as both enhancing and impeding studying. As regards the enhancing factors, it included four subcategories that emphasised how different sources of social support enhanced studying: *Peer support*, describing the importance of help and support from peers as well as positive competition that makes one want to proceed in one's studies; *Support from family and friends*, referring to both financial support as well as help and encouragement; *Supportive atmosphere in the department*, referring to the sense of being part of the scientific community and in an encouraging atmosphere; and *Hobbies as enhancing studying*.

Regarding the impeding factors, the descriptions emphasised challenges concerning different social aspects of life that were experienced as impeding study progress. It comprised three subcategories: *Challenges related to the student community*, referring to either not having friends at the university

or, for others, an overly active social life; *Family life*, referring to problems in combining family-life with studying; and *Hobbies*, emphasising the role of hobbies as a priority in life.

Student-related factors. Many students also acknowledged and emphasised their own role in studying. When one's own role was regarded as enhancing studying, it included descriptions that could be classified into six subcategories: *Interest and enthusiasm about one's field*; *Self-regulation skills*, e.g. time-management, planning studies and monitoring one's learning; *Study skills*, e.g. having effective study techniques, using different study methods and having good language proficiency; *Goal-orientation*, referring to having clear goals in studying and wanting to proceed quickly; *Clear career goals*, referring to having clear career perspectives; and *Ownership of studies*, referring to a sense of having found the right major and minor subjects and feeling committed to studying.

However, others saw their own roles as impeding study progress. Seven categories emerged here: *Motivational problems*, referring to a kind of "apathy", i.e. lack of interest in one's field and having little motivation to study; *Unclear career perspectives*, referring to having no clear career goals and this influencing one's study motivation; *Lack of goals in studying*, referring to not knowing what to study and why, and not setting goals; *Low self-efficacy*, referring to lack of confidence in one's skills for coping with studies; *Lack of self-regulation skills*, referring to poor time-management and organisation skills, being lazy, having poor concentration, as well as procrastinating and being in a hurry because of it; *Learning difficulties*, referring to insufficient reading and writing skills impeding studying, and having difficulty seeing the overall picture; and *Stress and tiredness*.

Life situation. This category included descriptions of external factors that influenced studying in different ways. When seen as enhancing studying, the following categories emerged: *Possibility for full-time studying*, referring to not having to undertake paid work; *Working as enhancing studying*,

referring to how work served as a balancing factor in life and made for a more effective use of time; *Age*, referring to being older than other students or having started to study later than others, making students want to graduate quickly and move on in life; *Previous experience*, referring to either having already studied at university and thus knowing how to study, or having work experience which enhanced studying; and *Personal reasons*, referring to different aspects of one's life situation that have served as motivators to proceed quickly, e.g. financial challenges and wanting to improve one's financial situation, living in another city, and wanting to own a residence.

However, one's life situation at times posed challenges that impeded studying, including the following factors: *health problems, personal problems, financial worries, family, or living at great distance from the university.*

Some of the subcategories' frequencies were very low. However, we decided not to combine them with other categories because they made their own independent and unique contribution to the main category.

Additional enhancing categories

As mentioned earlier, two additional categories emerged regarding enhancing factors that did not emerge from impeding factors: *External pressure* and *Facilities*. *External pressure* comprised descriptions of demands posed by the university and society to move forward in studies, e.g. requirements regarding study duration, number of credits and having earned enough credits for a student allowance. *Facilities* comprised descriptions of resources that were available for the students, e.g. textbooks, computers and printers.

The frequency of the enhancing factors was clearly weighed towards student factors, the most common subcategories being *interest and enthusiasm about one's field*, and *self-regulation skills*. Goal-orientation was also often mentioned as enhancing learning. On the other hand, the most frequently mentioned factors impeding learning could be found in many different categories. The most common were problems associated with number of courses and availability of guidance, challenges related to different life situations, such as working and personal problems, and lack of self-regulation skills and motivational problems. Therefore, many types of factors were felt to impede learning. The categories and their frequencies are presented in more detail in Table 2.

Insert Table 2. about here.

Study profiles and differences in factors enhancing or impeding studying

The second aim of the study was to explore how students with different study profile (introduced in Table 1.) perceived the factors that were enhancing or impeding their study progress. Firstly, regarding factors experienced as enhancing learning, statistically significant differences were found between various student profiles in the following subcategories: Pre-set timetabled study plan, Interest and enthusiasm about one's field, and Ownership of studies. The *Surface approach to learning* profile in particular differed from the other profiles in all these respects, with the students mentioning pre-set timetabled study plan as enhancing studies more often. Regarding interest and enthusiasm about one's field, students in this profile mentioned it significantly less frequently than students in the three other profiles, where close to a third of the students in each mentioned it as enhancing studies. Similarly, none of the students in the profile mentioned ownership of studies as

enhancing their studying, whereas eight per cent of *Unorganised students applying a deep approach* did. The categories and percentages are presented in Table 3.

Insert Table 3. about here.

Regarding the factors impeding studying, the study profiles differed in the following subcategories: Lack of information, Lack of face-to-face teaching, Workload, Family life, Challenges related to student community, Motivational problems and Lack of self-regulation. No students in the *Organised students* profile mentioned lack of information as impeding their studying, whereas students in other profiles did; however, the percentages for this factor were fairly low. Students in the *Unorganised students applying a deep approach* profile significantly more often mentioned lack of face-to-face teaching, challenges related to the student community, and lack of self-regulation as impeding their studying than students in the other three profiles, while students in the *Surface approach to learning* profile mentioned motivational problems more often. Finally, students in the *Deep approach to learning* profile mentioned workload and family life as impeding their studying more often than students in the other profiles.

Discussion

In the present study, the aim was to explore which factors students' experience as enhancing or impeding their studying in a non-professional field and how these experiences are related to different study profiles. A mixed methods approach was applied. In general, students experienced many different factors as affecting their learning and studying. As with research in the field of veterinary

medicine (Ruohoniemi and Lindblom-Ylänne 2009), the same main categories clearly emerged regarding both enhancing and impeding factors, except for “external pressure” and “facilities”, which were mentioned as enhancing factors only. The results of the study revealed that the factors students identified as enhancing their learning were mostly related to themselves, such as being interested and enthusiastic about their own field and self-regulating their learning. Regarding impeding factors, students tended to emphasise many different things. Interestingly, problems relating to combining work and study were commonly felt to impede learning, whereas previous studies suggest that working could be considered as both enhancing and impeding study progress (Hailikari and Parpala 2014; Ruohoniemi and Lindblom-Ylänne 2009). However, in order to be able to see the reasons for this result we should have more information regarding the participants’ work experience. For example, there is evidence that working over 20 hours a week clearly slows the study progress (Tuononen, Parpala, Mattsson, and Lindblom-Ylänne 2015). In contrast to the findings of Ruohoniemi and Lindblom-Ylänne (2009), conducted in a very professional field, lack of self-regulation was emphasised more often as an impeding factor, which clearly reflects the challenges presented by curriculums that are not strictly pre-set and leave more responsibility for the students themselves to organise their studying. On the other hand, being in a hurry, which was mentioned by Ruohoniemi and Lindblom-Ylänne (2009), did not emerge in our study. The relatively greater study freedom in the humanities and social sciences allows students to plan their own study schedules; however, good self-regulation skills are still required. Another difference between these research studies was that the students in Ruohoniemi and Lindblom-Ylänne (2009) emphasised the role of the practical side of studies and the importance of knowing how to apply acquired knowledge to practice, whereas those in the present study did not. This may be explained by the non-professional orientation of humanities and social sciences fields where the practical side of studies is less emphasised than in veterinary medicine, for example.

Our study indicated that students with different study profiles differed from each other regarding both impeding and enhancing factors in a non-professional field. Students with high scores on *surface approach to learning* appeared to differ from the other groups in terms of enhancing factors. They had much lower scores on study interest and enthusiasm, and ownership of studies. On the other hand, these students mentioned that having a pre-set timetabled study plan enhanced their studying more often than those in the other groups. Furthermore, students in this profile had experienced many more motivational problems and also had high scores on lack of self-regulation. The connection between lack of inner motivation and applying a surface approach has also been found in other studies (Lindblom-Ylänne and Lonka 2000; Nieminen, Lindblom-Ylänne, and Lonka, 2004). An interesting finding emerged regarding *Unorganised students applying a deep approach*. These students experienced more factors as impeding their studying than the others. For them, lack of information, lack of face-to-face teaching and lack of self-regulation had impeded their studying, as did challenges related to the student community. It appears that students in this profile were very motivated to learn and aimed at understanding but were more dependent on the teacher to regulate and support their learning. Similar findings have been found in earlier studies showing that less organised students who apply a deep approach also progress more slowly (Haarala-Muhonen 2011). For these students it seems that the more there is face-to-face teaching with a pre-set study plan the less impediments they might feel. The pre-set curriculum, teacher's guidance and face-to-face lectures with other students might help them being part of the student community as well.

For students in the present study with high scores on *deep approach to learning*, heavy workload and family life were experienced as impeding. This is in contrast with previous findings in which heavy workload has usually been associated with a surface approach (Kreber 2003; Lizzio, Wilson, and Simons 2002) or with the aforementioned unorganised student profile (Ruohoniemi, Parpala, Lindblom-Ylänne, and Katajavuori, 2010). Furthermore, in other studies a deep approach has been associated with the feeling that one's workload is appropriate (Diseth, Pallesen, Hovland,

and Larsen 2006). Therefore our results were somewhat surprising. This contradictory finding might be explained by the data collection method. Earlier studies have used a questionnaire where workload and stress were asked about directly, whereas in the present study the students themselves generated the factors that they felt were impeding. It appears that students who scored high on *deep approach to learning* also mentioned workload and stress as impeding their studying. It may be that their workload was preventing them from studying as thoroughly as they would have liked, and therefore they mentioned it as an impediment.

Implications of the study

This study stresses the importance of hearing students' own views about the factors that enhance or impede their studying. There appears to be a huge variation in these factors. The study suggests that at least part of this variation can be explained by students' learning profiles. Especially in the profiles *Students applying a surface approach* and *Unorganised students applying a deep approach*, students appear to experience more obstacles in their studies than students in other profiles. Characteristic of these two profiles is the low ability to organize the studies, that is, to manage time and effort. Therefore, special attention should be paid to detect and to support these individuals in their studies. It would be useful to identify different student profiles rather than concentrating on asking students about their experiences of enhancing and impeding factors. This could be done by enquiring about their aims and how they go about learning. There are examples that a research instrument focusing, for example, on students' approaches to learning can be used to help students to identify their learning strategies and intentions in studying and not only as a research instrument (Parpala and Lindblom-Ylänne 2012). On the basis of the students' responses, it would then be possible to help the students develop their own ability to organise their studies. Moreover, it would be important to increase their awareness that experiencing many impediments in their studying may be related to their poor organising skills. Furthermore, organised studying is strongly related to students' aims as well as other learning processes such as analysing and critical thinking (Parpala et al. 2010; Nieminen,

Lindblom-Ylänne, and Lonka 2004), thus it would be worthwhile to teach students organising skills in order to be able to enhance desirable learning outcomes. The results of the present research also suggest that the problems discussed here may arise especially in fields where the curriculum is not tightly set, and where the studies require good self-regulation skills. Therefore, special attention should be paid to these challenges in such fields.

References

Biggs, J. 1979. "Individual differences in study processes and the quality of learning outcomes." *Higher Education* 8: 381-394.

Bound, J., M. F. Lovenheim, and S. Turner. 2007. "Understanding the Decrease in College Completion Rates and Increased Time to the Baccalaureate Degree." Research Report 07-626. Accessed December, 3. <http://www.psc.isr.umich.edu/pubs/pdf/rr07-626.pdf>.

Brunello, G., and R. Winter-Ebmer. 2003. "Why Do Students Expect to Stay Longer in College? Evidence from Europe." *Economics Letters* 80: 247–253. doi:10.1016/S0165-1765(03)00086-7.

Curtis, S., and J. Williams. 2002. "The reluctant workforce: undergraduates' part-time employment." *Education + Training* 44: 5-10. doi:10.1108/00400910210416192.

Diseth, Å., S.Pallesen, A. Hovland, and S. Larsen. 2006. "Course experience, approaches to learning and academic achievement." *Education + Training* 48: 156 – 169. doi: 0.1108/00400910610651782.

Duff, A. 2004. "Understanding Academic Performance and Progression of First-Year Accounting and Business Economics Graduates: The Role of Approaches to Learning and Prior Academic Achievement." *Accounting Education* 13: 409–430. doi:10.1080/0963928042000306800.

Entwistle, N.J. 2009. "*Teaching for understanding at university: Deep approaches and distinctive ways of thinking*". Basingstoke, Hampshire: Palgrave Macmillan.

Entwistle, A., and N. Entwistle. 1992. "Experience of understanding in revising for degree examinations." *Learning and Instruction* 2: 1-22. doi: 10.1016/0959-4752(92)90002-4.

Entwistle, N.J., and V. McCune. 2004. "The conceptual base of study strategies inventories in higher education." *Educational Psychology Review* 16: 325-345.

Entwistle, N., V. McCune, and D. Hounsell. 2003. "Investigating Ways of Enhancing University Teaching–Learning Environments: Measuring Students' Approaches to Studying and Perceptions

of Teaching.” In *Unravelling Basic Components and Dimensions of Powerful Learning Environments*, edited by E. De Corte, L. Verschaffel, N. Entwistle, and J. van Merriënboer, 89–107. Oxford: Elsevier Science.

Entwistle, N., and E.R. Peterson. 2004. “Conceptions of learning and knowledge in higher education: relationships with study behaviour and influences of learning environments.” *International Journal of Educational Research* 41: 407-428. doi: 10.1016/j.ijer.2005.09.009.

Entwistle, N., and P. Ramsden. 1983. *Understanding student learning*. London: Croom Helm.

Flick, U. 2002. *An introduction to qualitative research*. 2nd ed. London: Sage publications.

Gaebel, M., K. Hauschildt, K. Mühleck, and H. Smidt. 2012. “*Tracking Learners’ and Graduates Progression Paths: Trackit*.” EUA Publications 2012. Brussels: European University Association.

Haarala-Muhonen, A. 2011. “First-year law students’ challenges in studying” [Oikeustieteen ensimmäisen vuoden opiskelijoiden haasteet opiskelussa.] PhD diss., University of Helsinki.

Hailikari, T., and A. Parpala. 2014. “What impedes or enhances my studying? The interrelation between approaches to learning, factors influencing study progress and earned credits.” *Teaching in Higher Education* 19: 812-824. doi: 10.1080/13562517.2014.934348.

Hofman, W.H.A., and M.N. van den Berg. 2000. “Determinants of Study Progress. The impact of Student characteristics, Curriculum and Context factors in University education.” *Higher Education in Europe* 25: 93-110. doi: 10.1080/03797720050002242.

Johnston, R.B., and A. J. Onwuegbuzie. 2004. “Mixed Methods Research: A research paradigm whose time has come.” *Educational Researcher* 33: 14–26. doi: 10.3102/0013189X033007014.

Kreber, C. 2003. “The relationship between students’ course perception and their approaches to studying in undergraduate science courses: a Canadian experience.” *Higher Education Research and Development* 22: 57-70. doi: 10.1080/0729436032000058623.

- Lindblom-Ylänne, S. 2003. "Broadening an understanding of the phenomenon of dissonance." *Studies in Higher Education* 28: 63-77. doi: 10.1080/03075070309306.
- Lindblom-Ylänne, S., and K. Lonka. 1999. "Individual Ways of Interacting with the Learning Environment – Are They Related to Study Success?" *Learning and Instruction* 9: 1–18. doi:10.1016/S0959-4752(98)00025-5.
- Lindblom-Ylänne, S., and K. Lonka. 2000. "Dissonant study profiles of high-achieving university students." *European Journal of Psychology of Education*: 15, 19-32. doi: 10.1007/BF03173164.
- Lizzio, A., K. Wilson and R. Simons. 2002. "University students' perceptions of the learning environment and academic outcomes: Implications for theory and practice." *Studies in Higher Education* 27: 27-52. doi: 10.1080/03075070120099359.
- Marton, F., and R. Säljö. 1976. "On qualitative differences in learning I: outcome and process." *British Journal of Educational Psychology* 46: 4-11. doi: 10.1111/j.2044-8279.1976.tb02980.x.
- Marton, F., and R. Säljö. 1997. Approaches to learning. In *The experience of learning*. 2nd ed., edited by F. Marton, D.J. Hounsell, and J. Entwistle, 39-58. Edinburgh: Scottish Academic Press.
- Meyer, J.H.F. 2000. "The modeling of dissonant study orchestrations in higher education." *European Journal of Psychology of Education* XV: 5-18. doi: 10.1007/BF03173163
- Mikkonen, J., M. Ruohoniemi, and S. Lindblom-Ylänne. 2010. "The role of individual interest and future goals during the first years of university studies." *Studies in Higher Education* 38: 71-86. doi: 10.1080/03075079.2011.564608.
- Nieminen, J., S. Lindblom-Ylänne, and K. Lonka. 2004. "The development of study orientations and study success in students of pharmacy." *Instructional Science* 32: 387-417.
- Parpala, A., S. Lindblom-Ylänne, E. Komulainen, T. Litmanen, and L. Hirsto. 2010. "Students' approaches to learning and their experiences of the teaching-learning environment in different disciplines." *British Journal of Educational psychology* 80: 269-282. doi: 10.1348/000709909X476946.
- Parpala, A., S. Lindblom-Ylänne, E. Komulainen, and N. Entwistle. 2013. "Assessing students' experiences of teaching-learning environments and approaches to learning: validation of a

questionnaire used in different countries and varying contexts.” *Learning Environments research* 16: 201-215. doi: 10.1007/s10984-013-9128-8.

Ruohoniemi, M., and S. Lindblom-Ylänne. 2009. “Students' experiences concerning course workload and factors enhancing and impeding their learning – a useful resource for quality enhancement in teaching and curriculum planning.” *International Journal for Academic Development* 14: 69-81. doi: 10.1080/13601440802659494.

Ruohoniemi, M., A. Parpala, S. Lindblom-Ylänne, and N. Katajavuori. 2010. “Relationships between students' approaches to learning, perceptions of the teaching-learning environment, and study success - a case study of third-year veterinary students.” *Journal of Veterinary Medicine Education* 37: 282-288. doi: 10.3138/jvme.37.3.282.

Rytkönen, H., A. Parpala, S. Lindblom-Ylänne, and L. Postareff. 2012. “Factors influencing bioscience students' academic achievement.” *Instructional Science* 40: 241–256. doi:10.1007/s11251-011-9176-3.

Smeby, J.C. 2000. “Disciplinary differences in Norwegian graduate education.” *Studies in Higher Education*, 1, 53-67. doi: 10.1080/030750700116019.

Tuononen, T., A. Parpala, M. Mattsson., and S. Lindblom-Ylänne. 2015. ”Work experience in relation to study pace and thesis grade: investigating the mediating role of student learning.” *Higher Education*, Doi: 10.1007/s10734-015-9937-z.

U.S. Department of Education, National Center for Education Statistics. 2013. “The Condition of Education 2013” (NCES 2013-037). Retrieved from <http://nces.ed.gov/pubs2013/2013037.pdf>.

Van den Berg, M. N., and W.H.A. Hoffman. 2005. “Student Success in University Education: A Multi-Measurement Study of the Impact of Student and Faculty Factors on Study Progress.” *Higher Education*, 50, 413–446. doi:10.1007/s10734-004-6361-1.

Vermunt, J. K., and J. Magidson. 2002. “Latent class cluster analysis”. In *Applied latent class analysis*, edited by J. A. Hagenaars and A. L. McCutcheon. 89–106. Cambridge: Cambridge University Press.

Table 1. Different learning profiles according to the approaches to learning

PROFILES	SCALES MEASURING APPROACHES TO LEARNING			
	Deep approach	Organized studying	Intention to understand	Surface approach
Organised students	low	high	average	average
Students applying a deep approach	high	high	high	low
Students applying a surface approach	low	low	low	high
Unorganised students applying a deep approach	high	low	average	average

Table 2. Main categories and subcategories of enhancing and impeding factors

MAIN CATEGORY	Mentioned as enhancing learning (subcategories and frequencies)	Mentioned as impeding learning (subcategories and frequencies)
COURSE PLANNING	Flexibility in taking courses (56), Good variety of courses (18), Pre-set timetabled study plan (38), Interesting course content (48).	Overlapping courses (58), Problems related to number of courses (148), Unbalanced study schedule (10), Low availability of course material (13), Lack of information (11), Lack of alternative methods of assessment (20), Obligatory attendance (25), Lack of face-to-face teaching (13), Workload (30), Curriculum reform (26).
TEACHER	Approachability (23), Enthusiasm (19), Expertise in own field (5), Pedagogical skills (51), Teaching practices (18).	Problems in teaching skills (36), Problems in alignment (15).
GUIDANCE	Sufficient guidance (18), Personal study planning (44).	Problems related to availability of guidance (85), Lack of career counseling (15).
SOCIAL FACTORS	Peer support (70), Support from family and friends (10), Supportive atmosphere in the department (13), Hobbies (2).	Challenges related to student community (13), Family life (17), Hobbies (18).
STUDENT-RELATED FACTORS	Interest and enthusiasm about one's field (171), Self-regulation skills (140), Study skills (29), Goal-orientation (83), Clear career goals (12), Ownership of studies (29).	Motivational problems (65), Unclear career perspectives (34), Lack of goals in studying (4), Low self-efficacy (7), Lack of self-regulation skills (84), Learning difficulties (38), Stress and tiredness (46).
LIFE SITUATION	Possibility for full-time studying (26), Working (3), Age (10), Previous experience (7), Personal reasons (28).	Working (146), Student exchange (9), Personal reasons (103).
EXTERNAL PRESSURE	Demands posed by the university and society to move forward in studies (e.g. regarding study duration and credits, requirements for student allowance) (37)	
FACILITIES	E.g., textbooks, computers and printers (12)	

Table 3. Statistically significant differences between study profiles in the categories of enhancing and impeding factors (percentages)

CATEGORY	Difference between clusters	CLUSTER			
		Organised students	Deep approach	Surface approach	Unorganised students applying a deep approach
<i>Mentioned as enhancing studying</i>					
Pre-set timetabled study plan	$\chi^2=14.936$, df=3, p=.002	8.5	2.6	12.9	3.5
Interest and enthusiasm in one's field	$\chi^2=13.500$, df=3, p=.004	27.8	32.6	11.8	29.9
Ownership of studies	$\chi^2=8.694$, df=3, p=.034	4.0	4.7	0.0	8.3
<i>Mentioned as impeding studying</i>					
Lack of information	$\chi^2=8.209$, df=3, p=.042	0.0	2.1	1.1	3.9
Lack of face-to-face teaching	$\chi^2=21.654$, df=3, p=.000	1.5	0.0	0.0	6.5
Workload	$\chi^2=8.837$, df=3, p=.032	4.0	8.3	3.3	1.9
Family life	$\chi^2=9.557$, df=3, p=.023	1.0	5.2	0.0	3.2
Challenges related to student community	$\chi^2=11.115$, df=3, p=.011	1.0	0.5	2.2	5.2
Motivational problems	$\chi^2=18.999$, df=3, p=.000	6.4	5.7	16.5	10.1
Lack of self-regulation	$\chi^2=8.180$, df=3, p=.042	10.4	9.8	17.6	18.2

Appendix 1. Items measuring approaches to learning

1. I've often had trouble in making sense of the things I have to remember.
2. I've been over the work I've done to check my reasoning and see that it makes sense.
3. I have usually set out to understand for myself the meaning of what we had to learn.
4. I have generally put a lot of effort into my studying.
5. Much of what I've learned seems no more than lots of unrelated bits and pieces in my mind.
6. In making sense of new ideas, I have often related them to practical or real life contexts.
7. On the whole, I've been quite systematic and organised in my studying.
8. Ideas I've come across in my academic reading often set me off on long chains of thought.
9. I've looked at evidence carefully to reach my own conclusion about what I'm studying.
10. When I've been communicating ideas, I've thought over how well I've got my points across.
11. I've organised my study time carefully to make the best use of it.
12. It has been important for me to follow the argument, or to see the reasons behind things.
13. I've tended to take what we've been taught at face value without questioning it much.
14. I've tried to find better ways of tracking down relevant information in this subject.
15. Concentration has not usually been a problem for me, unless I've been really tired.
16. In reading for this course unit, I've tried to find out for myself exactly what the author means.
17. I've just been going through the motions of studying without seeing where I'm going.
18. If I've not understood things well enough when studying, I've tried a different approach.