

The study experiences of the high achievers in a competitive academic environment: A cost of success?

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The present paper is a case study that explores the study experiences and possible costs of success for the students accepted into the professional program in psychology at the University of Bergen in Norway. In this highly competitive environment, between 500 and 1000 students compete for 36 places during the introduction year. The study is based on 31 students' written narratives about their studying experiences during the introductory year in psychology. The data were analysed from a qualitative phenomenological perspective, and resulted in four basic themes that describe the students' experiences. The main findings indicate sacrificing a normal social student life in order to deal with an excessive workload, a shift in motivation from intrinsic to extrinsic, and a declined interest in the subject and joy of studying. The students experienced considerable stress during the studies, partly caused by lack of informational feedback on their level of competence during the semesters prior to the final exams. The findings are discussed in relation to the learning environment, drawing on Self-Determination Theory and the satisfaction of the basic psychological needs of competence, autonomy and relatedness.

Introduction

She still has not found the motivation to immerge herself into the subject material she really is excited about, mostly because the curriculum has dominated and consumed most of her reading and study energy, but also because the curriculum and exam chase has reduced the aspiration – the appetite for the subject. (Student 25)

A sense of competition for good results and grades is felt at all levels of education to various degrees. A reason for that is that grades usually are part of what determines entrance into the next level of education or into attractive programs with limited access, or into good schools. In that sense, we all have experienced some kind of academic competition. Still, sometimes the competition gets to another level and becomes severe. What kind of study experience is it to perform well under such conditions?

The five-year *Professional program in psychology* at the University of Bergen (UiB), Norway's second largest university, is an example of a very attractive study program. It accepts only 36 students each semester, based on exam grades in an introduction to psychology year that enrolls between 500 and 1000 students. Students have about a 1:20 chance of being accepted, thus making the introduction studies an extremely competitive learning environment. What is it like to study and try your best to succeed under such conditions? Is there a cost of success? What are the characteristics of the learning environment that can explain these experiences and possible costs?

Generally, a competitive environment is not considered to promote high quality learning. A wide body of research has shown how assessment influences the students' learning process (Boud, 2000; Boud & Falchikov, 2006; Havenes, 2004; Kvale, 1995; Lauvås & Jakobsen, 2002; Miller & Partlett, 1974; Raaheim & Raaheim, 2002; Snyder, 1971). A general claim is that students aiming for good grades design their study activities to fit the exam requirements, giving less attention to the course objectives and scheduled learning activities, if these are not well aligned with what is important in order to get good exam grades. Kvale (1980) found that "grade behaviour" made students in high schools more dependent on teachers, competing rather than cooperating with peers, moving their self-image towards grade identification, shifting motivation towards focus on rewards (extrinsic motivation), and adopting a surface approach to learning. This is behaviour that is contrary to the educational goals expressed in policy documents, namely student independence, peer cooperation, self-development, intrinsic motivation and a deep approach to learning.

Highly competitive learning environments have also been discussed in relation to students' well-being. Some research has been conducted on why law students report higher emotional distress and decline in subjective well-being during law school than students in other programs (Benjamin, Kaszniak, Sales, & Shanfield, 1986; Sheldon, 2004; Sheldon & Krieger, 2007). Benjamin et al. (1986) identified excessive workload, very limited student-faculty interactions and unbalanced development of student interpersonal skills as possible causes for the decline in well-being. Sheldon & Krieger in a recent longitudinal study (2007), used a model of thriving based on Self-Determination Theory (Ryan & Deci, 2000b) to explore possible factors in the learning environment that influenced subjective well-being and academic achievement. Their analysis supported a model that links subjective well-being to satisfaction of the basic psychological needs of autonomy, competence and relatedness, which are influenced by the degree to which students perceive the learning environment as autonomy supportive. Sheldon and Krieger (2007) argued that "the negative emotional effects they [the students] demonstrated were likely caused by the controlling and autonomy-denying features of legal education" (p.884). Together, these studies make us aware of the issue of well-being in relation to strong competition and unsupportive learning environments.

Surprisingly little research has addressed the student experience in the highly competitive learning environment of the introduction to psychology program at UiB. A recent report based partly on a student questionnaire (Hovland, Pallesen, Diseth, & Larsen, 2006) revealed that half of the students believed that there was not sufficient study time to understand everything in the curriculum, and another 25% of the students were uncertain on the issue. This clearly indicates that the workload is perceived as quite excessive. The same report found that 2/3 of the students were uncertain or did not know what was expected of them, strongly indicating that the students had poor understanding of the learning goals and how their performance would be measured. Investigating the relationships between measures of course experience, approaches to learning and academic achievement, the same authors argue for the importance of perceived appropriate workload and clearly stated goals and standards (Diseth, 2006). Nordmo (2007) has interviewed the most successful students in the introduction to psychology

courses about study activities, but the complexity of the students' experiences and a possible "costs of success" were not addressed, and need further investigation.

In the present study we take a phenomenological approach and analyse the successful students' reflections of their experiences during the introduction to psychology courses. We are looking for the themes that comprise the structure of these experiences and present this as the study's findings. In discussing the findings, we go beyond describing the experiences and explore some possible explanations for them. To do so, we turn our focus to the study environment analysing some of its features with the help of Self-Determination Theory (SDT), with its concepts of support for the basic psychological needs of autonomy, competence and relatedness (Ryan & Deci, 2000b). This is expected to be a valuable conceptual framework for such an analysis because SDT addresses the design of social environments in relation to how they foster or undermine people's development, performance and well-being. The SDT approach is expected to contribute to a better understanding of the local conditions for the reasons which the students have the kind of experience we present in the findings. A better understanding will hopefully enable us to suggest some changes to improve the learning environment. More widely, the study will test the power of the SDT framework in providing explanations for the students' experiences in a specific learning environment. The study will thus add to the growing literature on environmental influence on students' experiences from a SDT perspective, with a particular focus on the experiences of successful students in a severe competitive learning environment.

Context of the present study

An extensive description of the context of a case study is considered important for interpretive validity as well as for the readers to determine the applicability of the findings in their own situations (Gall, Borg & Gall 1996). We do not claim wide generalisability of the present case study, but expect it to be of interest to researchers looking at student performance and experience in other highly competitive learning environments. The essential features of the context of this study are the structure of the professional psychologist education at UiB, how selection of students to the professional program is done, the main elements of the learning environment, and the exam conditions and grading procedures of the introduction courses. A description of these features will be presented in the following. UiB is a state university with general admission accepting a variety of students. Higher education at the state universities in Norway is free. We would like to note that most other professional programs in Norway (e.g. medicine, law and engineering) select their students based on grade point average from secondary education rather than from grades in an introduction year. The professional psychologist education is special in this respect.

The structure of the psychology education: 1+5 years

The education at UiB to become a professional psychologist comprises of a one year introduction to psychology study followed by a five year professional program with integrated clinical practice that leads to authorisation as a psychologist. The introduction

study includes four courses, one philosophy course and three psychology courses (of 15 ECTS each), and the academic year is divided into a fall and a spring semester. Students normally follow two courses each semester and the courses are separately assessed by a four hour final essay exam. Entrance into the professional program is determined by the mean exam grade of the three psychology courses, while only a passing grade is necessary in the philosophy course. Between 500 and 1000 students are registered in each of the introduction courses, while only 36 students are accepted into the professional program each semester. The majority of students not accepted into the professional program use the introduction courses as a part of other university degrees.

The learning environment

The curriculum is defined by textbooks, and each course includes approximately 1000 pages of reading material. The university has study facilities on campus, but many students prefer to study at home. Each course has a weekly two-hour lecture for a period of 12 weeks. The lectures tend to follow the curriculum rather closely and are delivered in a large auditorium with several hundred students attending. Students can sign up for a series of five 3-hour seminars in each course, held every fortnight. There is a limit of 25 students per seminar, but the number of students attending tends to drop sharply during the series of meetings. Senior students from the professional psychology program are seminar leaders, and activities include discussing the curriculum and learning how to write good essay exams. Each student can hand in two essays to the seminar leader for individual feedback as preparation for the exams, but far from all students do so. Students are encouraged to form independent study groups and can book facilities on campus for their meetings, but they just as often meet outside the campus. A set of previous exam questions is available to the students.

Exam conditions

As there is no mandatory course work or control of attendance, the grade is determined by the final exam only. During the four hour exam the students write individual essays with no books or personal notes allowed. In one course they are asked to write one long essay while in the other courses they are asked to write three short essays for each exam. The exam questions are rather complex and demand some synthesis of the course literature. The essays have no word limits. Two examiners separately mark each essay, and the grade is agreed upon between them. The student identity is unknown to the examiners as only a student number is used for identification.

Method

The main research question addressed in this paper is: What are the study experiences of the students with the best exam grades in this competitive learning environment? The question is approached from a phenomenological perspective where the focus is to reveal and understand the meaning of studying in the introductory program in psychology at UiB, as expressed through the students' own experiences.

Sample and data collection

The students that managed to get into the professional program beginning in August 2002, had an introduction week which included one day of discussions about the study activities and possible new study challenges. The first author, who is not a lecturer in the program but works with educational issues in higher education, facilitated this discussion. A point made was that students so far probably had been studying with the goal to get good grades on essay exams, while they now needed to focus more on developing knowledge useful for a professional career. At the end of this day the cohort of 36 new students were asked to participate in the present study, which required reflecting further on their prior study experiences. 32 students accepted and wrote a “Self-description as student” on a provided template (see appendix) during approximately 30 minutes in the classroom. The students were asked to write about their study experiences during the introduction courses from the perspective of an imaginary good friend, one who knew them better than anybody else, in order to facilitate reflection. The students were allowed to use imaginary names to ensure anonymity. This method is strongly inspired by narrative research, where the informants’ own stories about events, episodes, or life trajectories can give access to the way they make meaning of themselves in the experienced life world (see Parker, 2005). Specifically, Kelly’s self-characterisation tool (see Androutsopoulou, 2001) as a particular technique was used. A description of oneself from the perspective of an imaginary friend is an expression of the way the person has constructed him-/herself in the situation where the narrative takes place. Self-characterisations as a research tool aims at uncovering these personal constructs. The handwritten texts were converted to electronic text files by the researchers. One text was discarded because the student had taken the introduction courses as a distant student in a private correspondence school. The remaining 31 texts constitute the data material of this study.

Data analysis

The goal of the analysis was to reveal the phenomenological meaning of the student experiences, as presented in their descriptions. Drawing on Giorgi (1985), the researchers adopted a stance of *phenomenological reduction*; previous knowledge about the phenomenon of studying at the university was bracketed, and the claims made regarded the presence of the phenomenon, rather than its existence. The researchers approached the data from an educational-psychological perspective. The student texts were analysed using a combination of descriptive phenomenological meaning condensation and meaning categorisation (Giorgi, 1985; Kvale, 1996, p.193-199). The analysis was carried out in the following three steps:

1. Dividing each student text into ‘meaning units’. A new unit was delineated every time the text moved to a new aspect of the study experience.
2. Converting meaning units into ‘transformation units’. Adopting an educational-psychological perspective, the phenomenological essence of each meaning unit was uncovered and expressed in transformation units. This was done with the help of *imaginative variation*; the various elements of the meaning units were altered with the aim to discover what remained consistent through the variations.

3. Clustering the transformation units into major themes according to what part of the study experience they described. Four major themes were uncovered: motivation, involvement with the learning environment, expectations for further studies, and study activities.

In order to ensure credibility, the student texts were divided between the two authors and both carried out steps 1 and 2. Each text was then discussed separately, and the transformation units were rephrased if necessary. The first author proceeded with step 3, and the themes proposed were discussed with the second author. The themes reported here are a result of discussion and negotiation between both authors.

Findings

Our aim, which guided the method of analysis chosen, has been to uncover the structure of the experiences rather than to assign different degrees of importance to the experiences' parts. The variety of elements in the students' experiences is, through the analysing procedure, clustered into four major themes, and the organisation of the first three themes reflects the chronology of the experience. It starts with the motivation that drove the students to enter the courses and some changes in that motivation during their studies; it continues with different parts of the experience of getting involved in the learning environment, and ends with expectations for further studies expressed at the very beginning of the five year professional program. The fourth theme reflects the students' descriptions of the actual study activities rather than how they experienced them.

Motivation

The first theme includes descriptions of initial motivation for studying psychology and expressions of motivational change during the studies.

We identified two types of initial motivation. One was interest in the subject, expressed as motivation to study psychology and become a psychologist. Getting top grades on the exams would then be necessary to obtain this goal. The second was expressions of the high importance of getting top grades in order to maintain identity as a high achiever. This refers to students saying they were used to being high performers in school and held that as an important part of their self-image. Some claimed they had difficulties dealing with anything but being among the best, and some said they were working on making "high performance" a less important part of their identity giving the impression of trying to free themselves from a self-image partly imposed on them by others.

Performance anxiety plays a notable role for her, even though she normally performs well in her studies. She is afraid of not living up to others' and her own expectations. I believe she is in danger of turning her study achievements into a far too important part of her identity. (Student 1)

Motivational change was not widely reported. A few students reported increased engagement in the subject of psychology during their studies, and some others reported

decreased engagement because they were not able to follow their own interests in the subject due to the sole focus on the exams. Still a few reported a loss in their general joy of studying and zest for learning, due to the huge study effort and lack of social life that resulted from it.

Involvement in the learning environment

This theme includes different parts of the students' experiences with the learning environment: a) the ways they dealt with the heavy workload, b) the uncertainty of whether their efforts and competences were good enough, c) their reactions to not getting good enough grades on their first attempt, and d) their disappointment with the general lack of support and indifference from the learning environment to their huge efforts to succeed.

a) Reading to understand the literature in order to be able to describe and discuss any part of it was experienced as a heavy workload that demanded long study hours daily throughout the semester. With no external control of attendance or assignments it was the students' own responsibility to manage such efforts. The importance of good self-management can be sensed in that the students attributed their success to personal qualities like being goal-oriented, self-disciplined and well-structured. Some enjoyed executing self-management; others had clearly difficulties with procrastination or struggling to find a balance between studying and other activities.

She is not sufficiently relaxed about her achievements and this results in a constant feeling of guilt (one can always read more), but good results. She always puts pressure on herself and when this pressure is real (for example 'getting good grades'), well-being is poor. Well-being requires a social-life. The main goal from now on is to make social-life a higher priority. (Student 6)

b) Being very much aware of the competition, the students tried to find out if their knowledge would be good enough to put them in the top 5% of the class, or if study efforts had to be intensified. The lack of formal information and feedback led them to informal comparison of knowledge, done in self-organised study-groups and in organised seminars. This process of sharing knowledge in order to be informed of each others' levels of understanding brought some tension: On one hand, the students would rather be the ones learning from others with more knowledge than being the ones giving knowledge away to potential competitors. On the other hand, increased self-confidence came from realising that they knew more than the others. This tension was partly solved by gravitating towards others with the same level of ambitions and knowledge.

He is not the kind of student who is lenient about his knowledge in relation to fellow students. He is happy to share and contribute that little bit extra in relation to them. Peter is trying to create a win-win situation. (Student 27)

Study efforts were compared as well, by observing the number of daily study hours spent and how far other students had come with their readings in the study rooms. Some

reported that this awareness made them more uncertain whether their own efforts were sufficient or not, and chose instead to study in isolation.

He has mostly been sitting by himself reading in his room. That is where he feels most comfortable. The times he has been in the study-rooms, he notices how much and for how long his fellow students read and he feels he is lagging far behind and is a bad student. That is why he is sitting alone, and it makes him feel very lonely in the long run. This loneliness results in poor well-being. (Student 11)

c) More than half of the students accepted into the professional program had retaken courses and exams in order to improve their grades. Some seemed to accept this as part of the cost of getting into the professional program and did not express much disappointment about not making it on their first try. Others reported being surprised and strongly disappointed by not making it, leading them to seriously question their self-image of being hard-working, good students. Going back for a second try could be a risky endeavour that further jeopardised their self-image if they still did not achieve the necessary grade. Support from family, friends and fellow students seemed important in making the decision to re-enter.

She has always been a good student, so the drop was dramatic when she started at the university and did not get good grades at first. This has made her quite discouraged at times and has influenced her belief in her coping ability. Linda always has a tendency to “excuse” her successes. Generally, she believes she is not as good as probably is the case, and her self-confidence, at least on the subject of psychology, could have been better. (Student 5)

d) This particular learning environment placed the responsibility for developing and maintaining a productive daily routine on the students. A few expressed disappointment in the university as they did not expect mainly self-studies. They criticised the introductory courses for accepting too many students and for not spending enough resources on teaching, and felt to some degree alienated by what seemed like the university's indifference concerning their success or failure.

Sean was dissatisfied with the introduction studies. He felt that he became alienated and that he was reduced to a small piece in a large jigsaw puzzle. It rained on his soul. (Student 31)

Expectations regarding further studies

This theme includes the students' expectations regarding their further studies. There were many expressions of happiness and relief in having succeeded in getting into the professional program, and the students expressed only positive expectations.

Many were now looking forward to being part of a small class where they could collaborate and engage in discussions, concentrating on sharing and building knowledge

together rather than competing for good grades. These expectations imply that many felt lonely and missed the social part of learning and of being a student during the introductory studies. They also imply that many did not feel that competition for good grades would be of importance in the professional program.

The students that claimed to have lost interest and motivation due to huge study efforts in the introductory studies now had hopes or expectations to regain their interest and motivation to learn. Students that experienced lower academic self-worth after having retaken exams, now hoped to regain their self-confidence. One student hoped to feel more appreciated as a student by the faculty and another expected to get better at studying.

Some students were looking forward to getting the competencies needed to become professional psychologists rather than the knowledge needed to write good essays, regarding this to be the “real” knowledge that motivated them in the first place. Such expressions may, however, reflect that this theme was discussed previously in the day of writing the self-characterisation.

Study activities

This study was mainly interested in the students’ experiences rather than which study activities they employed in order to succeed. Hence, the findings on the theme of study activities will only be reported briefly. For a more thorough discussion of the study activities of the most successful students, see Nordmo’s findings from a previous study (Nordmo, 2007). The findings in this study mostly confirm these previous findings of a threefold study process: a) Massive individual reading of the course literature, supported to some degree by lectures and study group discussions, with the aim to absorb the knowledge as it is presented; b) A transformation of this knowledge into thematic discussions guided by the type of questions the students expected to get on the final exam. This transformation was partly done individually by re-reading the literature and making outlines of essays, and partly in collaboration with peers in study groups and in tutored seminars; and c) Memorisation of different essay outlines with the hope that some of them would match the exam questions and that the essay exam could be written based on memorised outlines. This process was expressed rather precisely by one student:

The study program consists, roughly speaking, of three stages: 1 – acquire the information, 2 – make outlines, and 3 – memorise them. (Student 4)

Self-determination theory

As stated in the introduction, the present paper will use Self-Determination Theory (SDT) as a frame of understanding, in order to investigate links between the students’ experiences and characteristics in the learning environment.

SDT (Ryan & Deci, 2000b) deals with motivation - why we act - and focuses “on the social-contextual conditions that facilitate versus forestall the natural processes of self-

motivation and healthy psychological development” (p. 68). The theory is based on the assumption that humans are proactive and engaged, thriving for growth and integration. Rather than focusing on level or amount of motivation, SDT focuses on the quality of motivation and distinguishes between motivation being intrinsic or extrinsic. Intrinsic motivation is when a person is doing an activity for its inherent satisfaction. Based on the theory’s assumption about human nature, intrinsic motivation is the natural basis for learning and development. This is in contrast to extrinsic motivation that leads a person to do an activity in order to attain some separable outcome. Educational institutions, however, are seldom designed to allow students to freely follow their intrinsic motivation, but instead use different forms of control to regulate student behaviour towards certain goals and learning activities. SDT has been concerned with differentiating extrinsic motivation in accordance with to what degree people self-regulate activities without external pressure. The theory describes self-regulation as more controlled or more autonomous, based on the extent to which the rationale and value behind the activities have been internalised. More internalised extrinsic motivation in learning environments is associated with greater engagement, better performance, less dropping out, higher quality learning and greater psychological well-being (Ryan & Deci, 2000b, p. 73). The mechanisms behind maintaining intrinsic motivation or developing the more internalised types of extrinsic motivation associated with higher quality learning and greater psychological well-being, underpin the three basic needs of *competence, autonomy* and *relatedness*. Failure to provide support for these basic needs thwarts self-regulation and contributes to alienation and ill-being.

Hence, the question posed in the discussion is to what degree this particular learning environment supports the satisfaction of the three psychological needs SDT views as essential for self-regulation, high performance and well-being.

Discussion

Firstly, *competence* is described as exercising and extending one’s capabilities (Deci & Ryan, 2000). Ideally, the need for competence would be met when students engage in a series of optimally challenging situations, exercising the very capabilities that this particular education seeks to develop, and receiving positive informational feedback on their performances along the way. In the learning environment analysed here, the capabilities are, according to the final assessment, to be able to read, understand, absorb and memorise a large body of knowledge, and transform the essentials of different theories and perspectives into discussions arguing for similarities and differences. These discussions must in the end be turned into well written essays during the final four-hour exam without the aid of books or notes (Nordmo, 2007). In other words, the students need to know they have understood the material and can transform their understanding into written discussions in a proper academic language under severe time constraints. Further, with the goal to be accepted into the professional program, they need to know they can do this better than almost all the other students. How is the need for competence met in this particular learning environment? With no performance demands before the final exam and very little positive informational feedback along the way, there is little to ensure the students of the development of these new competences. The large lectures may

confirm their understanding of the essentials, but seem to offer little feedback other than that. Some feedback does come from peers (including older students) during oral discussions in seminars and study groups, but this feedback seems to add to the students' uncertainty about their competence just as much as confirms it.

Ann has worked for some part in study groups, but gets easily stressed by working together with others who know much of the curriculum, and she tends to think that “they know much more than me”, but she has learned from experience that when the exam results are presented, she has done better than her study group friends. (Student 8)

Writing two voluntary assignments and receiving feedback on them – if they choose to do so – is potentially quite valuable for the students. Nevertheless, the feedback comes from older students that cannot, and are not allowed to, use the grading scale, and it thus fails to answer the essential question: “Is this essay good enough for the grade needed for further studies?” Hence, in lack of better means of comparison, the students compare time spent on studies as a way of getting an idea of their level of competence. Many seem to believe that others put in more effort than themselves and this leads to a decreased rather than increased feeling of competence.

The large number of students that are retaking exams to get accepted into the professional program, expresses how previous failure to succeed made them seriously doubt their competence. Since the grade is the only informational feedback from the exam, the students gained little useful information on what was good enough and what needed improvement in order to get a better grade next time. We may claim that only a grade on the exam good enough to be accepted into the program, does function as positive informational feedback. Our conclusion drawn from the above is that the learning environment rather poorly supports the students' need for competence.

Secondly, *autonomy* is described as the “experience of integrity, volition and vitality that accompanies self-regulated actions” (Deci & Ryan, 2000, p. 254), and autonomous behaviours have an internal perceived locus of causality – they are experienced as emanating from the self (Deci & Ryan, 1994). How is this basic need met in the present learning environment? We can start by acknowledging that the students had chosen to study at the university and had chosen the subject of psychology, assuming this choice to be voluntary and out of interest. Having chosen psychology, however, the students had no further influence on the content, as the curriculum was defined by the university with no room for individual choice at the introduction level. When getting involved, the students faced a learning environment without control of attendance or compulsory assignments, and this gave the students freedom in choosing when, where, how and how much to study. By applying self-management techniques, the students got control of their reading providing a sense of autonomy.

John kept, during the first and second semester, a log of how many pages he read, in order to have control. He left this system the last semester because he felt it had a negligent effect on what was to be learned, that is the focus was

directed towards getting through as many pages as possible, not towards learning the material. (Student 4)

All the students had the clear goal of getting top grades, so in order to experience autonomy, they also needed to know how to reach this goal, meaning that they needed to know what was expected of them at the exam and how to get the necessary competences. Here, however, is where the need for autonomy got somewhat thwarted. If we look at the school essay exam with no books or notes allowed from the perspective of autonomy, the situation gave the students little perceived control. Neither did they know what knowledge to demonstrate nor who would assess them, but most importantly: they did not have a clear understanding of the assessment criteria and what distinguished an excellent essay from a merely very good one. We do not claim this distinction to be easy to express and make clear to students. However, as it is the difference between acceptance and rejection into the professional program, uncertainty about this demarcation line did contribute to difficulties in experiencing an internal perceived locus of causality and behaviour emanating from the self. Instead, the students experienced serious and troubling doubt while studying, and did not, until the exam results had proved to be good enough, fully attribute their success to their own efforts and control. In this way the learning environment only to some degree supported autonomy.

Thirdly, the need for *relatedness* is described in educational settings as “belongingness and connectedness to the persons, group, or culture disseminating a goal” (Ryan & Deci, 2000a, p. 64). In the present case, such significant others can be the teachers and psychologists, as they represent a community of practitioners (Wenger & Snyder, 2000) the students aspire to be members of. Feeling connected with the professionals by way of personal contact is difficult, as the scientific staff appears in lecture halls with several hundred students present. Nevertheless, a feeling of belonging is possible on an intellectual level, and reports of feeling at home at the university and in academia can be taken as expressions of such.

At least she likes to study, loves to gain new knowledge and could not dream of having an occupation where she would not get to use her brain. So the university is a perfect place for her, where knowledge flourishes all over the place. (Student 30)

If we take significant others to mean peers, we find that many of the students formed study groups with equally ambitious students for mutual help and support and that a sense of relatedness developed in such groups, even though the success or failure in the end depended on the individual effort on the exam.

During the introduction week, Laura got to know a group of others with the same goal as her. Later, she has often thought that the most important thing she did this first semester was to get together with these people; talk about psychology, the curriculum, the lectures, and about the common goal they had. (Student 20)

The competition for best grades often undermined feeling connected, as many viewed their peers as competitors and preferred to study alone. The fact that the courses had such a large number of students also impeded relatedness, as a group identity was difficult to get and students felt like “one in the crowd”. Many looked forward to belonging to a small group of students who would work together and follow each other for several years in the professional program, and we take this as a sign of limited feelings of relatedness in the introductory year.

Now that Laura has been accepted, she hopes to have a good class environment and engaged lecturers. She feels good about belonging somewhere, about being able to lower her shoulders, and get the education she desires. (Student 20)

Family and friends outside the courses were sometimes the significant others providing a feeling of relatedness in valuing higher education and hoping for the students’ success. Such relatedness seemed important to some of the students, especially in getting support (morally and probably financially) to carry on for an extra semester after not achieving the necessary grade the first time through the course. Our conclusion is that the learning environment of the introductory year only to some degree supported the basic need of relatedness due to large cohorts, poor student-teacher ratio and high competition.

Drawing on this analysis from a SDT perspective, we conclude that the competitive learning environment of the introduction study only partly supported the basic psychological needs of autonomy and relatedness and quite poorly supported the need for competence. Hence, it is expected and understandable that the students had difficulties in developing and maintaining intrinsic motivation as well as the more autonomous regulation of extrinsic motivation that is found to be important for commitment, effort, high-quality performance and psychological well-being. However, despite the poor support for the basic needs, the students in this study were able to show great commitment, make a huge effort and achieve a high-quality performance on the final exams. Our findings suggest that this was done with a personal cost of temporary decline in psychological well-being, ranging from a mild sense of isolation to more serious personal distress and a feeling of alienation. We believe that the SDT framework has proved its usefulness in giving some explanations of why the students had these experiences, considering the quality of the learning environment.

Concluding remarks

Based on the findings of this study, some supportive conditions for strengthening the students’ feelings of competence, autonomy and relatedness can be suggested: a) Establishing a feedback practice on the students’ learning performance in order to allow more control over the development of necessary competences. This could be obtained through assignments throughout the study year where students receive positive informational feedback on their performance and how it matches the grading criteria. We recognise that obligatory assignments might increase the feeling of external control and pressure and thus thwart the need for autonomy, and that the needs for competence and autonomy can thus be in conflict. However, our analysis of autonomy showed that it was

thwarted by students having an unclear understanding of the assessment criteria, making them uncertain of how to reach their goal. In this way, assignments will also support autonomy, but it is essential that assignments are supplied with adequate feedback in order to be experienced as meaningful for the students' learning; b) Establishing a teaching and learning practice that is more consistent with the exam goals, i.e. the achievement of deep understanding of the subject, making students able to compare and discuss the curriculum. This will enhance the students' perceived competence; and c) Create more opportunities for interaction between the students and the faculty, for example by organising regular gatherings where the faculty present their ongoing research, or by having meetings lead by senior students that present their experiences within psychology.

We have concluded that the learning environment rather poorly supported the basic psychological needs associated with thriving and natural growth tendencies, and we must ask why it is designed this way. One answer could be that it is designed this way to seek out the students that can succeed despite poorly supportive conditions, because these students will have qualities important for further studies and a career in the field of psychology. The premise for this assumption is, of course, that further studies and practising psychology is done in poorly supportive conditions. The main personal characteristics that the students, in retrospect, ascribed their success to were: having a clear goal and being goal-oriented, being self-disciplined and well-structured, and, mentioned by the many who retook exams, sometimes repeatedly, being determined enough to endure disappointments. These qualities are important for success in many parts of life, without any doubt, but are they essential for further studies and a career in psychology? We will not attempt to answer this question as it goes beyond the scope of the present investigation. We would like, however, to question the choice of keeping the learning environment unsupportive if done so in the interest of finding the top 5% of the students. Not mainly for the well-being of these few selected students, but in the interest of the remaining 95% of the students that are not selected. The university would serve them better if it created a learning environment that supported the three basic psychological needs associated with thriving and high quality learning.

The present study has several limitations. Its focus is on experiences of studying based on self-characterisations by the "winners", done after succeeding at the exams. These retrospective descriptions can be criticised with regard to their validity – is the experience coloured by the positive results? Could reflections gathered during studying reveal other elements of the studying process? Moreover, by focusing only on the successful students, our claims lack support from a possible comparison between experiences from students that did not succeed. Where do these students attribute their "failure"? What is their motivation and feeling of self-determination? Does the learning environment have a similar influence on them, and how do these experiences influence their further study and career choices? Such questions would be fruitful material for further studies. Finally, as SDT was used as a theoretical perspective in this study, we focused on social environmental conditions for support of thriving, and we neglected self-influence in applying effort and persistence to goal reaching. In further studies, a stronger intra personal component in the analyses could be incorporated.

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Appendix

Self-description as a student

We want to get a glimpse into how students perceive and describe their experiences of being a student at the University of Bergen. One way to do this that lends itself to research, is to ask students to write a character sketch of themselves as students in as rich language as possible.

We ask you to write this character sketch from the point of view of an imaginary friend, someone who knows you extremely well, perhaps better than anyone really does. Include everything you think someone would need to know about you to help them understand your experience of studying and what affects your learning at the university. Write using the third person (using “him” or “her” rather than “I”), and start by saying: “(First name) is”

The descriptions will be used for research purposes and all names will be changed to ensure anonymity. You can always give yourself an imaginary name to further ensure anonymity. The description however, must not be imaginary.

(This instruction is strongly inspired by an unpublished work by P. Laybourn and G. Jeffrey, Department of Psychology and Sociology, Napier University, Edinburgh, UK.)

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