Motivational sources of practical nursing students at risk of dropping out from vocational education and training
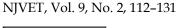
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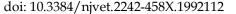
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Abstract

The aim of this study was to contribute to the understanding of the reasons for low or high academic motivation among practical nursing students at risk of dropping out from vocational education and training. The research data consisted of semi-structured interviews with 14 Finnish students, which were analysed by qualitative content analysis. The analysis identified six motivational sources. Two of these sources – Responsible agency and Completing out of necessity – were related to engagement in studying, whereas two other sources – Exhaustion from learning challenges and Tight-roping between competing responsibilities – were related to disengagement from studying. Emotional drive and Social orientation were ambivalent motivation sources, partly pushing towards engagement as well as to disengagement, depending on the circumstances. Overall, the complicated reasons for low or high motivation were found to be heterogeneous and, consequently, the ways to support students may also vary.

Keywords: dropping out, qualitative content analysis, motivational sources, practical nursing student, vocational education and training

Introduction

Adolescents' learning motivation has been shown to decline throughout one's school career (Gnambs & Hanfstingl, 2016; Otis, Grouzet & Pelletier, 2005), especially when they move to secondary school (Peetsma & Van der Veen, 2015). Lack of motivation leads many students to drop out of school (Caprara, Fida, Vecchione, Del Bove, Vecchio, Barbaranelli & Bandura, 2008; Fortin, Marcotte, Potvin, Royer & Joly, 2006; Utvær, 2013). Dropping out of education is, in turn, a risk factor for many social difficulties, such as living in low socioeconomic status (Nurmi, 2012) and having fewer employment opportunities (Litalien, Guay & Morin, 2015). The dropout percentage of education is particularly alarming in vocational education and training (VET) (Bulger, McGeown & St Clair-Thompson, 2016; Utvær, 2013). In 2015, the percentage of youth in OECD countries who were not employed or participating in education was on average 14.5%, and in Finland it was 14.3% (OECD, 2015).

There are various potential reasons for dropout. Intrapersonal reasons include factors such as learning difficulties (Hakkarainen, Holopainen & Savolainen, 2013), the use of weak learning strategies (Montague, 2007), or lack of interest in the future profession (Van Bragt, Bakx, Teune, Bergen & Croon, 2011). Moreover, interpersonal reasons, which are particularly crucial in dropout, include factors such as lack of friendship networks (Hakimzadeh, Besharat, Khaleghinezhad & Jahromi, 2016; Juvonen, Espinoza & Knifsend, 2012) and parental support (Hodkinson & Bloomer, 2001; Leino, 2015) as well as the lack of support (Niittylahti, Annala & Mäkinen, 2019) they receive at school, teachers' contradictory expectations (Learned, 2016), and difficulties in teacher–student relationships in the classroom (Nurmi, 2012; Wubbels, Brekelmans, den Brok & Tartwijik, 2006). All these factors may contribute to a student's motivation risk of school dropout.

Because many factors and experiences of the students contribute to dropping out over a long period (Lee & Burkam, 2003), it is hard to demonstrate a connection between any single factor and students' definitive decision to leave school. There are some studies related to dropping out from VET which are focused on engagement in studies (e.g., Nielsen, 2016; Niittylahti et al., 2019), reasons for interrupting the vocational education (Beilmann & Espenberg, 2016) or VET students' decision-making processes in relation to dropping out (Wahlgren, Aarkrog, Mariager-Anderson, Gottlieb & Larsen, 2018). However, there is a lack of qualitative studies on the different motivational sources behind low motivation that represent students' different ways of describing their commitment to their studies and factors decreasing or strengthening their motivation. In the present study, we focus on the motivational sources of Finnish practical nursing students at risk of dropping out of school during the first and second year of their studies in VET. The research question is the following: What kinds of motivational

sources do practical nursing students at risk of dropping out from their studies show?

Motivation and school engagement

The role of motivation in school success and failures has been widely investigated. While motivation refers to goals, values and beliefs in a certain area, engagement refers to behavioural displays of effort, time, and persistence in attaining desired outcomes (Guthrie, Wigfield & You, 2012). Motivation is a facilitator of engagement, which in turn facilitates achievement (Klauda & Guthrie, 2015). In addition to slow progress of learning, poor motivation or amotivation – which means not being motivated in one's studies – have also been shown to increase the risk of dropout (Legault, Green-Demers & Pelletier, 2006; Otis et al., 2005; Scheel, Madabhushi & Backhaus, 2009).

According to Ryan and Deci's self-determination theory (SDT; 2000), individuals' three basic psychological needs for autonomy, relatedness and competence play a key role in their motivation (Utvær, 2014). Autonomy refers to students' belief that they can influence their studies; relatedness refers to the feeling that one is important to key social partners (Fuller & Macfayden, 2012); and competence refers to the satisfaction felt in being able to accomplish one's duties successfully (Ryan & Deci, 2000; Smit, de Brabander & Martens, 2014). Using this framework, one reason for low academic motivation can be a deficiency in the satisfaction of these three psychological needs (Gnambs & Hanfstingl, 2016; Utvær, 2014). The central concepts in SDT in a school context are autonomous and controlled motivation (Ryan & Deci, 2017). Autonomous motivation can be intrinsic, that is, the desired action is interesting or valuable in itself, or partly extrinsic (i.e., the action has instrumental value), such as when the student has internalised the values of school or society. Controlled motivation then refers to other types of extrinsic motivation. These refer to actions the student feels compelled to perform, for internal (self-esteem, shame) or external (rewards, punishments) reasons.

It has been shown that students who experience a greater sense of autonomy exhibit more positive perceptions of self-determination and competence (Smit et al., 2014). According to Hardre and Reeve (2003), the more teachers support students' autonomy, the more positive students' perceptions of autonomy and competence become, which in turn predicts their intentions to continue their studies. In addition, support for the need of relatedness and competence has also been shown to predict motivational outcomes (Lazarides, Rohowski, Ohlemann & Ittel, 2015), in a study by King (2015) peer rejection was related to disengagement from school and lower levels of achievement (see also Scheel et al., 2009).

Another reason for low motivation is conflict between motivations (Grund, Brassler & Fries, 2014). It means that two or more action tendencies of similar

motivational strength compete for limited resources, such as time or effort. In their study of university students, Grund and Fries (2012) observed that the more students valued effort and success, the more they experienced internal conflict between leisure time and learning.

Furthermore, academic emotions may play a role in low motivation and affect the performance of the students (Oriol, Amutio, Mendoza, Da Costa & Miranda, 2016). For example, when academic activities generate satisfaction, happiness or hope, students feel more motivated before a task (Gnambs & Hanfstingl, 2016) as well as more engaged and tend to expend more academic effort. On the contrary, experiencing negative emotions may cause poor academic adaptation and students may feel bored or frustrated, which can lead to school failure (Oriol et al., 2016). Different actors, such as teachers, peers and parents, have also been shown to play a role in the formation of academic emotions (Fortin et al., 2006; Niittylahti et al., 2019). For example, when students perceive their teacher to be strict and admonishing, there is a decrease in student wellbeing (Wubbels et al., 2006).

Finally, learning difficulties and lack of educational support might be factors related to motivational problems. For example, Fortin et al. (2006) found that one-third of students at-risk of dropping out of school showed learning difficulties in math and languages; and two-thirds of them showed low motivation as a greater risk factor than poor academic performance. Hakkarainen, Holopainen and Savolainen (2016) found that those students who had learning difficulties in comprehensive school were more likely to choose a vocational track than an academic one in the transition to upper secondary school. In addition, school personnel seem to have a more positive perception of guidance than the pupils themselves do. Ahola and Kivelä (2007) observed that young people valued the practical support when facing difficulties, while school personnel tend to emphasise the formal principles of guidance, such as multivocational support and guidance.

Present study

Overall, lack of motivation has been shown to be a serious risk factor for school dropout (Scheel et al., 2009). The reasons behind lack of motivation, however, can be complex and diverse. The aim of the present study is to identify sources of motivation among VET students by listening to the students themselves about their opinions on why they are committed or uncommitted to their studies. The study was carried out in Finland among practical nursing students at risk of dropping out from VET.

The Finnish educational system consists of 10 years' compulsory education. After the conclusion of compulsory basic education at age 16, students choose their further education. About 95% proceed to upper secondary education, of which nearly half enter VET. During the time this study was conducted, about 64% of these students completed their education within the standard period of

three and a half years, while 75% finished within five-and-a-half years (Official Statistics of Finland [OSF], 2012a). Of those students who started studying for social and health care qualifications in Finland in 2009, 68% qualified in three-and-a-half years (men, 58%, women, 69%; Koramo & Vehviläinen, 2015). The overall dropout rate (completely discontinued education) was 7.8% (men, 7.7% and women, 8.0%; OSF, 2012b). Practical nursing studies last three years. The first year is mostly theory based, consisting of some learning by doing and one period of about five weeks of on-the-job training, whereas the second and third years consist of longer periods of on-the-job learning in addition to theoretical studies. In addition, Finland's vocational institutions offer individualised guidance counselling, remedial teaching, and extended on-the-job learning if needed.

Research methods

Participants and data

In this study, 14 Finnish first- and second-year practical nursing students in health care and social services were interviewed about their study and life situations. The students were between 16 and 20 years old (M = 17.3). One student was male while the others were female. The participants participated in the intervention part of the Motivoimaa project. The project was conducted by the Niilo Mäki Institute and funded by the European Social Fund. The project was carried out in a medium-sized city in Central Finland and it aimed, on the one hand, at identifying factors that make the students' studying difficult and, on the other, to encourage students to engage with their studies (Määttä, Kairaluoma & Kiiveri, 2011). In the present study, the sample consisted of those students from the Motivoimaa project who studied in the same social and health care college and who were selected for the project's intervention by a student multidisciplinary team on the basis of the following criteria: 1) students had troubles completing their studies, 2) students mainly used passive and task-avoidant learning strategies (as assessed by teachers), and 3) students did not have psychological symptoms that would have prevented their inclusion in group-based activities.

Two intervention groups, each consisting of 10 students, met twice a week, 14 times in total, during one semester. Altogether, 17 of those students completed the course and 14 authorised the use of their interview answers in the study. The intervention consisted of different life mastery and studying skills exercises and students received course credit for the completed intervention course. Those 14 students who wanted to voluntarily participate in the study were individually interviewed at the end of it by project researchers. The participants were informed of the purpose and process of the study before they gave their informed

consent. In addition, it was promised that the responses would be handled confidentially so that the privacy of interviewees would be protected (Patton, 2015).

The interviews were carried out in a semi-structured format. This format is generally used when the aim is to provide knowledge and deeper understanding of the phenomenon under study (Hsieh & Shannon, 2005). The interviews lasted approximately 25 to 50 minutes, were audiotaped and transcribed verbatim. The interview questions focused on participants' opinions about their study and life situations, motivation to study, strengths and weaknesses in studying, learning environment, and plans for their future. Although the questions were based on the same framework, the interviewers could adapt the questions in relation to the answers of the students. The interviews were conducted at school in an adjacent classroom during the intervention lessons.

Analysis

In this study, the phenomena under study were the reasons for low or high academic motivation among practical nursing students at risk of dropping out from vocational education and training. Based on the reasons narrated by the students, various motivation sources were identified. We understood the motivation sources largely as all factors which students indicated as pushing them towards a goal of completing or disengaging from their studies. The unit of analysis was one meaning unit, that is, a clause, a sentence, or a whole turn which created a clearly distinguishable image of one's motivation.

After the first author had familiarised herself with the data by reading each interview transcript and organising the data thematically (e.g., discussion of learning difficulties, significance of social relationships), we utilised researcher triangulation and identified similarities and differences between those thematic categories regarding how committed students narrated themselves as being committed to their studies, how permanent or changeable the commitment was said to be and what reasons students gave for their commitment or failure to commit. On the basis of these comparisons, we decided to create six ideal types (see Patton, 2015, p. 548) of the ways in which students talked about the factors which pushed them towards completing their studies or disengaging from them. The identification of these types did not mean classifying the students themselves into different types, but the typology was based on all the meanings students produced regarding committing to or disengaging from their studies. Thus, none of the participants represented only one motivation source, but the motivation sources represent the main meanings found across the interviews. This kind of overlap is typical in typologies which 'are built on ideal types or illustrative end points rather than a complete and discrete set of categories' (Patton, 2015, p. 546). Nearly every student mentioned more than one reason for having an influence

on their motivation to the studies, although all six motivation sources were not present in each participant's interviews.

After identifying the ideal types of various motivation sources, we conceptualised the findings according to how students committed themselves to their studies (e.g., engagement and disengagement) and how they explained their reasons for these commitments. The latter were organised in terms of internal and external reasons. We thus combined both the inductive and quasi-deductive approach during the analysis (see Patton, 2015, pp. 542–543): the six motivation sources were identified and created from the interview data inductively to find students' unique perspectives without imposing preconceived categories or theoretical perspectives, whereas a final understanding about the relation of these sources to the students' engagement (King, 2015; Studsrød & Bru, 2011) and locus of control (Zimmerman, 2000) were achieved through theory-driven thinking and utilising previous literature. The most illustrative data extracts were selected for the Findings section and they were translated into English with the assistance of a language consultant with an emphasis on idiomatic translation. All names used in the article are pseudonyms.

Findings

The findings are presented through six different motivational sources representing students' different ways of describing their commitment to their studies and factors decreasing or strengthening this commitment. Figure 1 presents the motivational sources the students generated in relation to their school engagement and locus of control.

	Locus of control	
	more internal ↔	more external
Engaged	Responsible agency	Completing out of necessity
Ambivalent	Emotional drive	Social orientation
Disengaged	Exhaustion from learning challenges	Tight-roping between competing responsibilities

Figure 1. A typology of students' motivation sources.

When expressing strong school engagement, the students describe two motivation sources with different locus of control: responsible agency and completing out of necessity. Conversely, when manifesting disengagement from the studies, the students narrate such motivation sources as exhaustion from learning challenges or tight roping between competing responsibilities. Studying with an ambivalent attitude is described by individual emotional drive or social orientation.

Engagement in studies

Responsible agency describes the engagement which is preceded by students' own choice of the particular field of VET and a strong aim to graduate for its own sake. The studying is considered intrinsically valuable, which creates a strong motivation for completing the studies. In addition, the sense of agency is reinforced by experiencing oneself as being the cause of an action and having the primary responsibility for his or her studies.

> Extract 1: …this is like an optional school, or that no one must be here if they don't want to. It depends on your own choice and you must take more responsibility for yourself. […] at times it feels hard, but you get used to it. On the other hand, quite nice. (Katrin)

> Extract 2: When you go to the vocational school you go there to study for yourself, like really. So that junior high school [ages 13–15] might have partly been a place where one still grows and so on. And that it's, like, sort of, everyone's duty to go through it. But when you go to vocational school then you should understand that it has been about your own choices. So, if you can't manage to be there, or you're not interested, then why do you have to blabber on during class and disturb others. (Emily)

In Extracts 1–2, studying for oneself is strongly emphasised. Studying is said to be voluntary and to depend mainly on students' own choices: they are the ones who must take the responsibility for their duties, complete the tasks on time, and make their own contribution to learning outcomes and graduation. It is characteristic of responsible agency, however, that students in this group are not bothered by this, but like self-direction and the sense of responsibility, even though it 'at times feels hard' (Extract 1).

Studying in VET is also compared with learning in compulsory comprehensive school, where learning is described as being more controlled. Compared to this, studying in VET is voluntary, and therefore 'no one must be here' (Extract 1). In Extract 2, Emily also distances herself from her classmates who do not have the same kind of responsible attitude to studying and who 'blabber on during class and disturb others.' Thus, internalising the importance of the studies for oneself and having a general sense of control over one's life is an inherent part of responsible agency.

Completing out of necessity refers to completing studies as a necessity of life or even as a necessary evil in Western societies. Although studying arouses various

negative feelings in students, dropping out of studying is associated with even more negative consequences, such as a bad financial situation or a meaningless life without work. Therefore, fearing the worst is the main compelling motive for the students to push ahead with their studies.

> Extract 3: We, like, encourage each other to finish school. And not like, even though sometimes it feels that it's going badly, so then anyway, even though the studies might take longer, one would still finish them. So that you would have a job then. And you would have a kind of security there. And many have that sad thing that if they drop out, then, like a friend of mine just a while back, then all study loans should be paid back. And it was not some small amount of money that those loans had been about. (Emily)

> Extract 4: So here I'm still thinking should I quit or what to do. But I have decided on one thing that I won't be useless, not for a minute. So that if I quit this, then I'll quit it so that I can basically, like, continue in a job right away. (Susan)

In Extracts 3–4, the students describe how the studies have only an instrumental value for them. They narrate various future threats such as suffering from meaningless weekdays or receiving a huge bill from paying back a student loan when dropping out from education. Evading these undesirable consequences and ensuring ones' own living in the future pushes students to continue their studies, although they would not have any internal motivation towards learning. Therefore, as Susan states in Extract 4, one must first find an alternative solution before it is sensible to drop out of studies. Although there are some motivational conflicts between the students' gratifications and responsibilities, they have decided to try to graduate.

Ambivalence

Emotional drive describes the role of emotions in study motivation and an ambivalent attitude towards studies. The investment of time for studies depends mainly on student's internal factors, such as mood and interests. Therefore, the students with emotional drive may be committed to studying certain subjects, but they disengage from trying in other study modules depending on their likes and dislikes.

> Extract 5: So, if I happen to have, like, that kind of good motivation and interest in that work then I'm up for it. But then, when it's not, if I'm not interested at all then nothing comes of it. Then you might go and do something else for a while. (Helena)

> Extract 6: It is affected, like, by the class and your energy. […] It is so, like, we go forward at full speed and then when something doesn't get done then it's just left undone. Then I just don't have the energy to think about it afterwards. I just think that I'll do it sometime, when I have the energy. (Markus)

In extracts 5 and 6, the students attribute the efficiency or inefficiency of studying to their emotional state. In Extract 5, Helena describes how interest plays a

significant role in regulating her work: if some subject is not interesting, it is not worth doing. In Extract 6, Markus refers to his fatigue, which controls his studying. Tasks are postponed to the (open-ended) future, at which time he believes he will have more energy to manage them. However, the disengagement is not necessarily a considered solution but more often out of his conscious control: 'when something doesn't get done then it's just left undone'. Thus, the students with emotional drive experience things as just happening to them and feel themselves to be simply drifting.

Social orientation as a motivational source emphasises the role of other people in study progress. Those students with social orientation narrate themselves as being energised by multiple action tendencies but possess limited resources to pursue various activities simultaneously, such as partying all night with friends and completing their course assignments. Thus, in this case students typically experience motivational conflicts, which arise from various social temptations while pursuing their learning goals.

> Extract 7: Well they [friends] have, like, positive and negative impacts on studying. It is like, you can get help if you need. […] So yes [friends] also encourage. But yes, they do sometimes take you with them to do, like, a bit of something else other than school stuff. (Helena)

> Extract 8: My brother has just helped a lot and parents as well. […] I have really bad memories from junior high school because our class was very restless. And then I have also been bullied at school and so on. When I got here there was such a good group with such a good team spirit. (Suvi)

In extracts 7 and 8, students attribute their weak enthusiasm for studying to others: circumstances, their friends, or the lack of support. In Extract 7, Helena describes how her friends, at their best, support her in completing her studies, but they can similarly absorb a great deal of her learning time by tempting her to take part in other activities.

In Extract 8, Suvi remembers times when she was bullied at school, suffered from the noisy classroom and felt lonely. These negative social experiences have influenced her attitude towards her studies and weakened her concentration on learning. On the other hand, people such as her parents, a brother and a supportive peer group at her present school have also played a significant role in making Suvi's situation more positive. That means that both negative and positive social experiences contribute to one's life.

Disengagement

Exhaustion from learning challenges refers to the experience of falling behind one's peers due to the difficulty of the learning content. The experience of the learning difficulties prevents students from becoming motivated to try to learn more

challenging content. The difficulties appear in certain subjects (e.g., mathematics) or more widely in some basic skills (e.g., reading comprehension).

> Extract 9: …we go over such difficult things in such a short time, and so much. And you should be able to assimilate all that. […] I have been diagnosed as having mild dyslexia. […] When I read a text, I can read it like million times, reading without thinking. Even in Finnish. But I don't necessarily understand what the main point is. And then I'm really absent-minded. […] If I can't do something, if it doesn't happen, then I, sort of, lose the motivation totally. I, like, I got discouraged then. (Susan)

In Extract 9, Susan describes her learning difficulty and its effects on her studies and gradually on her identity as a student. Difficulties in reading and remembering make her a slow learner, disturb her understanding and weaken her motivation for reading. Finally, the difficulties lead to a negative cumulative cycle between learning difficulties, a lack of motivation and giving up in the face of constant setbacks.

Although learning difficulties are related to students themselves and their internal factors, the education system is also more or less explicitly excoriated by students as mass instruction which does not pay enough attention to individual learning needs or provide diverse ways of teaching. Susan talks about the requirements for studying which are experienced as challenging (e.g., 'such difficult things in such a short time, and so much'). However, Susan does not necessarily seek help but instead leaves the tasks undone, thereby remaining alone with her difficulties.

Tight-roping between competing responsibilities means struggling with various external duties (e.g., taking on paid work in addition to studies) or value conflict. This demotivates the student and riding out the storm takes priority over completing studies.

> Extract 10: I always want to spend time with my daughters as much as possible in the evenings. But they go to bed nicely in time and then, after that you just wouldn't have the energy. It's always such a big bother then to start with the school things after you get them to bed. […] Anyway, they come, the family comes before school things. […] even though I'm continuing for half a year longer, but I am still quite proud that I, anyhow, started with this school at the same time as having such small children. (Karin)

In Extract 10 Karin mentions various challenges in her life which disturb her concentration on her studies. The narration culminates in long-lasting challenges concerning the reconciliation of her family and her studies. She states that she is really committed to school attendance, but that she also prefers her family to her studies. Thus, caring about her children takes so much energy that she does not have any left for studying. The students discussing tight-roping between competing responsibilities do not necessarily disengage from their studies

permanently, but their level of commitment may vary depending on the external circumstances.

Discussion

The aim of the present study was to investigate the motivational sources of Finnish practical nursing students at risk of dropping out of VET. In accordance with earlier studies (Fortin et al., 2006; Scheel et al., 2009), the students at risk of dropping out from VET were found to be a heterogeneous group whose motivation sources varied largely and who typically expressed many, even contradictory, motives for completing or dropping out of their studies in the same interview. As motivational sources, the categories of responsible agency and completing out of necessity represented strong school engagement also among the students reported as having low study motivation, whereas exhaustion from learning challenges and tight-roping between competing responsibilities manifested disengagement from the studies. In addition, social orientation and being driven by emotions embodied an ambivalent attitude towards the studies.

Interestingly, in relation to self-determination theory (Ryan & Deci, 2000), the results showed that neither intrinsic nor extrinsic motivation can be considered as categorically desirable or undesirable attitudes towards education. For instance, although completing out of necessity represented strong study engagement, the students were extrinsically motivated, and the studies only had instrumental value for them. Thus, the desire to evade undesirable consequences pushed the students to continue their studies for controlled motivational reasons, that is, without autonomous academic motivation. Similarly, although tight-roping between competing responsibilities represented disengagement from studies, the disengagement might only be a temporary solution in the situation where the full life meant too many overlapping duties, although the students were still somewhat intrinsically motivated to continue their studies and still had a relatively strong sense of autonomy, relatedness and competence. In this respect, exhaustion from learning difficulties meant the most vulnerability to permanent disengagement from studies, since it was characterised by both a low sense of competence and a weak sense of autonomy to be able to do something to improve the situation. Therefore, it is particularly important to get these students engaged in their studies, so that they would not develop any cynicism, since those who have a high level of cynicism towards school have been found to be almost four times more likely to drop out than those with a low level of cynicism (Bask & Salmela-Aro, 2013).

In addition to narrating learning difficulties as weakening their motivation to study, students also criticised the learning structures and one-sided pedagogical methods used in the lessons. In this case, the failures were not considered

inevitable in the future, but the primary responsibility for them was in the teacher's control. In addition, in earlier research, the classroom environment has been perceived as making a major contribution to the engagement with school, and classroom climate has an influence on student achievement and attitude (Niittylahti et al., 2019; Van Petegem, Aelterman, Rosseel & Creemers, 2007). Thus, the more the social environment can satisfy psychological needs, the more positive the consequences (Deci & Ryan, 2012).

The ambivalent motivation sources such as emotional drive and social orientation represented motivational conflicts in the studies, especially between studying and social life. Because of the ambivalence in their attitudes these groups can be more easily supported. Social orientation as a motivation source strengthened the earlier results about the importance of belonging and having supportive friends in the engagement in school (Fuller & Macfayden, 2012; King, 2015). Thus, the learning goals are not the only goals students bring to the learning context. When school is alienating, students will go elsewhere in their quest for validating relationships (Scheel et al., 2009). Therefore, activities in school should connect with everyday experiences of students to help them generate greater meaning for their knowledge (Oriol et al., 2016).

The main result was that although the students were at risk of dropping out of VET, their motivation sources were heterogeneous, including autonomous, controlled and ambivalent motivation factors. Consequently, the study claims that rather than simply having favourable or unfavourable motives for studying, the students had a complicated and even ambivalent range of motivation sources, the relative balance of which is likely to define whether they end up continuing their studies or dropping out. The study also emphasises the significance of the quality of instruction and the teacher–student relationship in the engagement of students with their studies, which is contrary to studies that have mainly emphasised more permanent and individual reasons for dropout. The complicated motivation factors also provide many opportunities for intervention, since strengthening even one positive and convincing motive for continuing studies can be a means of diminishing the influence of more negative motivating factors on students' decisions.

Limitations

Although this study was not an intervention study, the intervention might have had a positive influence on the sources of motivation students narrated during the intervention. However, the data are diverse, and they produced diverse and even contradictory descriptions about the motivation sources of students. The quality of interviews varied because some students gave very short answers while others narrated their opinions with more variety. If there had been several interviews the students who spoke little could also have narrated their sources in

a more wide-ranging manner. Despite the relatively small amount of interviewees, the motivation sources narrated by them seem to be reasonable, and the transferability of the results would be worth testing by means of the larger sample. Credibility in this study was strengthened by researcher triangulation. All the researchers read the interviews independently and noted down their initial ideas concerning it. After creating the initial codes and naming the motivational sources, all data relevant to each potential motivation source were also re-checked systematically and the typology was tested together.

Practical implications

It is challenging for school personnel to support all the students struggling with a lack of motivation because finding the appropriate preventive interventions that meet the needs of differently motivated students is a complex task. While autonomously motivated students, with responsible agency, may be able to learn in a partly self-directed manner, students with learning difficulties are likely to benefit from intensive instructional support and learning skills interventions in order to learn effectively. Students showing controlled or extrinsic motivation, who complete studies out of necessity, might benefit from longer periods of on-the-job-learning where they can contemplate their vocational identity, acquire satisfying experiences from work, and strengthen their autonomous motivation for their studies. In addition, students tight-roping between competing responsibilities may need support in managing their studies and learning life control skills as well as in developing social networks to organise their everyday life. Instead, students narrating emotionally driven and social orientation motivation sources could benefit from tutor students, working in pairs or in groups, and learning by doing.

All the students should benefit from multiple teaching methods and a good classroom climate, which teachers can manage by using teaching strategies that fit each student's ability level. Bacca, Baldiris, Fabregat and Kinshuk (2018) noted that using scaffolding and real-time feedback relates to dimensions of strengthening motivation. In addition, the aim of the interventions, like the Motivoimaa project, is to create a learning environment where the students can obtain experiences of success, which further increases their motivation to study. These interventions can be organised during regular lessons, so there is no need for extra resources. In this way they become one part of developing the whole school system.

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References

Ahola, S., & Kivelä, S. (2007). 'Education is important, but…' Young people outside of schooling and the Finnish policy of education guarantee. *Educational Research*, *49*, 243–258.

Bacca, J., Baldiris, S., Fabfegat, R., & Kinshuk. (2018). Insights into the factors influencing student motivation in augmented reality learning experiences in vocational education and training. *Frontiers in Psychology*, *9*, Article 1486.

Bask, M., & Salmela-Aro, K. (2013). Burned out to drop out: Exploring the relationship between school burnout and school dropout. *European Journal of Psychology of Education, 28*, 511–528.

Beilmann, M., & Espenberg, K. (2016). The reasons for the interruption of vocational training in Estonian vocational schools. *Journal of Vocational Education and training*, *68*(1), 87–101.

Bulger, M., McGeown, S., & St Clair-Thompson, H. (2016). An investigation of gender and age differences in academic motivation and classroom behavior in adolescents. *Educational Psychology, 36*(7), 1196–1218.

Caprara, G.V., Fida, R., Vecchione, M., Del Bove, G., Vecchio, G.A., Barbaranelli, C., & Bandura, A. (2008). Longitudinal analysis of the role of perceived self-efficacy for self-regulated learning in academic continuance and achievement. *Journal of Educational Psychology, 100*, 525–534.

Deci, E.L., & Ryan, R.M. (2012). Motivation, personality and development within embedded social context: An overview of self-determination theory. In R. Deci (Ed.) *The Oxford Handbook of Human Motivation* (pp. 85–107). UK, Oxford: Oxford University Press.

Fortin, L., Marcotte, D., Potvin, P., Royer, J., & Joly, J. (2006). Typology of students at risk of dropping out of school: Description by personal, family and school factors. *European Journal of Psychology of Education*, *21*(4), 363–383.

Fuller, C., & Macfayden, T. (2012). 'What with your grades?' Students' motivation for and experiences of vocational courses in further education. *Journal of Vocational Education and Training*, *64*(1), 87–101.

Gnambs, T., & Hanfstingl, B. (2016). The decline of academic motivation during adolescence: An accelerated longitudinal cohort analysis on the effect of psychological need satisfaction. *Educational Psychology*, *36*, 1691–1705.

Grund, A., Brassler, N.K., & Fries, S. (2014). Torn between study and leisure: How motivational conflicts relate to students' academic and social adaptation. *Journal of Educational Psychology, 106*(1), 242–257.

Grund, A., & Fries, S. (2012). Motivational interference in study–leisure conflicts: How opportunity costs affect the self-regulation of university students. *Educational Psychology*, *32*(5), 589–612.

Guthrie, J.T., Wigfield, A., & You, W. (2012). Instructional Contexts for engagement and achievement in reading. In S.L. Christenson, A.L. Reschly, & C. Wylie (Eds.) *Handbook of research on student engagement* (pp. 601–634). Boston, MA: Springer.

Hakimzadeh, R., Besharat, M-A., Khaleghinezhad, S.A., & Jahromi, R.G. (2016). Peers'perceived support, student engagement and academic activities and life satisfaction: A structural equation modelling approach. *School Psychology International*, *37*(3), 240–254.

Hakkarainen, A.M., Holopainen, L.K., & Savolainen, H.K. (2013). A five-year follow-up on the role of educational support in preventing drop out from upper secondary education in Finland. *Journal of Learning Disabilities, 48*(4), 408–421.

Hakkarainen, A.M., Holopainen, L.K., & Savolainen, H.K. (2016). The impact of learning difficulties and socioemotional and behavioural problems on transition to postsecondary education or work life in Finland: A five-year follow-up study. *European Journal on Special Needs Education*, *31*(2), 171–186.

Hardre, P.L., & Reeve, J. (2003). A motivational model of rural students' intentions to persist in, versus drop out of, high school. *Journal of Educational Psychology, 95*(2), 347–356.

Hodkinson, P., & Bloomer, M. (2001). Dropping out for further education: complex causes and simplistic policy assumptions. *Research Papers in Education*, *16*(2), 117–140.

Hsieh, H-F., & Shannon, S.E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277–1288.

Juvonen, J., Espinoza, G., & Knifsend, C. (2012). The role of peer relationship in student academic and extracurricular engagement. In S.L. Christenson et al. (Eds.) *Handbook of research on student engagement* (pp. 387–401). Boston, MA: Springer.

Jørgensen, C.H. (2015). Some boys' problems in education: What is the role of VET? *Journal of Vocational Education and Training*, *67*(1), 62–77.

King, R.B. (2015). Sense of relatedness boosts engagement, achievement, and well-being: A latent growth model study. *Contemporary Educational Psychology*, *42*, 26–38.

Klauda, S.L., & Guthrie, J.T. (2015). Comparing relations of motivation, engagement, and achievement among struggling and advanced adolescent readers. *Reading and Writing*, *28*(2), 239–269.

Koramo, M., & Vehviläinen, J. (2015). *Ammatillisen koulutuksen läpäisyn Tehostamisohjelma: Laadullinen ja määrällinen seuranta vuonna 2014. Raportti ja selvitykset 2015:3* [The rationalisation programme of the penetration of vocational education and training: Qualitative and quantitative monitoring in 2014. Report and explanations 2015:3]. Helsinki, Finland: Finnish National Board of Education.

Lazarides, R., Rohowski, S., Ohlemann, S., & Ittel, A. (2015) The role of classroom characteristics for students' motivation and career exploration. *Educational Psychology*, *36*(5), 992–1008.

Learned, J.E. (2016). "Feeling like I'm slow because I'm in this class": Secondary school context and the identification and construction of struggling readers. *Reading Research Quarterly*, *51*(4), 367–371.

Lee, V.E., & Burkam, D. T. (2003). Dropping out of high school: The role of school organization and Structure. *American Educational Research Journal, 40*(2), 353–393.

Legault, L, Green-Demers, I., & Pelletier, L. (2006). Why do high school students lack motivation in the classroom? Toward an understanding of academic amotivation and the role of social support. *Journal of Educational Psychology, 98*(3), 567–582.

Leino, M. (2015). Contemporary issues in post-compulsory education: Dropping out from vocational education in the context of the dimensions of communication. *Research in Post-Compulsory Education. 20*(4), 500–508.

Litalien, D., Guay, F., & Morin, A.J.S. (2015). Dropout intentions in PhD studies: A comprehensive model based on interpersonal relationships and motivational resources *Contemporary Educational Psychology, 41*, 218–231.

Montague, M. (2007). Self-regulation and mathematics instruction. *Learning Disabilities Research and Practice, 22*(1), 75–83.

Määttä, S., Kiiveri, L., & Kairaluoma, L. (2011). Motivoimaa-hanke ammatillisen nuorisoasteen koulutuksessa [Motivoimaa project in upper secondary vocational education and training]. *NMI Bulletin, 21*(2), 36–50.

Nielsen, K. (2016). Engagement, conduct of life and dropouts in the Danish vocational education and training (VET) system. *Journal of Vocational Education and Training, 68*(2), 198–213.

Niittylahti, S., Annala, J., & Mäkinen, M. (2019) Student engagement at the beginning of vocational studies. *Nordic Journal of Vocational Education and Training, 9*(1), 21–42.

Nurmi, J-E. (2012). Students' characteristics and teacher-child relationships in instruction: A meta-analysis. *Educational Research Review, 7*, 177–197.

OECD (2015). *Youth employment and unemployment.* Retrieved 15. May, 2018, from: www.oecd.org/employment/action-plan-youth.htm

Official Statistics of Finland (OSF). (2012a). *Progress of studies* [e-publication]. Helsinki: Statistics Finland. Retrieved 20. August, 2019, from: http://www.stat.fi/til/opku/2012/opku_2012_2014-03-20_tie_001_en.html

Official Statistics of Finland (OSF). (2012b). *Discontinuation of education* [e-publication]. Helsinki: Statistics Finland. Retrieved 20. August, 2019, from: http://www.stat.fi/til/kkesk/2012/kkesk_2012_2014-03-20_tie_001_en.html

Oriol, X., Amutio, A., Mendoza, M., Da Costa, S., & Miranda, R. (2016). Emotional creativity as a predictor of intrinsic motivation and academic engagement in university students: The mediating role of positive emotions. *Frontiers in Psychology, 7*, 1–9.

Otis, N., Grouzet, F.M.E., & Pelletier, L.C. (2005). Latent motivational change in an academic setting: A 3-year longitudinal study. *Journal of Educational Psychology, 97*(2), 170-183.

Patton, M.Q. (2015). *Qualitative research & evaluation methods* (5th ed.). Thousand Oaks, CA: SAGE Publications.

Peetsma, T., & Van der Veen, I. (2015). Influencing young adolescents' motivation in the lowest level of secondary education. *Educational Review, 67*(1), 97–120.

Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68–78.

Ryan, R.M., & Deci, E.L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness.* New York, NY: Guilford Press.

Scheel, M.J., Madabhushi, S., & Backhaus A. (2009). The academic motivation of at-risk students in a counselling prevention program. *The Counselling Psychologist, 37*(8), 1147–1178.

Smit, K., de Brabander, C.J., & Martens, R.L. (2014). Student-centered and teacher-centered learning environment in pre-vocational secondary education: Psychological needs, and motivation. *Scandinavian Journal of Educational Research, 58*(6), 695–712.

Studsrød, I, & Bru, E. (2011). Upper secondary school students' perceptions of teacher socialization practices and reposts of school adjustment. *School Psychology International, 33*(3), 308–324.

Utvær, B.K.S. (2013). *Staying in or dropping out? A study of factors and critical incident of importance for health and social care students in upper secondary school in Norway.* Serie Doktoravhandlinger ved NTNU, 1503-8181; 2013:331. Trondheim: Norges teknisk-naturvitenskapelige universitet.

Utvær, B.K.S. (2014). Explaining health and social care students' experiences of meaningfulness in vocational education: The importance of life goals, learning support, perceived competence, and autonomous motivation. *Scandinavian Journal of Educational Research, 58*(6), 639–658.

Van Bragt, C.A.C., Bakx, A.W.E.A., Teune, P.J., Bergen, T.C.M., & Croon, M.A. (2011). Why students withdraw or continue their educational careers: A closer look at differences in study approaches and personal reasons. *Journal of Vocational Education and Training, 63*(2), 217–233.

Van Petegem, K., Aelterman, A., Rosseel, Y., & Creemers, B. (2007). Student perception as moderator for student wellbeing. *Social Indicators Research, 83*(3), 447–463.

Wahlgren, B., Aarkrog, V., Mariager-Anderson, K., Gottlieb, S., & Larsen, C.H. (2018). Unge voksnes beslutningsprocesser i relation til frafald: En empirisk undersøgelse blandt unge voksne i erhvervs- og almen voksenuddannelse [Young adults' decision processes in relation to drop out: An empirical study among young adults in vocational education and training and basic general adult education]. *Nordic Journal of Vocational Education and Training, 8*(1), 98–113.

Wubbels, T., Brekelmans, M., den Brok, P., & van Tartwijk, J. (2006). An interpersonal perspective on classroom management in secondary classrooms in the Netherlands. In C.M. Evertson, & C.S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 1161–1192). Mahwah, NJ: Lawrence Erlbaum.

Zimmerman, B.J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology, 25*, 82–91.

Zvoch, K. (2006). Freshman year dropouts: Interactions between students and school characteristics and student dropout status. *Journal of Education for Students Placed at Risk, 11*(1), 97–117.