



MASTER THESIS

Motivation and related psychological
needs of dropouts in secondary
vocational education

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Preface

With great pleasure but also with quite some perseverance I carried out this study. Combining a thesis with teaching four days a week and running a family was not an easy job, besides the care for my mother and brother. Nevertheless I got my energy because I liked the study. After 20 years of teaching I was facing about another 20 years of teaching till I could retire. Although teaching is still a part of me, other aspects within secondary vocational education became more attractive during the years. Motivation and related psychological needs became one of them. During the years of teaching, I met students who went all the way. They were motivated, enjoyed being at school, and got high grades. Other students lost their motivation, didn't seem happy, struggled to come to school, and their grades were average or below average. What happened to their motivation? They were too young to drop out. The chance of applying successfully for a job, let alone work in the field they'd like, would decrease considerably. I hope this research will help to track down the reasons why dropouts lost their motivation, and that an intervention would be put on those who need it. I modestly wish that this study will contribute in the development of dropouts, even if it would mean a very tiny detail.

I would like to thank some people who made this study possible. First of all I want to thank the management of Rijn IJssel for cooperating with me, and for providing me data of dropouts. I also want to thank all school-going students of Rijn IJssel who filled in the questionnaire. Thanks to Boris Ney who helped me with testing and interpreting statistics in SPSS. Thanks to Tessa Eysink who supervised me, gave useful feedback and showed patience and empathy. Moreover thanks to Henny Leemkuil who appeared to be a valuable second supervisor. A very special thanks goes to my family. They kept supporting me, also in difficult times, to finish this study, each in their own way.

Best regards,

Mary Amodeo

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Abstract

This study aims to measure differences in motivation and related psychological needs between dropouts and school-going students in secondary vocational education.

Although the number of dropouts in secondary vocational education in the Netherlands is slowly decreasing, we are still dealing with an impressive number of students who quit school prematurely. Dropouts face a future in which entering the labour market is found difficult. Besides possible unemployment, an increased risk of delinquency or behavioural problems could occur, as well as mental problems. A questionnaire was disseminated to students who left secondary vocational education in their previous year (dropouts) and students still attending secondary vocational education (school-going students). The respondents were 36 dropouts and 72 school-going students. Results revealed that dropouts indicated that they need a fair and psychological engagement with their teachers, need supportive peers, emotional engagement, and creativity in classroom work. If these needs are met, the chance that dropouts won't drop out might be lower and will stay at school to achieve a diploma in their own autonomous way.

1. Introduction

The number of dropouts has declined in the Netherlands over the last decade. The amount of dropouts has decreased from 2,97% in 2010-2011 to 1,89% in 2017-2018. However, we are still dealing with 25.574 dropouts of which 78% come from secondary vocational education. The aim of the ministry of Education, Culture and Science is to limit the amount to 20.000 at the most in 2021 (www.onderwijsinijfers.nl).

In the Netherlands, children are obligated to go to school from the age of 5 to 16 and from 16 to 18 they have to attend school full time unless they have already achieved a starters qualification. A starters qualification is a diploma of higher secondary education, pre-university education, or secondary vocational education on at least level two of the four existing levels. If they haven't received a starters qualification at the age of 18, they are guided and stimulated by the municipalities to go back to school in order to gain a diploma.

Dropouts in the Netherlands are considered youngsters between 12 and 23 who leave school without a starters qualification. Compared to graduates, they have greater chances of unemployment (Sum, Khatiwada, McLaughlin, & Palma, 2009), live six to nine years shorter (Muennig, 2007), and are at risk of depression (Heegstra, 2017). Aside from possible mental health problems, they have an increased frequency of delinquency which can lead to criminal activity and imprisonment (Moretti, 2007). The relationship between dropping out and future disadvantages is obvious. The rates for poverty, unemployment and receiving welfare are significantly higher for school dropouts than the those for graduates (Boisjoly, Harris, & Duncan, 1998; Caspi, Entner, Wright, & Moffitt, 1998; Iceland, 2012; National Center for Education Statistics, 2012; U.S. Census Bureau, 2010). The gap between society and themselves will get wider, their chances for the future will be restricted, and this will result in other risks in their development (Sanders, Lautenbach, Smulders, & Dirven, 2011).

One of the main reasons why youngsters become dropouts is that they cannot develop themselves in an education system that does not match with their needs (Steketee,

Vandenbroucke, & Rijkschroeff, 2009). At this moment few options can be offered for this specific target group (Steketee et al., 2009). For instance, if a student faced personal struggles to join class in a regular school causing a ten minutes delay, he will probably get dismissed and possibly punished. No effort will be made to track down the reason why he was too late. Instead of being punished, the student should reversely be stimulated because initially he had the intention to go to school. Those students experience disappointment time after time and eventually quit school without a starters qualification.

Initiatives to reduce the amount of dropouts are mainly focussed on re-entering regular education after seeing their teachers, mentor, and other counsellors at school. However, this demotivates the student, because this type of education system probably does not seem to fit (Sanders et al., 2011). According to Vansteenkiste, Soenens, Sierens, and Lens (2005), a possible solution seems easy. They stated that motivation eventually will be increased if there is a better match of the needs of students by offering an autonomously supporting learning environment.

When a person is autonomously motivated, he fully supports his own behaviour and experiences a sense of choice, because it is consistent with his intrinsic goals. The behaviour is self-determined and supports the person's innate need for autonomy (Hagger et al. 2014). Autonomous motivation effects learning positively. Autonomously motivated students are more concentrated and less distracted during learning, they plan their study activities better, they process study material more thoroughly, are less anxious for tests, are feeling better and achieve better test results (Vansteenkiste, Zhou, Lens, & Soenens, 2005). Autonomous motivation is considered crucial to students' learning as it has been linked, among other things, with creativity (Amabile, 1996), adaptive coping strategies (Boggiano, 1998; Ryan, & Connell, 1989), deep conceptual learning strategies (Meece, Blumenfeld, & Hoyle, 1988), and academic achievement (Boggiano, 1998, Gottfried, 1985; Spinath, Spinath, Harlaar, & Plomin, 2006).

A theory that supports autonomous motivation is the self-determination theory of Deci and Ryan (SDT, 1985, 2000). SDT makes a difference between motivation that is

intrinsic, driven by personal interest, motivation that is extrinsic, driven by feelings of pressure by others, and amotivation, an absence of motivation. When related to education, SDT is primarily concerned with promoting an interest in learning, a valuing of education, and a confidence in own capacities and attributes. According to SDT, efforts to control behaviour of others, by for instance rewards, eventually decrease intrinsic motivation as this control frustrates the satisfaction of the basic psychological needs. SDT proposes that three natural psychological needs need to be met to be intrinsically motivated: autonomy, relatedness, and competence. These psychological needs are seen as human universal necessities that are instinctive, not learned across time, gender, and culture (Chirkov, Ryan, Kim, & Kaplan, 2003).

The aim of this study was to investigate whether there is a difference in motivation and related psychological needs between dropouts consisting of students who left secondary vocational education in their previous year, and school-going students still attending secondary vocational education. Differences could track down possible reasons for dropping out. This study is merely based on the macro theory of human motivation and personality, SDT, in which not only intrinsic motivation, but motivation as a whole is taken into consideration. Intrinsic motivation is expanded with extrinsic motivation and amotivation, as this could reveal a better understanding of motivational reasons for dropping out. Besides motivation, relatedness and competence are emphasized. Within relatedness, psychological engagement needs in education is used, and mindset beliefs are used for a better understanding of the role of competence.

Motivation

Within motivation a distinction can be made between intrinsic motivation (IM), extrinsic motivation (EM) and amotivation (AM). In general IM refers to the act of doing an activity for itself, and the pleasure and satisfaction experienced from participation (Deci, 1975; Deci and Ryan, 1985). EM refers to behaviour that comes from outside the individual, driven by external rewards such as money, fame, grades, and praise (Deci, 1975). AM refers to when individuals experience feelings of incompetence and expectancies of uncontrollability (Deci and Ryan, 1985).

IM is divided into IM-knowledge, IM-achievement, and IM-stimulating experiences. IM-knowledge consists of several factors as exploration, curiosity, learning goals, intrinsic intellectuality, and the intrinsic motivation to learn (e.g., Gottfried, 1985; Harter, 1981). IM-knowledge can be described as performing an activity for the pleasure and the satisfaction that one experiences while learning, exploring, or trying something new. IM-achievement can be described when one attempts to accomplish or create something and doing this with pleasure and satisfaction. IM-stimulating experiences is the dynamic and extensive sensation of flow, on feelings of excitement in IM, on stimulating experiences and peak experiences (e.g., Csikszentmihalyi, 1975).

EM is divided into EM-external regulation and EM-identification. External regulation refers to the least autonomous form of extrinsic motivation. It means that behaviour is regulated through external means such as rewards and constraints. When the behaviour becomes valued and important for the individual, and especially when it is perceived as chosen by oneself, then the internalization of extrinsic motives becomes regulated through identification. Therefore EM-identification is a more autonomous, or self-determined, form of extrinsic motivation.

Amotivation is a third kind of motivation that Deci and Ryan (1985) have posited in order to fully understand human behaviour. Individuals are amotivated when they cannot relate outcomes to their own actions. They are neither intrinsically nor extrinsically motivated. When amotivated, individuals experience feelings of incompetence and expectancies of uncontrollability.

It is expected that dropouts are less intrinsically motivated, less extrinsically motivated and will show more amotivation as they possibly experience no pleasure and satisfaction in education, are not tempted by rewards and do not experience feelings of competence.

Relatedness

The psychological need for relatedness refers to the experience of mutual care and feeling connected to others; to having a sense of belongingness with others and one's community (Deci and Ryan, 2002). The components within relatedness that were used

were limited to components that could undergo an intervention. If needed, an intervention could prevent dropouts from decreasing or lacking motivation. The following components are distinguished: teacher-student relationships, peer support for learning, family support for learning, teacher provision of autonomy support, student involvement, engagement with class activities and assignments, personal development, and boredom.

The importance of teacher-student relationships can be found in studies that have reported that relatedness between students and teachers can be increased if students feel related and cared for by their teachers (Guthrie, Wigfield, & VonSecker, 2000). It is expected that dropouts lack in feeling connected with their teachers and are not feeling cared for and heard by their teachers. Dropouts are associated with numerous conflicts with teachers and, in their perception, teachers show a negative attitude (Lessard, Fortin, Joly, Royer, Potvin, & Macotte, 2006). Academic achievement and determination have a strong impact on the quality of the teacher-student relationship (Englund, Egeland, & Collins, 2008; Fortin, Marcotte, Potvin, Royer, & Joly, 2006). Additionally, teacher-student relationship plays an important role in school attachment, academic achievement and well-being on emotional and social level (Fredriksen, & Rhodes 2004).

Prior studies have examined the importance of a student's social integration with their peers for dropping out. It was found that students who are more socially integrated in high school are less likely to drop out. Students who were rejected by their peers and socially isolated in school are more likely to drop out of high school (DeLuca, & Rosenbaum, 2004; Farmer, Estell, Leung, Trott, Bishop, & Cairns, 2003; Jimerson, Egeland, Scroufe, & Carlson, 2000; Risi, Gerhardstein, & Kistner, 2003; Staff, & Kreager, 2008). Staff and Kreager (2008) found that more popular students were less likely to drop out of high school. South, Haynie and Bose (2007) also found that students who are less likely to drop out have denser friendship networks, and also tend to be more centrally situated within their friendship network. A significant association was also found in a study by Flook, Repetti, & Ullman (2005) between peer acceptance and academic performance. It is expected that students perceive less learning support from their peers.

According to Deci and Ryan, autonomous motivation will be enlarged if it is related with teachers and parents. Findings indicated that students' relationships to parents and teachers were significantly and positively interrelated to students' motivation and school adjustment (Ryan, Stiller, & Lynch, 1994). Therefore it is to be expected that dropouts are less supported by their parents or family.

The studies of Reeve, Jang, Carrell, Jeon, and Barch (2004) and Van Petegem (2008) show that the style and personality of the teacher influences students' motivation. Based on SDT, teachers cannot only increase students' intrinsic motivation, but they can also indirectly respond to autonomous motivation (Vansteenkiste, Sierens, Soenens, & Lens, 2007). Teacher provision of autonomy support includes teaching controlling behaviour, respect, choice, and relevance. Students with autonomy-supportive teachers show greater skilfulness, seems more competent and are more intrinsically motivated (Deci, Nezlek, & Sheinman, 1981). Autonomy supportive teachers find ways to relate and meet their student's psychological needs during instruction (Hardre, & Reeve, 2003; Reeve, 2002). It is expected that dropouts perceive less autonomy support from their teachers.

A distinction within student involvement is made in emotional engagement and student creativity in classroom work. Emotional engagement emphasizes students' feelings of connection, or lack of connection, to their school. Student creativity in classroom work refers to which extent they can be creative in their classroom assignments and projects. It is likely predictable that dropouts do not have a positive feeling about their school and do not feel free to be creative in classroom work.

Engagement with class activities and assignments refers to the type of activities and assignments that attract students like teacher lectures, discussions and debates, research projects, and group projects. Students' experience of autonomy in learning is promoted when teachers allow students freedom in their learning activities and provide connections between school activities and students' interests. It is therefore expected that dropouts likely do not experience this freedom to choose among class activities and assignments.

Personal development refers to the way in which students have learned to understand themselves, how they should treat others with respect and developing personal beliefs

and values. One of the most important risks of dropouts are behavioural problems (Fortin et al., 2006) and show early predictors of school dropout (Garnier, Stein, & Jacobs, 1997; Hickman, Bartholomew, Mathwig, & Heinrich, 2008). Therefore it is likely predictable that dropouts went through less personal development.

Boredom limits students' cognitive and metacognitive potential, they are at a higher risk of many negative consequences like low grades, absence at school and dropping out (Bearden, Spencer, & Moracco, 1989; Goetz, Frenzel, Hall, & Pekrun, 2008; Tidwell, 1988; Wasson, 1981; Wegner, Flisher, Chikobvu, Lombard, & King, 2008). Studies revealed that perceived uselessness of learning materials is an important predictor of boredom (Fiske, & Maddi, 1961; Morton-Williams, & Finch, 1968; Robinson, 1975). Meaningful learning materials can prevent students from being bored (Mitchell, 1993). Therefore it is expected that dropouts perceive learning materials as uninteresting, unnecessary and not relevant.

Competence

A condition for any type of motivation, whether intrinsic or extrinsic, is that a student must feel competent. This type of psychological need stimulates the identified regulation of EM. We all share a need to feel like we are learning, growing, and moving towards success. Motivation to achieve is about striving for competence. A major part of understanding achievement motivation is understanding what people believe about competence (Molden & Dweck, 2000). People's beliefs about competence can be influenced by mindsets. People holding an entity theory of intelligence believe that intelligence levels remain relatively constant over a person's lifetime whether or not they were educated, put effort into their development, or gained experience. In the theory of Dweck (1986, 2000, 2012), this is called a fixed mindset. By contrast, incremental theorists believe that intelligence can be increased and cultivated over a lifetime by hard working and learning continuously (Dweck & Bempechat, 1983). Students who see intelligence as fixed, are discouraged by mistakes and encounter roadblocks while learning. When students have a fixed mindset, they believe that sciences are reserved for the smart students and that this is an ability that people just do or do not understand

(Barmby & Defty, 2006). On the other hand, students who see intelligence as malleable, learn from mistakes and see challenges as obstacles to be conquered. Students with a fixed mindset avoid challenges, give up easily and consider effort as in vain. Because these characteristics matches with dropping out, it is to be expected that dropouts will have a fixed mindset.

This study aims to map differences in motivation and related psychological needs of dropouts and school-going students of Rijn IJssel. Dropouts were students who left Rijn IJssel in their previous year. School-going students were students still attending Rijn IJssel. It is expected that psychological needs of dropouts will not match current education. On the differences found, dropouts could undergo an intervention in order to better fit education with their needs.

2. Method

2.1. Participants

The participants consisted of two groups, the dropouts and school-going students. The dropouts consisted of students who dropped out in the previous year of Rijn IJssel, a vocational secondary education centre in the eastern part of the Netherlands. The school-going students consisted of students who were still attending Rijn IJssel. Dropouts were approached ($n = 353$) and the number of the respondents was $n = 36$. School-going students were approached ($n = 638$) and the number of the respondents was $n = 72$. The ages of the dropouts varied from 18 to 22 of which 23 were female and 13 male, and the ages of school-going students varied from 16 to 27 years old, of which 54 were female and 17 male.

Demographic data (i.e., level of education, year of education, household, job parents, and highest level of education of (one of) the parents) are shown in Table 1.

Table 1

Frequencies and percentages of demographic data of dropouts and school-going students

	Dropouts (<i>n</i> =36)		School-going students (<i>n</i> =72)	
	Frequency	Percentage 0-100%	Frequency	Percentage 0-100%
Level of education				
level 1	1	2,8	n.a.	n.a.
level 2	11	30,6	19	26,4
level 3	5	13,9	9	12,5
level 4	19	52,8	44	61,1
Year of education				
first	19	52,8	24	33,3
second	12	33,3	30	41,7
third	3	8,3	11	15,3
fourth	n.a.	n.a.	7	9,7
Household				
I live with both parents	14	38,9	39	54,2
I live with one parent	9	25	15	20,8
I live alone	9	25	11	15,3
I live with family/friends	4	11,1	7	9,7
Job parents				
both parents have a paid job	21	58,3	48	66,7
one parent has a paid job	10	27,8	20	27,8
both parents don't have a paid job	2	5,6	4	5,6
I don't know	3	8,3	n.a.	n.a.
Highest education of (one of the) parents				
primary school	1	2,8	4	5,6
high school	13	36,1	11	15,3
higher vocational education	13	36,1	33	45,8
university	3	8,3	6	8,3
I don't know	6	16,7	18	25

2.2. Questionnaire

A questionnaire (see appendix B) was used to measure motivation, competence, and relatedness. To measure the constructs, the original English questions were translated into Dutch by two English teachers. Besides questions on motivation, competence, and relatedness, demographic questions and a question for possible

comments was included in the questionnaire. The questionnaire consisted of 67 questions. These questions were divided in 12 on motivation, 37 questions on relatedness, 8 questions on competence, 9 questions about demographic data, and one open question at the end to give any comment if they wished. A pilot was conducted in order to get insight in the difficulty and number of questions. Although most of the students had no problem filling out the questionnaire, some students had difficulty in completing this task due to the number of questions and therefore slight adjustments have been made by removing some questions.

2.2.1 Motivation

An abridged version of the Academic Motivation Scale College version (AMS-C 28) was used (Vallerand, Pelletier, Blais, Brière, Senécal, & Vallières , 1993) to measure motivation. The original version of AMS-C consisted of 28 questions, divided into 12 questions on intrinsic motivation, 12 questions on extrinsic motivation and 4 questions on amotivation. To shorten the questionnaire, a selection was made by omitting reverse questions, which resulted in 6 questions on intrinsic motivation, 4 on extrinsic motivation, and 2 on amotivation. All questions began with “Why do you go to college?”. Within intrinsic motivation, questions were used regarding knowledge (e.g., “Because I experience pleasure and satisfaction while learning new things.”), achievement (e.g., “For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.”) and stimulating experiences (e.g., “For the intense feelings I experience when I am communicating my own ideas to others.”). Within extrinsic motivation, questions were used regarding external regulation (e.g., “Because with only a high-school degree I would not find a high-paying job later on.”) and identification (e.g., “Because I think that a college education will help me better prepare for the career I have chosen.”). An example of amotivation is “I once had good reasons for going to college; however, now I wonder whether I should continue.”. All 12 questions were based on a 7-point Likert scale ranging from 1 (*does not correspond at all*) to 7 (*corresponds exactly*). Reliability was measured with Cronbach’s Alpha: intrinsic motivation $\alpha = .87$, extrinsic motivation $\alpha = .70$ and amotivation $\alpha = .77$.

2.2.2. *Relatedness*

Several abridged versions of existing questionnaires were used to measure relatedness. The variables of relatedness that were measured were teacher-student relationships, peer support for learning, family support for learning, teacher provision of autonomy support, student involvement, engagement with class activities and assignments, and personal development. An abridged version of the Student Engagement Instrument (SEI) was used (Appleton, Christenson, Kim & Reschly, 2006) to measure Teacher-Student Relationships, Peer Support for Learning, and Family support for Learning. The original version consisted of 35 items divided in 19 items on Psychological Engagement and 16 items on Cognitive Engagement. Within Psychological Engagement, 9 items on Teacher-Student Relationships were used (e.g., “My teachers are there for me when I need them.”), 6 items on Peer Support for Learning (“I enjoy talking to the students here.”), and 4 items on Family Support for Learning (e.g., “My family want me to keep trying when things are tough at school.”). None of the Cognitive Engagement items were used, consisting of 9 items on Control and Relevance of School Work, 5 items on Future Aspirations and Goals, and 2 items on Extrinsic Motivation. The items on Cognitive Engagement were not relevant for this thesis or were used elsewhere like items on Extrinsic Motivation. Teacher Provision of Autonomy Support was measured by using 5 items of the Teacher as a Social Context Questionnaire Short Form (TASQ-Short Form) (Belmont, Skinner, Wellborn, Connell, 1988). The questionnaire originally consisted of 24 items divided in 8 items on Teacher Involvement, 8 items on Teacher Provision of Structure, and 8 items on Teacher Provision of Autonomy Support. Teacher Provision of Structure was not used because it was not relevant for this thesis and the items on Teacher Involvement were comparable to the items on Teacher-Student Relationships mentioned above. Of the 8 items on Teacher Provision of Autonomy Support, 5 items were used (e.g., “My teacher gives me a lot of choices about how I do my schoolwork.”) and 3 items were omitted because they were put in reverse or were similar to the questions used in Teacher-Student Relationships. Student involvement was measured by using 13 questions of the High School Survey of Student Engagement (HSSSE) (Center for Evaluation and Education Policy, 2009).

Selection was made based on components that were suitable for intervention and relevant to this study. Originally, the survey consisted of 31 questions divided in three dimensions. Dimension 1 consisted of Cognitive/Intellectual/Academic Engagement Items in which were 9 subdimensions, dimension 2 consisted of Social/Behavioral/Participatory Engagement Items in which were 3 subdimensions, and dimension 3 consisted of Emotional Engagement Items in which are 15 subdimensions. Student Involvement was measured by using 2 questions: 1 question was used of dimension 3 regarding subdimension Emotional Engagement with the School (e.g., “Overall, I feel good about being in this school.”) and 1 question was used of dimension 1 regarding subdimension Student Creativity in Classroom Work (e.g., “I can be creative in classroom assignments and projects.”). Engagement with Class Activities and Assignments was measured by using 5 questions of dimension 1 regarding subdimension Engagement with Class activities and Assignments (e.g., “I like group projects.”). Personal Development was measured by using 3 questions of which 1 came from dimension 2 regarding subdimension School’s Contribution to Student Social Behavior (e.g., “This school taught me to treat people with respect.”) and 2 questions of dimension 3 regarding subdimension School’s Contribution to Student Values (e.g., “This school taught me how to develop personal beliefs and values.”). All 32 questions about relatedness were measured on a 4-point Likert scale from 1 (*strongly disagree*) to 4 (*strongly agree*). Questions on boredom were measured by using 3 questions of dimension 1 regarding Class Boredom. The first question was “I often skipped school, faked an illness to stay home, or deliberately come to school late because of disinterest” and could be answered on a 4-point Likert scale from 1 (*strongly disagree*) to 4 (*strongly agree*). The second question “Have you ever been bored in class?” could be answered by “never” or “seldom, sometimes or often”. The third question “If you have been bored in class, why?” could be answered by 8 options and respondents could give more than one answer (e.g., “Work wasn’t challenging enough”). Reliability was measured with Cronbach’s Alpha: teacher-student relationships $\alpha = .93$, peer support for learning $\alpha = .91$, family support for learning $\alpha = .92$, teacher provision of autonomy support $\alpha = .31$,

student involvement $\alpha = .76$, engagement with class activities and assignments $\alpha = .45$, and personal development $\alpha = .87$.

2.2.3. Competence

Competence was measured by using the Dweck Mindset Instrument (DMI) which assesses how students view their mindset beliefs (Dweck, 2012). Originally, the Instrument consisted of 16 items divided into 8 items on “intelligence” in which 4 items were related to Fixed Mindset and 4 items related on Growth Mindset and 8 items on “talent” in which 4 items were related to Fixed Mindset and 4 items were related to Growth Mindset. To shorten the questionnaire, 8 items on “intelligence” were used consisting of 4 items on Fixed Mindset (e.g., “You can learn new things, but you can’t really change your basic intelligence.”) and 4 items on Growth Mindset (e.g., “No matter who you are, you can significantly change your intelligence level.”). This choice was made, after asking several students in class, because it was believed that “talent” could be misinterpreted by the addressed students and so this could give a more valid result. The items were based on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Reliability was measured with Cronbach’s Alpha: fixed mindset $\alpha = .83$ and growth mindset $\alpha = .89$.

2.3. Procedure

The participants received an introductory e-mail in which they were linked to the questionnaire. After giving permission to use the questionnaire for research, the participants faced 67 questions of which 9 were demographic questions and one open question at the end. Filling in the questionnaire took about 10 minutes.

2.4. Data analysis

To compare the differences on motivation, relatedness, and competence between the two groups, independent samples *t* tests were used. To determine if demographic data

influenced the significant differences between the two groups, a one-way MANOVA was used. For each subconstruct, the mean and standard deviation were calculated. The answers given on the two questions on boredom, part of the construct relatedness, were analysed by using a Frequency test.

The answers on the voluntarily open question at the end were visually analysed and categorized into: the way students felt supported, tailored education, the poor organisation of the school, importance of peer group, lack of guidance in personal development, and disappointing offered teaching material.

3. Results

Means and standard deviations for the different scales are shown for the group consisting of students who left Rijn IJssel in the previous year, the dropouts, and students still attending Rijn IJssel, the school-going students in Table 2.

Table 2

Means and Standard Deviations for dropouts and school-going students per subconstruct

	Dropouts		School-going students	
	(n = 36) M	SD	(n = 72) M	SD
Motivation (1-7) ¹⁾				
intrinsic motivation	4.65	1.20	4.76	1.20
extrinsic motivation	5.24	1.36	5.85*	1.10
amotivation	3.17	1.72	2.38*	1.50
Relatedness (1-4) ²⁾				
teacher-student relationships	2.63	.84	3.48**	.74
peer support for learning	2.61	.85	3.10*	.56
family support for learning	3.48	.77	3.59	.64
teacher provision of autonomy support	2.47	.53	2.50	.50
student involvement	2.38	.81	2.90**	.74
engagement with class activities and assignments	2.67	.55	2.63	.55
personal development	2.20	.93	2.52	.78
Competence (1-6) ³⁾				
fixed mindset	3.12	1.26	3.10	1.05
growth mindset	4.67	1.06	4.33	1.13

* p < .05, ** p < .001

¹⁾ From 1 (*does not correspond at all*) to 7 (*corresponds exactly*)

²⁾ From 1 (*disagree*) to 4 (*strongly agree*)

³⁾ From 1 (*strongly disagree*) to 6 (*strongly agree*)

3.1. Motivation

An independent samples *t*-test was conducted to compare motivation of the dropouts and school-going students. No significant differences were found on intrinsic motivation $t(106) = .473$, $p = .64$. However, significant differences were found on extrinsic motivation $t(106) = -2.541$, $p < .05$ and amotivation $t(106) = 2.465$, $p < .05$.

The frequencies and percentages for all questions on motivation for dropouts and school-going students are shown in Appendix A.

3.2. Relatedness

An independent samples *t*-test was conducted to compare relatedness of the dropouts and school-going students. No significant differences were found on family support for learning $t(106) = -767, p = .44$; teacher provision of autonomy support $t(106) = -.319, p = .75$; engagement with class activities and assignments $t(106) = .370, p = .71$ and personal development $t(106) = -1.774, p = .81$. However, significant differences were found on teacher-student relationships $t(106) = -5.353, p < .001$; and peer support for learning $t(106) = -3.176, p < .05$.

The questionnaire consisted of three questions on boredom. The first question “I often skipped school, faked an illness to stay home, or deliberately come to school late because of disinterest” could be answered on a 4-point Likert scale from 1 (*strongly disagree*) to 4 (*strongly agree*). In Frequency Table 3 it can be seen that dropouts agreed more with this statement as opposed to school-going students. Of the dropouts 41,7 percent strongly agreed with the question as compared to 18,1 % of the school-going students.

Table 3

Frequencies and percentages on the question “I often skipped school, faked an illness to stay home, or deliberately come to school late because of disinterest”

	Dropouts (<i>n</i> = 36)		School-going students (<i>n</i> = 72)	
	Frequency	Percentage 0-100%	Frequency	Percentage 0-100%
I strongly disagree	5	13,9	35	48,6
I disagree	8	22,2	16	22,2
I agree	8	22,2	8	11,1
I strongly agree	15	41,7	13	18,1

The second question was “Have you ever been bored in class?” The respondents could choose between two answers: “never” or “rarely, sometimes, often”. In Frequency Table 4 it can be seen that dropouts agreed 94,4% and school-going students 90,3% with the question if they have rarely, sometimes or often been bored in class.

Table 4

Frequencies and percentages on the question “Have you ever been bored in class?”

	Dropouts (n = 36)		School-going students (n = 72)	
	Frequency	Percentage 0-100%	Frequency	Percentage 0-100%
Never	2	5,6	7	9,7
Rarely, sometimes or often	34	94,4	65	90,3

The third question on boredom was “If you have been bored in class, why?” could be answered by 8 options. The respondents could give more than one answer. In Frequency Table 5 it can be seen that the distribution of both groups were similar, except that about twice as many dropouts chose the answer that the material was not relevant.

Table 5

Frequencies and percentages on the question “If you have been bored in class, why?”

	Dropouts (n = 36)		School-going students (n = 72)	
	Frequency	Percentage 0-100%	Frequency	Percentage 0-100%
Work wasn't challenging enough	17	47,2	42	58,3
Work was too difficult	4	11,1	8	11,1
Material wasn't interesting	21	58,3	43	59,7
Teaching methods not interesting	17	47,2	36	50
Material wasn't relevant to me	8	22,2	9	12,5
No interaction with teacher	10	27,8	23	31,9
No interaction with classmates	5	13,9	12	16,7
I have never been bored in class	3	8,3	7	9,7

The frequencies and percentages for all questions on relatedness for dropouts and school-going students are shown in Appendix A.

3.3. Competence

An independent samples *t*-test was conducted to compare competence of the dropouts and school-going students. No significant differences were found on fixed mindset $t(106) = .106, p = .92$ and growth mindset $t(106) = 1.491, p = .14$.

The frequencies and percentages for all questions on competence for dropouts and school-going students are shown in Appendix A.

3.4. Demographic data

A MANOVA was carried out for each group separately to compare extrinsic motivation, amotivation, teacher-student relationships, peer support for learning and student involvement between level of education, year of education, household, job parents, and highest education of (one of) the parents. For the group of dropouts there was found a significant difference between household and teacher-student relationship $F(2,5) = 6.317, p < .05$. However, a Tukey post-hoc test revealed that there was no significant difference between household and teacher-student relationship. For the group of school-going students there were found significant differences between household and amotivation $F(3,18) = 3.424, p < .05$, and between household and peer support for learning $F(3,18) = 3.412, p < .05$. As can be seen in Table 6, a Tukey post hoc test revealed that school-going students experienced significantly more peer support for learning when they lived with both parents, $M = 3.31, SD = .073$, mean difference = .57, $p < .001$ than when living with one parent $M = 2.65, SD = .110$, mean difference = .57, $p < .001$.

Table 6

Mean and Standard Deviation for peer support for learning of school-going students splitted by household

	I live with both parents (n= 39)		I live with one parent (n=15)		I live alone (n= 11)		I live with family/friends (n=7)	
	M	SD	M	SD	M	SD	M	SD
Relatedness peer support for learning	3.31**	.07	2.65**	.11	2.96	.13	3.10	.16

** p < .001

3.5. Open ended question

Besides some general remarks on the test itself, 12 respondents who left Rijn IJssel in the previous year, the dropouts, made use of the open question, and 8 respondents still attending Rijn IJssel, the school-going students. The comments given were categorized in topics. Of the 12 dropouts 3 comments were made on missing support and guidance (e.g., “I was supervised poorly in my education.”), 2 on poor interaction between people at school (e.g., “I stopped because of the way students were treated.”), 2 on missing tailored education (e.g., “When I felt bad, there was no support.”), 2 on the poor organisation of the school (e.g., “I told others to stay away from this school because of the poor organisation.”) and at last three separate comments of the fact that they were satisfied (“I’m very satisfied about the time I was at Rijn IJssel.”), chose another education (“I chose for another education because that would give me more satisfaction for the long run.”), and started to work (“I started to work full-time and feel happy.”). Of the 8 school-going students 3 comments were made on the teaching materials of which 2 comments that they weren’t relevant for their future jobs (e.g., “A lot of things I had to learn weren’t relevant for my future job.”) and 1 comment that they experienced too little teaching materials (“I found teaching materials too little.”). Two comments were made on lack of room for personal development (e.g., “The pressure was so high that this made me uncertain instead of being stimulated.”) . Furthermore 1

comment was made on dropout teachers (“Temporary teachers who stayed away after two weeks.”), 1 comment on teachers putting little effort in their lessons due to unmotivated students (“Because of the negativity among students, a lot of teachers were putting little effort in their lessons.”), 1 comment that they experienced no support (“Teachers don’t care about you, you have to find out yourself and try not to drown.”), 1 comment that the organisation was poor (“Because my education is organised so poorly, it was difficult to be motivated for not even one second.”), 1 comment that there was no attention for peer group development (“They changed classes every time and therefore I couldn’t be with fellow students who I felt close with, this was very demotivating.”), and finally a comment was made on doubting if this was the right education (“I think that motivation problems are mainly caused by the lack of knowing what they will be doing later on in their career.”).

4. Discussion & Conclusion

The aim of this research was to determine if there is a difference in motivation and related psychological needs between dropouts and school-going students of Rijn IJssel, a secondary vocational education in the eastern part of the Netherlands. Results revealed significant differences between the two groups on extrinsic motivation, amotivation, teacher-student relationships, peer support for learning, and student involvement. Demographic data showed significance between household and peer support for learning for school-going students.

Motivation

As was expected, findings revealed that dropouts were less extrinsically motivated and showed more amotivation. Although no significant differences were found between dropouts and school-going students on intrinsic motivation, the results revealed they both were quite highly intrinsically motivated. This could indicate that all students had the best intentions when they started school. Apparently intrinsic motivation

could not be ascribed for dropping out in this study. As regards to extrinsic motivation, results showed that dropouts seemed to think to a lesser extent than school-going students that a diploma of secondary vocational education would help them prepare for the well-paid job they had chosen resulting in a good respectable life later on. These findings match with the theory that individuals who are extrinsically motivated, show behaviour that is driven by external rewards such as money and fame (Deci, 1975). Schools make use of extrinsic motivation by setting deadlines and giving marks for assignments. Students know school will be a success when they get high grades. If school is a success, their wishes and expectations about further education or career perspectives are then within reach. An example of stimulating extrinsic motivation in secondary vocational education could be more competitive assignments, more rewards for their performances, or chunking teaching materials into smaller pieces so that the feeling of success is achievable for every student.

More than school-going students, dropouts seemed to think they are wasting their time at school, although they didn't think that way when they started secondary vocational education. These findings meet the feeling of incompetence and decreased expectancies of amotivation (Deci and Ryan, 1985). An explanation could be that the current level of education is too high or low or that the chosen type of future profession does not match with their expectancies. As amotivation is a serious sign for dropping out, further individual coaching on tracking down the underlying reasons may bring a solution, as well as an obligatory getting to know programme about the education and the expected lessons before starting school.

Apparently both dropouts as school-going students are intrinsically motivated to go to school to the same extent. They enjoy when they got challenged by interesting subjects and difficult learning activities at Rijn IJssel. This fits the theory that intrinsically motivated individuals experience pleasure and satisfaction of doing an activity for itself (Deci, 1975 & Deci and Ryan, 1985). Although this outcome was not what was expected, interventions on increasing extrinsic motivation are easier realizable than increasing intrinsic motivation as intrinsic motivation is dependent on the person itself

and character traits. Extrinsic motivation can be achieved by for example interventions from school like the earlier mentioned examples.

Besides existing tools for monitoring presence and grades, a tool for monitoring motivation could provide insight when motivation is decreasing. If such a to be developed tool will be used four times a year for all students of secondary vocational education, the outcome will reveal which students show any difference in relation to their previous outcome. In this way the coach will see which student needs extra coaching and what intervention could be put in.

Relatedness

Regarding relatedness, significant differences were found on teacher-student relationships, peer support for learning and student involvement. Differences revealed that dropouts felt less emotionally engaged with their teachers, felt less supported in learning by their peers, didn't have a good feeling to be at school, and couldn't be as creative with class assignments and class projects as they wished.

As for the teacher-student relationship, findings indicate that dropouts felt less supported by their teachers than school-going students. It is therefore recommendable to put more time and effort in that relationship. Studies have reported that relatedness between students and teachers can be increased if students feel related and cared for by their teachers and that teachers are involved with the results and learning process of the students (Guthrie et al., 2000). Most teachers become coach of a group as well, as it is often the policy within most secondary vocational schools. As coaching skills are different than teaching skills, coaching skills could be developed and offered by training. In this way teachers are more equipped with tools how to coach a student. In some directions within secondary vocational education, students are scheduled to see their coach about once or twice a week and after the first semester or two, once a week or on a voluntary basis and often together with the rest of their coach group. When an individual meeting with the student is planned, presence and grades are often the main topics and

reason for seeing the student with most of the time a serious warning at the end, but this study suggests that a more holistic approach could help the student more. Although it is not practically possible to put a lot of time and effort in the relation with each and every teacher the student is involved with, little gestures could also achieve the feeling of relatedness by students. Besides expanding time spent with each other, possibilities could be doing class activities in or outside school, or having an informal talk.

As peer support for learning appeared to be significant as well, recommendations to improve the relationship among peers could be made. Compared to higher vocational education and university, far less time is spent on the first year introduction on secondary vocational education which is the ultimate chance to start off with meeting new classmates. Especially at the beginning of an education, crucial connections and attachments could be stimulated and developed in order to make new friends. School success and peer support contributes to general self-efficacy (McCauley, Weymouth, Feinberg, & Fosco, 2019). A possible recommendation for an introduction could be a serious getting to know programme during one or two weeks. The importance also corresponds with the comments the respondents gave that they prefer having class sitting next to or nearby their friends. This is in contradiction with some class systems wherein some students are set separately because teachers think they will then attend better in class. Besides an introduction programme, also the existence of an active and visible student union at school could improve the relationship among peers. In this way students would feel more at ease with their classmates and a built on friendship could stimulate them to study together or that they are treated respectfully by their peers. To support this, group assignments in class could contribute the feeling of a peer group by let them work together on an activity, assignment, or project.

The results on Student Involvement revealed that dropouts didn't experience a good feeling at school compared to school-going students and perceived no participation in creativity with class assignments and class projects. A possible suggestion could be to offer students various learning materials instead of fixed ones, and also offering them various ways to show they understood the material. A possibility could be a presentation

or project instead of a written test so that students could make their own autonomous choice.

As expected, dropouts agreed more on the question if they ever skipped school, faked an illness to stay home, or deliberately come to school late because of disinterest. Although the answer on the question if they ever felt bored in class was more confirmed by dropouts than school-going students as expected, the reasons why were unexpectedly almost alike. However, dropouts perceived more than school-going students that material wasn't relevant. A student's say in what kind of teaching material school will be using for their education could be a solution. Relevance could be improved, although in secondary vocational education some directions disappear because of descending enrolments and some new directions are developed because of a changing market. It is a challenge for publishers to keep up in creating new teaching materials meeting new markets.

Competence

Although no significant differences were found on fixed and growth mindset, results revealed that dropouts as well as school-going students nearly shared the same fixed mindset. The results showed some difference in a growth mindset indicating that dropouts, more than school-going students, seemed to think that intelligence could be developed when time and effort is put in. This matches the belief that a growth mindset means when students believe that their abilities can be developed (Dweck, 1986). These results could indicate that dropouts think they have the ability to develop themselves, but are stagnated by other reasons. An explanation could be that dropouts lean backwards because they already believe that they can fulfil an education if they set to it but that they don't feel the urge to do it now. School-going students seemed to think less that they could develop themselves, but they might think that, because their grades are sufficient, they do not have to. Further research should be done to investigate what the possible reasons are for dropouts to have a more growth mindset compared to school-going students.

Demographic data

Although demographic data did not seem to influence motivation and related psychological needs for dropouts, household seemed to have influence on peer support for learning in a way that school-going students experienced significantly more peer support for learning when they lived with both parents than when they lived with one parent. An explanation could be that when students live with one parent, they already developed skills to manage problems more on their own or to live a more independent life. Further research is needed to show why school-going students experience more peer support for learning in different household settings.

Limitations

Some limitations are apparent in this research. The fact that only Rijn IJssel was examined is a strong limitation for the generalization of the findings in this study. Future research should include more secondary vocational education schools. Furthermore the questionnaire was mailed to students short before the summer break. Possibly because of this, there were not as much respondents as hoped for. A lot of students already finished school or went off on vacation. Another limitation was differentiation within the questionnaire. Due to the fact that the questionnaire could not be too long, not all constructs are fully tested, and questions on autonomy could have been added to complete the self-determination theory. Lastly, some subconstructs like student involvement within the construct relatedness consisted only of two questions and could have been much longer to provide an optimal picture of student involvement.

Finally

In this study it is shown that dropouts seemed to show different motivation and related psychological needs than school-going students in secondary vocational education. Results revealed that dropouts indicated that they need a fair and

psychological engagement with their teachers, need supportive peers, emotional engagement, and creativity in classroom work. Household seemed to influence peer support for learning in a way that school-going students perceived more peer support for learning when living with two parents than with one parent.

If motivation will be monitored and psychological needs will be met, the chance that dropouts won't drop out might be lower and will stay at school to achieve a diploma in their own autonomous way.

Literature

- Amabile, T. M. (1996). *Creativity in context*. Boulder, CO: Westview Press.
- Appleton, J., Christenson, S., Kim, D., & Reschly, A. (2006). Measuring cognitive and psychological engagement: Validation of the Student Engagement Instrument. *Journal of School Psychology, 44*(5), 427–445.
- Barmby, P., & Defty, N. (2006). Secondary school pupils' perceptions of physics. *Research in Science & Technological Education, 24*(2), 199-215.
doi:10.1080/02635140600811585.
- Bearden, L.J., Spencer, W.A., & Moracco, J.C. (1989). A study of high school dropouts. *School Counselor, 37*(2), 113-120.
- Belmont, M., Skinner, E., Wellborn, J., & Connell, J. (1988). *Teacher as a social context: A measure of student perceptions of teacher provision of involvement, structure, and autonomy support*. Rochester, New York: University of Rochester.
- Boggiano, A.K. (1998). Maladaptive achievement patterns: A test of a diathesis-stress analysis of helplessness. *Journal of Personality and Social Psychology, 74*(6), 1681-1695.
- Boisjoly, J., Harris, K.M., Duncan, G.J. (1998). Trends, events, and duration of initial welfare spells. *Social Service Review 72* (4), 466-492.
- Caspi, A., Entner, B.R., Wright, T.E., Moffitt, S.P.A. (1998). Early failure in the labor market: childhood and adolescent predictors of unemployment in the transition to adulthood. *American Sociology Review 63* (3), 425-451.
- Center for Evaluation and Education Policy at Indiana University, and High School Survey of Student Engagement. Retrieved October 1, 2009, from <http://ceep.indiana.edu/~ceep/hssse> & http://ceep.indiana.edu/nais/pdf/HSSSE_Sample.pdf

- Chirkov, V., Ryan, R. M., Kim, Y., Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination perspective on internalisation of cultural orientations, gender and well-being. *Journal of Personality and Social Psychology* (84), 97–110. doi:10.1037/0022-3514.84.1.97.
- Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. San Francisco: Jossey-Bass.
- Deci, E.L. (1975). *Intrinsic motivation*. New York: Plenum
- Deci, E.L., & Ryan, R.M. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Plenum.
- Deci, E.L., & Ryan, R.M. (2000). The “what” and “why” of goals pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.
- Deci, E.L., & Ryan, R.M. (Eds). (2002). *Handbook of self-determination research*. Rochester, NY: US: University of Rochester Press.
- Deci, E.L., Nezlek, J., & Sheinman, L. (1981). Characteristics of the rewarder and intrinsic motivation of the rewardee. *Journal of Personality and Social Psychology*, 40, 1-10.
- DeLuca, S., Rosenbaum, J.E. (2000). Are dropout decisions related to safety concerns, social isolation, and teacher disparagement? University California. Retrieved from <https://escholarship.org/uc/item/20p0b765>.
- Dweck, C.S. (1986). Motivational processes affecting learning. *American Psychologist*, 41, 1040-1048.
- Dweck, C.S. (2000). *Self-theories: Their role in motivation, personality and development*. Philadelphia, PA: Psychology Press.
- Dweck, C.S. (2012). *Mindset: How you can fulfil your potential*. Constable & Robinson Limited.

- Dweck, C.S., & Bempechat, J. (1983). Children's theories of intelligence: Consequences for learning. In S.G. Paris, G.M. Olson, & H.W. Stevenson (Eds.), *Learning and motivation in the classroom*, Hillsdale, NJ: Erlbaum.
- Englund, M.M., Egeland, B., & Collins, A. (2008). Exceptions to high school predictions in a low-income sample: do adults make a difference? *Journal of Social Issues*, *64*, 77-93.
- Farmer, T.W., Estell, D.B., Leung, M.-C., Trott, H., Bishop, J., & Cairns, B.D. (2003). Individual characteristics, early adolescent peer affiliations, and school dropout: an examination of aggressive and popular group types. *Journal of School Psychology*, *41*(3), 217-232.
- Fiske, D.W., & Maddi, S.R. (1961). *Functions of varied experience*. Oxford England: Dorsey.
- Flook, L. Repetti, R.L., & Ullman, J.B. (2005). Classroom social experiences as predictors of academic performance. *Developmental Psychology*, *41*, 319-327. doi:10.1037/0012-1649.41.2.319.
- Fortin, L., Marcotte, D., Potvin, P., Royer, É., & 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*, 63-383.
- Fredriksen, K. & Rhodes, J. (2004). The role of teacher relationships in the lives of children and adolescents. *New Directions in Youth Development*, *103*, 45-54.
- Garnier, H.E., Stein, J.A., & Jacobs, J.K. (1997). The process of dropping out of high school: a 19-year perspective. *American Educational Research Journal*, *34*, 395-419.
- Goetz, T., Frenzel, A.C., Hall, N.C., & Pekrun, R. (2008). Antecedents of academic emotions: testing the internal/external frame of reference model for academic enjoyment. *Contemporary Educational Psychology*, *33*(1), 9-33.
- Gottfried, A.E. (1985). Academic intrinsic motivation in elementary and junior high school students. *Journal of Educational Psychology*, *77*(6), 631-645.

Guthrie, J. T., Wigfield, A., & VonSecker, C. (2000). Effects of integrated instruction on motivation and strategy use in reading. *Journal of Educational Psychology*, 92(2), 331-341.

Hagger, M.S., Hardcastle, S.J., Chater, A., Mallett, C., Pal, S., & Chatzisarantis, N.L.D. (2014). Autonomous and controlled motivational regulations for multiple health-related behaviors: between- and within-participants analyses. *Health Psychology & Behavioural Medicine*, 2(1), 565-601. Retrieved from <http://dx.doi.org/10.1080/21642850.2014.912945>

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, 347-356.

Harter, S. (1981). A new self-report scale on intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. *Developmental Psychology*, 17, 300-312.

Heegstra, N.E. (2017). *Voortijdig schoolverlaters op weg naar de toekomst*. (master's thesis). Retrieved from <https://dspace.library.uu.nl/bitstream/handle/1874/353421/Masterthesis%20Heegstra%20C%20NE-5955254.pdf?sequence=2&isAllowed=y>

Hickman, G.P., Bartholomew, M., Mathwig, J., & Heinrich, R.S. (2008). Differential developmental pathways of high school dropouts and graduates. *The Journal of Educational Sciences*, 102(1), 3-14.

Iceland, J. (2012). *Poverty in America: A Handbook*. University of California Press. Berkeley.

Jimerson, S.R., Egeland, B., Scroufe, L.A., & Carlson, B. (2000). A prospective longitudinal study of high school dropouts examining multiple predictors across development. *Journal of School Psychology*, 38(6), 525-549.

Lessard, A., Fortin, L., Joly, J., Royer, E., Potvin, P., & Marcotte, D. (2006). Les raisons de l'abandon scolaire: différences selon le genre. *Revue québécoise de psychologie*, 27, 135-152.

McCauley, D.M., Weymouth, B.B., Feinberg, M.E., & Fosco, G.M. (2019). Evaluating school and peer protective factors in the effects of interparental conflict on adolescent threat appraisals and self-efficacy. *Journal of Adolescence*, 71, 28-37.

Meece, J.L., Blumenfeld, P.C., & Hoyle, R.H. (1988). Students' goal orientations and cognitive engagement in classroom activities. *Journal of Educational Psychology*, 80(4), 514-523.

Mitchell, M.T. (1963). *Situational interest in the secondary mathematics classroom*. (53). US: ProQuest Information & Learning. Retrieved from <http://www.redi-bw.de/db/ebSCO.php/search.ebSCOhost.com/login.aspx?direct=true&db-psyh&AN=1994-73446-001&site=ehost-live>.

Molden, D.C., & Dweck, C.S. (2000). Meaning and motivation: A Volume in the Educational Psychology Series. In C. Sansone, & J. M. Harackiewicz (Eds.), *Intrinsic and extrinsic motivation: The search for optimal motivation and performance: A Volume in the Educational Psychology Series* (pp. 131-153). San Diego: Academic Press.

Morton-Williams, R., & Finch, S., (1968). *Young school leavers: Report of a survey among young people, parents, and teachers*. London: HMSO.

Muennig, P. (2007). How education produces health: a hypothetical framework. *Teachers College Record*, 1-17.

Moretti, E. (2007). Crime and the costs of criminal justice. In C. Belfield, & H. Levin (Eds.), *The price we pay: Economic and social consequences of inadequate education* (pp. 142-159). Washington, DC: Brookings Institution Press.

National Center for Education Statistics (2012). *The Condition of Education: 1998*. US Department of Health and Human Services.

Onderwijs in cijfers: voortijdig schoolverlaten in het middelbaar beroepsonderwijs.

Retrieved on 27 February 2019 from

<https://www.onderwijsincijfers.nl/kengetallen/onderwijs-algemeen/leerlingen-en-studenten/prestaties-voortijdig-schoolverlaten/landelijke-vsv-cijfers>

Reeve, J. (2002). Self-determination theory applied to educational settings. In E.L. Deci & M.R. Ryan (Eds.), *Handbook of self-determination research* (pp. 183-203). Rochester, NY: University of Rochester Press.

Reeve, J., Jang, H., Carrell, D., Jeon, S., & Barch, J. (2004). Enhancing students' engagement by increasing teachers' autonomy support. *Motivation and emotion*, 28(2), 147-169.

Risi, S., Gerhardstein, R., Kistner, J. (2003). Children's classroom peer relationships and subsequent educational outcomes. *Journal of Clinical and Adolescent Psychology* 32(3), 351-361.

Robinson, W.P. (1975). Boredom at school. *British Journal of Educational Psychology*, 45(2), 141-152.

Ryan, R.M., & Connell, J.P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57(5), 749-761, doi:10.1037/0022-3514.57.5.749.

Ryan, R. M., Stiller, J. D., & Lynch, J. H. (1994). Representations of relationships to teachers, parents, and friends as predictors of academic motivation and self-esteem. *The Journal of Early Adolescence*, 14(2), 226-249.

Sanders, J., Lautenbach, H., Smulders, P., & Dirven, H-J. (2011). *Alle hens aan dek*. Hoofddorp: TNO/CBS.

Sketelee, M., Vandenbroucke, M., Rijkschroeff, R. (2009) *(Jeugd)zorg houdt niet op bij 18 jaar*. Utrecht: Verwey-Jonker Instituut.

- South, S.J., Haynie, D.L., & Bose, S. (2007). Student mobility and school dropout. *Social Science Research* 36(1), 68-94.
- Spinath, B., Spinath, F.M., Harlaar, N., & Plomin, R. (2006). Predicting school achievement from general cognitive ability, self-perceived ability, and intrinsic value. *Intelligence*, 34(4), 363-374. doi:10.1016/j.intell.2005.11.004.
- Staff, J., Kreager, D. (2008). Too cool for school? Violence, peer status and high school dropout. *Social Forces* 87, 445-471.
- Sum, A., Khatiwada, I., McLaughlin, J., & Palma, S. (2009). The Consequences of Dropping Out of High School: Joblessness and Jailing for High School Dropouts and the High Cost for Taxpayers. *Center for Labor Market Studies, Northeastern University*.
- Tidwell, R. (1988). Dropouts speak out: qualitative data on early school departures. *Adolescence*, 23(92), 939-954.
- U.S. Census Bureau (2010). Current Population Survey, 2010. Annual Social and Economic Supplement. U.S. Census Bureau, Washington, DC.
- Vallerand, R.J., Pelletier, L.G., Blais, M.R., Brière, N.M., Senécal, C.B., & Vallières, E.F. (1993). The Academic Motivation Scale: a measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 52, 1003-1017.
- Van Petegem, K. (2008). *Relationship between student, teacher, classroom characteristics and students' school well-being*. Retrieved from: <http://search.urgent.be/meercat>.
- Vansteenkiste, M., Soenens, B., Sierens, E., & Lens, W. (2005). Hoe kunnen we leren en presteren bevorderen? Een autonomie-ondersteunend versus controlerend schoolklimaat. *Caleidoscoop*, 17, 18-25.
- Vansteenkiste, M., Zhou, M., Lens, W., & Soenens, B. (2005). Experiences of autonomy and control among Chinese learners: Vitalizing or immobilizing? *Journal of Educational Psychology*, 97, 468-483. Retrieved from

http://selfdeterminationtheory.org/SDT/documents/2005_VansteenkisteZhouLensSoenens_ExperiencesofAutonomyandControlAmongChinese.pdf.

Vansteenkiste, M., Sierens, E., Soenens, B., & Lens, W. (2007). Willen, moeten en structuur: Over het bevorderen van een optimaal leerproces, *Begeleid Zelfstandig Leren*, 37, 1-27.

Wasson, A.S. (1981). Susceptibility to boredom and deviant behavior at school. *Psychological Reports*, 48(3), 901-902.

Wegner, L., Flisher, A.J., Chikobvu, P., Lombard, C., & King, G. (2008). Leisure boredom and high school dropout in Cape Town, South Africa. *Journal of Adolescence*, 31(3), 421-431.

Appendix A: Frequencies and percentages per question

Frequencies and percentages of the answers given by dropouts on extrinsic motivation

	Because with only a high-school degree I would not find a high-paying job later on		Because I think that a college education will help me better prepare for the career I have chosen		Because I want to have “the good life” later on		Because eventually it will enable me to enter the job market in a field that I like	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	5	13,9	2	5,6	1	2,8	2	5,6
2	5	13,9	2	5,6	1	n.a.	2	5,6
3	2	5,6	3	8,3	1	2,8	1	2,8
4	2	5,6	5	13,9	4	2,8	2	5,6
5	9	25,0	8	22,2	13	11,1	7	19,4
6	4	11,1	8	22,2	16	36,1	10	27,8
7	9	25,0	8	22,2	1	44,4	12	33,3
Total	36	100,0	36	100,0	36	100,0	36	100,0

* 1 (does not correspond at all) to 7 (corresponds exactly)

Frequencies and percentages of the answers given by school-going students on extrinsic motivation

	Because with only a high-school degree I would not find a high-paying job later on		Because I think that a college education will help me better prepare for the career I have chosen		Because I want to have “the good life” later on		Because eventually it will enable me to enter the job market in a field that I like	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	8	11,1	3	4,2	n.a.	n.a.	n.a.	n.a.
2	3	4,2	1	1,4	2	2,8	2	2,8
3	6	8,3	2	2,8	n.a.	n.a.	1	1,4
4	6	8,3	5	6,9	4	5,6	6	8,3
5	7	9,7	5	6,9	4	5,6	10	13,9
6	13	18,1	22	30,6	21	29,2	19	26,4
7	29	40,3	34	47,2	41	56,9	34	47,2
Total	72	100,0	72	100,0	72	100,0	72	100,0

* 1 (does not correspond at all) to 7 (corresponds exactly)

Frequencies and percentages of the answers given by dropouts on intrinsic motivation

	Because I experience pleasure and satisfaction while learning new things		For the intense feelings I experience when I am communicating my own ideas to others		For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments		For the pleasure that I experience in broadening my knowledge about subjects which appeal to me		For the “high” feeling that I experience while reading about various interesting subjects		For the satisfaction I feel when I am in the process of accomplishing difficult academic activities	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	n.a.	n.a.	4	11,1	2	5,6	2	5,6	2	5,6	2	5,6
2	2	5,6	3	8,3	3	8,3	n.a.	n.a.	3	8,3	2	5,6
3	1	2,8	5	13,9	2	5,6	n.a.	n.a.	3	8,3	5	13,9
4	4	11,1	14	38,9	11	30,6	5	13,9	7	19,4	11	30,6
5	10	27,8	7	19,4	7	19,4	10	27,8	11	30,6	9	25,0
6	8	22,2	1	2,8	10	27,8	10	27,8	8	22,2	6	16,7
7	11	30,6	2	5,6	1	2,8	9	25,0	2	5,6	1	2,8
Total	36	100,0	36	100,0	36	100,0	36	100,0	36	100,0	36	100,0

* 1 (does not correspond at all) to 7 (corresponds exactly)

Frequencies and percentages of the answers given by school-going students on intrinsic motivation

	Because I experience pleasure and satisfaction while learning new things		For the intense feelings I experience when I am communicating my own ideas to others		For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments		For the pleasure that I experience in broadening my knowledge about subjects which appeal to me		For the “high” feeling that I experience while reading about various interesting subjects		For the satisfaction I feel when I am in the process of accomplishing difficult academic activities	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	2	2,8	7	9,7	5	6,9	2	2,8	6	8,3	6	8,3
2	n.a.	n.a.	6	8,3	n.a.	n.a.	1	1,4	1	1,4	3	4,2
3	3	4,2	12	16,7	9	12,5	2	2,8	10	13,9	9	12,5
4	5	6,9	22	30,6	16	22,2	7	9,7	20	27,8	24	33,3
5	20	27,8	8	11,1	16	22,2	26	36,1	14	19,4	14	19,4
6	19	26,4	12	16,7	15	20,8	19	26,4	12	16,7	8	11,1
7	23	31,9	5	6,9	11	15,3	15	20,8	9	12,5	8	11,1
Total	72	100,0	72	100,0	72	100,0	72	100,0	72	100,0	72	100,0

* 1 (does not correspond at all) to 7 (corresponds exactly)

Frequencies and percentages of answers given by dropouts on amotivation

	Honestly I don't know, I really feel that I am wasting my time in school		I once had good reasons for going to college; however, now I wonder whether I should continue	
	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	13	36,1	8	22,2
2	7	19,4	5	13,9
3	5	13,9	5	13,9
4	5	13,9	5	13,9
5	2	5,6	3	8,3
6	3	8,3	7	19,4
7	1	2,8	3	8,3
Total	36	100,0	36	100,0

* 1 (does not correspond at all) to 7 (corresponds exactly)

Frequencies and percentages of answers given by school-going students on amotivation

	Honestly I don't know, I really feel that I am wasting my time in school		I once had good reasons for going to college; however, now I wonder whether I should continue	
	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	31	43,1	28	38,9
2	20	27,8	19	26,4
3	6	8,3	10	13,9
4	4	5,6	6	8,3
5	5	6,9	5	6,9
6	2	2,8	1	1,4
7	4	5,6	3	4,2
Total	72	100,0	72	100,0

* 1 (does not correspond at all) to 7 (corresponds exactly)

Frequencies and percentages of the answers given by dropouts on teacher-student relationships

	Overall, adults at my school treat students fairly		Adults at my school listen to the students		At my school, teachers care about students		My teachers are there for me when I need them		The school rules are fair		Overall, my teachers are open and honest with me		I enjoy talking to the teachers here		I feel safe at school		Most teachers at my school are interested in me as a person, not just as a student	
	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%
1*	6	16,7	7	19,4	10	27,8	9	25,0	9	25,0	5	13,9	10	27,8	6	16,7	14	38,9
2	10	27,8	14	38,9	13	36,1	13	36,1	8	22,2	13	36,1	13	36,1	6	16,7	9	25,0
3	16	44,4	12	33,3	8	22,2	10	27,8	14	38,9	14	38,9	9	25,0	18	50,0	11	30,6
4	4	11,1	3	8,3	5	13,9	4	11,1	5	13,9	4	11,1	4	11,1	6	16,7	2	5,6
Total	36	100,0	36	100,0	36	100,0	36	100,0	36	100,0	36	100,0	36	100,0	36	100,0	36	100,0

* 1 (*not at all true*) to 4 (*very true*)

Frequencies and percentages of the answers given by school-going students on teacher-student relationships

	Overall, adults at my school treat students fairly		Adults at my school listen to the students		At my school, teachers care about students		My teachers are there for me when I need them		The school rules are fair		Overall, my teachers are open and honest with me		I enjoy talking to the teachers here		I feel safe at school		Most teachers at my school are interested in me as a person, not just as a student	
	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%	Freq	Perc 0-100%
1*	3	4,2	2	2,8	4	5,6	4	5,6	11	15,3	3	4,2	3	4,2	n.a.	n.a.	8	11,1
2	5	6,9	13	18,1	12	16,7	10	13,9	16	22,2	11	15,3	8	11,1	6	8,3	18	25,0
3	35	48,6	30	41,7	30	41,7	33	45,8	29	40,3	32	44,4	36	50,0	28	38,9	23	31,9
4	29	40,3	27	37,5	26	36,1	25	34,7	16	22,2	26	36,1	25	34,7	38	52,8	23	31,9
Total	72	100,0	72	100,0	72	100,0	72	100,0	72	100,0	72	100,0	72	100,0	72	100,0	72	100,0

* 1 (*not at all true*) to 4 (*very true*)

Frequencies and percentages of the answers given by dropouts on peer support for learning

	Other students at school care about me		Students at my school are there for me when I need them		Other students here like me the way I am		I enjoy talking to the students here		Students here respect what I have to say		I have some friends at school	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	8	22,2	6	16,7	8	22,2	7	19,4	5	13,9	7	19,4
2	12	33,3	11	30,6	3	8,3	4	11,1	9	25,0	7	19,4
3	12	33,3	16	44,4	16	44,4	17	47,2	13	36,1	12	33,3
4	4	11,1	3	8,3	9	25,0	8	22,2	9	25,0	10	27,8
Total	36	100,0	36	100,0	36	100,0	36	100,0	36	100,0	36	100,0

* 1 (*not at all true*) to 4 (*very true*)

Frequencies and percentages of the answers given by school-going students on peer support for learning

	Other students at school care about me		Students at my school are there for me when I need them		Other students here like me the way I am		I enjoy talking to the students here		Students here respect what I have to say		I have some friends at school	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	2	2,8	3	4,2	n.a.	n.a.	1	1,4	1	1,4	n.a.	n.a.
2	17	23,6	13	18,1	9	12,5	12	16,7	9	12,5	10	13,9
3	41	56,9	39	54,2	43	59,7	35	48,6	42	58,3	26	36,1
4	12	16,7	17	23,6	20	27,8	24	33,3	20	27,8	36	50,0
Total	72	100,0	72	100,0	72	100,0	72	100,0	72	100,0	72	100,0

* 1 (*not at all true*) to 4 (*very true*)

Frequencies and percentages of the answers given by dropouts on family support

	My family is there for me when I need them		When I have problems at school my family is willing to help me		When something god happens at school, my family want to know about it		My family want me to keep trying when things are tough at school	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	2	5,6	2	5,6	1	2,8	1	2,8
2	2	5,6	3	8,3	5	13,9	3	8,3
3	9	25,0	8	22,2	5	13,9	9	25,0
4	23	63,9	23	63,9	25	69,4	23	63,9
Total	36	100,0	36	100,0	36	100,0	36	100,0

* 1 (*not at all true*) to 4 (*very true*)

Frequencies and percentages of the answers given by school-going students on family support

	My family is there for me when I need them		When I have problems at school my family is willing to help me		When something god happens at school, my family want to know about it		My family want me to keep trying when things are tough at school	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	2	2,8	1	1,4	3	4,2	1	1,4
2	6	8,3	7	9,7	3	4,2	5	6,9
3	11	15,3	11	15,3	16	22,2	18	25,0
4	53	73,6	53	73,6	50	69,4	48	66,7
Total	72	100,0	72	100,0	72	100,0	72	100,0

* 1 (*not at all true*) to 4 (*very true*)

Frequencies and percentages of the answers given by dropouts on teacher provision of autonomy support

	My teacher gives me a lot of choices about how I do my schoolwork		My teacher talks about how I can use the things we learn in school		My teacher doesn't explain why what I do in school is important to me		It seems like my teacher is always telling me what to do		My teacher is always getting on my case about schoolwork	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	7	19,4	10	27,8	5	13,9	4	11,1	5	13,9
2	18	50,0	10	27,8	12	33,3	13	36,1	10	27,8
3	7	19,4	12	33,3	13	36,1	12	33,3	13	36,1
4	4	11,1	4	11,1	6	16,7	7	19,4	8	22,2
Total	36	100,0	36	100,0	36	100,0	36	100,0	36	100,0

* 1 (*not at all true*) to 4 (*very true*)

Frequencies and percentages of the answers given by school-going students on teacher provision of autonomy support

	My teacher gives me a lot of choices about how I do my schoolwork		My teacher talks about how I can use the things we learn in school		My teacher doesn't explain why what I do in school is important to me		It seems like my teacher is always telling me what to do		My teacher is always getting on my case about schoolwork	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	8	11,1	5	6,9	4	5,6	13	18,1	30	41,7
2	16	22,2	24	33,3	21	29,2	37	51,4	24	33,3
3	33	45,8	25	34,7	29	40,3	16	22,2	13	18,1
4	15	20,8	18	25,0	18	25,0	6	8,3	5	6,9
Total	72	100,0	72	100,0	72	100,0	72	100,0	72	100,0

* 1 (*not at all true*) to 4 (*very true*)

Frequencies and percentages of answers given by dropouts on student involvement

	Overall, I feel good about being in this school		I can be creative in classroom assignments and projects	
	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	12	33,3	5	13,9
2	10	27,8	10	27,8
3	11	30,6	15	41,7
4	3	8,3	6	16,7
Total	36	100,0	36	100,0

* 1 (*not at all true*) to 4 (very true)

Frequencies and percentages of answers given by school-going students on student involvement

	Overall, I feel good about being in this school		I can be creative in classroom assignments and projects	
	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	6	8,3	6	8,3
2	11	15,3	10	13,9
3	39	54,2	41	56,9
4	16	22,2	15	20,8
Total	72	100,0	72	100,0

* 1 (*not at all true*) to 4 (very true)

Frequencies and percentages of the answers given by dropouts on engagement with class activities and assignments

	I like group instruction		I like discussions and debates		I like writing projects		I like research projects		I like group projects	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	5	13,9	6	16,7	5	13,9	4	11,1	5	13,9
2	11	30,6	8	22,2	11	30,6	5	13,9	10	27,8
3	16	44,4	9	25,0	14	38,9	17	47,2	18	50,0
4	4	11,1	13	36,1	6	16,7	10	27,8	3	8,3
Total	36	100,0	36	100,0	36	100,0	36	100,0	36	100,0

* 1 (not at all true) to 4 (very true)

Frequencies and percentages of the answers given by school-going students on engagement with class activities and assignments

	I like group instruction		I like discussions and debates		I like writing projects		I like research projects		I like group projects	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	8	11,1	15	20,8	19	26,4	8	11,1	11	15,3
2	16	22,2	22	30,6	19	26,4	13	18,1	22	30,6
3	29	40,3	18	25,0	22	30,6	34	47,2	23	31,9
4	19	26,4	17	23,6	12	16,7	17	23,6	16	22,2
Total	72	100,0	72	100,0	72	100,0	72	100,0	72	100,0

* 1 (not at all true) to 4 (very true)

Frequencies and percentages of the answers given by dropouts on personal development

	School contributed to my development on understanding myself		School contributed to my development on treating people with respect		School contributed to my development on developing personal beliefs and values	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	10	27,8	12	33,3	12	33,3
2	12	33,3	7	19,4	8	22,2
3	10	27,8	14	38,9	14	38,9
4	4	11,1	3	8,3	2	5,6
Total	36	100,0	36	100,0	36	100,0

* 1 (*not at all true*) to 4 (*very true*)

Frequencies and percentages of the answers given by school-going students on personal development

	School contributed to my development on understanding myself		School contributed to my development on treating people with respect		School contributed to my development on developing personal beliefs and values	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	11	15,3	17	23,6	10	13,9
2	19	26,4	21	29,2	16	22,2
3	30	41,7	26	36,1	37	51,4
4	12	16,7	8	11,1	9	12,5
Total	72	100,0	72	100,0	72	100,0

* 1 (*not at all true*) to 4 (*very true*)

Frequencies and percentages of the answers given by dropouts on fixed mindset

	My intelligence is something about me that I can't change very much		I have a certain amount of intelligence, and I can't do much to change it		To be honest, I can't really change how intelligent I am		I can learn new things, but I can't really change my basic intelligence	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	8	22,2	7	19,4	8	22,2	6	16,7
2	2	5,6	5	13,9	10	27,8	8	22,2
3	5	13,9	7	19,4	5	13,9	4	11,1
4	14	38,9	8	22,2	8	22,2	13	36,1
5	6	16,7	7	19,4	4	11,1	4	11,1
6	1	2,8	2	5,6	1	2,8	1	2,8
Total	36	100,0	36	100,0	36	100,0	36	100,0

* 1 (*strongly disagree*) to 6 (*strongly agree*)

Frequencies and percentages of the answers given by school-going students on fixed mindset

	My intelligence is something about me that I can't change very much		I have a certain amount of intelligence, and I can't do much to change it		To be honest, I can't really change how intelligent I am		I can learn new things, but I can't really change my basic intelligence	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	9	12,5	11	15,3	11	15,3	8	11,1
2	10	13,9	19	26,4	19	26,4	15	20,8
3	21	29,2	22	30,6	22	30,6	25	34,7
4	19	26,4	14	19,4	14	19,4	13	18,1
5	7	9,7	2	2,8	2	2,8	9	12,5
6	6	8,3	4	5,6	4	5,6	2	2,8
Total	72	100,0	72	100,0	72	100,0	72	100,0

* 1 (*strongly disagree*) to 6 (*strongly agree*)

Frequencies and percentages of the answers given by dropouts on growth mindset

	You can always substantially change how intelligent you are		No matter who you are, you can significantly change your intelligence level		No matter how much intelligence you have, you can always change it quite a bit		You can change even you basic intelligence level considerably	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	1	2,8	n.a.	n.a.	1	2,8	n.a.	n.a.
2	1	2,8	3	8,3	1	2,8	2	5,6
3	3	8,3	4	11,1	3	8,3	2	5,6
4	9	25,0	6	16,7	10	27,8	8	22,2
5	12	33,3	13	36,1	11	30,6	16	44,4
6	10	27,8	10	27,8	10	27,8	8	22,2
Total	36	100,0	36	100,0	36	100,0	36	100,0

* 1 (*strongly disagree*) to 6 (*strongly agree*)

Frequencies and percentages of the answers given by school-going students on growth mindset

	You can always substantially change how intelligent you are		No matter who you are, you can significantly change your intelligence level		No matter how much intelligence you have, you can always change it quite a bit		You can change even you basic intelligence level considerably	
	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%	Freq	Percent 0-100%
1*	2	2,8	4	5,6	1	1,4	1	1,4
2	3	4,2	5	6,9	3	4,2	4	5,6
3	8	11,1	13	18,1	13	18,1	12	16,7
4	21	29,2	19	26,4	20	27,8	25	34,7
5	19	26,4	17	23,6	19	26,4	18	25,0
6	19	26,4	14	19,4	16	22,2	12	16,7
Total	72	100,0	72	100,0	72	100,0	72	100,0

* 1 (*strongly disagree*) to 6 (*strongly agree*)

Appendix B: Questionnaire

Vragenlijst motivatie mbo-student

Beste student,

Wat fijn dat je meedoet!

De vragen hebben betrekking op het afgelopen schooljaar.

Wij zijn heel benieuwd naar jouw mening en wie weet ben jij straks in het bezit van een Spotify- of bioscoopbon!

Hartelijk dank voor je medewerking.

Met vriendelijke groet,

Mary Amodeo

***Vereist**

1. E-mailadres *

Ga naar vraag 1.

Toestemming

2. Vink onderstaande hokjes aan om toestemming te geven voor het onderzoek

** Vink alle toepasselijke opties aan.*

- Ik geef toestemming om de gegevens te gebruiken voor wetenschappelijk onderzoek.
- Ik heb de begeleidende mail bij deze vragenlijst gelezen net zoals de inleidende tekst behorend bij de digitale vragenlijst.
- Ik ben in de gelegenheid geweest om vragen te stellen aan de onderzoeker als bepaalde punten niet duidelijk zijn.
- Ik begrijp dat alle gegevens die ik lever in verband met dit onderzoek vertrouwelijk worden behandeld en anoniem worden verwerkt.
- Ik kan altijd inzage krijgen in de resultaten na afloop als ik dat wil.
- Ik begrijp dat ik mezelf terug kan trekken op elk moment, zonder daarvoor een reden op te geven.

Zit je nog steeds op het mbo of heb je die het afgelopen jaar verlaten?

3. *Vink alle toepasselijke opties aan.

Ik zit nog steeds op het mbo (ook als je dit jaar je diploma haalt)

Ik zat afgelopen jaar op het mbo maar ben nu uitgeschreven

Waarom ben je naar het mbo gegaan?

Vink aan in hoeverre je het eens bent met onderstaande stellingen

4 Omdat ik met alleen een middelbare school diploma later geen goedbetaalde baan vind

*Markeer slechts één ovaal.

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

5. Omdat ik plezier en voldoening ervaar als ik nieuwe dingen leer

* Markeer slechts één ovaal.

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

6. Omdat ik denk dat een mbo-opleiding mij beter helpt voorbereiden op de carrière die ik gekozen heb

* Markeer slechts één ovaal.

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

7. Vanwege de intense gevoelens die ik ervaar als ik mijn ideeën deel met anderen

* Markeer slechts één ovaal.

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

8. Eerlijk gezegd weet ik het niet; ik denk echt dat ik mijn tijd verdoe op school

* Markeer slechts één ovaal.

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

9. Voor het plezier dat ik ervaar als ik mezelf overtref in een van mijn persoonlijke prestaties

** Markeer slechts één ovaal.*

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

10 Omdat ik het later goed wil hebben

** Markeer slechts één ovaal.*

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

11. Voor het plezier dat ik ervaar als ik mijn kennis uitbreid over onderwerpen die ik leuk vind

** Markeer slechts één ovaal*

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

12. Omdat ik uiteindelijk hierdoor voor de baan kan gaan die ik leuk vind

** Markeer slechts één ovaal.*

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

13. **Voor de kick dat het me geeft als ik over interessante onderwerpen lees**

* Markeer slechts één ovaal.

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

14. **Ik had ooit goede redenen om naar het mbo te gaan, maar nu vraag ik mezelf af of ik zou moeten doorgaan**

* Markeer slechts één ovaal.

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

15. **Voor de voldoening die ik voel als ik bezig ben met moeilijke leeractiviteiten**

* Markeer slechts één ovaal.

	1	2	3	4	5	6	7	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

Docent - Student Relatie

Vink aan in hoeverre je het eens bent met onderstaande stellingen
Let op, de keuzemogelijkheid is vanaf nu minder, namelijk 4 opties

16 **Over het algemeen word ik eerlijk behandeld door de docenten**

* Markeer slechts één ovaal.

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

17. **De docenten luisteren naar me**

* Markeer slechts één ovaal.

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

18. **De docenten geven om mij**

* Markeer slechts één ovaal.

1 2 3 4

helemaal niet mee eens helemaal mee eens

19. **Mijn docenten zijn er voor me wanneer ik hen nodig heb**

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

20. **De regels op school zijn eerlijk**

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

21. **Over het algemeen zijn mijn docenten open en eerlijk tegen me**

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

22. **Ik vind het leuk om met de docenten van deze school te praten**

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

23 **Ik voel me veilig op school**

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens

24 **De meeste docenten zijn geïnteresseerd in mij als persoon, niet alleen als student**

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

Studentondersteuning

Vink aan in hoeverre je het eens bent met onderstaande stellingen

25. Andere studenten op school geven om mij

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

26. Studenten zijn er voor me wanneer ik hen nodig heb

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

27. Andere studenten op school vinden me leuk zoals ik ben

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

28. Ik vind het leuk om met andere studenten te praten

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

29. De studenten respecteren wat ik te zeggen heb

** Markeer slechts één ovaal.*

30 Ik heb een paar vrienden op school

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens

helemaal niet mee eens helemaal mee eens

Familieondersteuning

Vink aan in hoeverre je het eens bent met onderstaande stellingen

31. Mijn familie is er voor me wanneer ik hen nodig heb

** Markeer slechts één ovaal.*

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

32. Als ik problemen op school heb, dan is mijn familie bereid om me te helpen

** Markeer slechts één ovaal.*

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

33. Als er iets goeds gebeurt op school, dan wil mijn familie het weten

** Markeer slechts één ovaal.*

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

34. Mijn familie wil dat ik blijf proberen als iets tegenzit op school

** Markeer slechts één ovaal.*

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

Docentenaanpak

Vink aan in hoeverre je het eens bent met onderstaande stellingen

35. Mijn docenten geven me veel keuze over hoe ik mijn schoolwerk aanpak

** Markeer slechts één ovaal.*

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

36. Mijn docenten leggen uit hoe ik de dingen die we op school leren, kan gebruiken

** Markeer slechts één ovaal.*

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

37. Mijn docenten leggen NIET uit waarom wat ik doe op school belangrijk voor me is

** Markeer slechts één ovaal.*

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

38. Het is alsof mijn docenten altijd zeggen wat ik moet doen

** Markeer slechts één ovaal.*

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

39. Mijn docenten geven altijd kritiek op hoe ik mijn werk doe in de klas

** Markeer slechts één ovaal.*

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

Studentbetrokkenheid

Vink aan in hoeverre je het eens bent met onderstaande stellingen

40. Over het algemeen voelt het goed om op deze school te zijn

* Markeer slechts één ovaal.

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

41. Ik kan creatief zijn bij klasopdrachten en -projecten

* Markeer slechts één ovaal.

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

In hoeverre interesseren onderstaande klasactiviteiten en opdrachten jou?

Vink aan in hoeverre je het eens bent met onderstaande stellingen

40. 42 Ik vind klassikaal onderwijs leuk (de docent voor de klas legt uit of geeft instructies)

* Markeer slechts één ovaal.

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

43. Ik hou van discussies en debatten

* Markeer slechts één ovaal.

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

44. Ik vind schrijfopdrachten leuk

* Markeer slechts één ovaal.

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

45. Ik hou van onderzoeksprojecten

* Markeer slechts één ovaal.

1 2 3 4

helemaal niet mee eens helemaal mee eens

46. Ik vind groepsopdrachten leuk

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

Persoonlijke ontwikkeling

Vink aan in hoeverre je het eens bent met onderstaande stellingen

47. Deze school heeft me geleerd mezelf te begrijpen en/of inzicht te krijgen in mijzelf

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

48 Deze school heeft me geleerd mensen met respect te behandelen

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

49 Deze school heet me geleerd persoonlijke normen en waarden te ontwikkelen

** Markeer slechts één ovaal.*

1 2 3 4

helemaal niet mee eens helemaal mee eens

50. Ik heb vaak gespijbeld, een ziekte verzonnen om thuis te blijven of ben opzettelijk te laat gekomen omdat ik niet gemotiveerd was

* Markeer slechts één ovaal.

	1	2	3	4	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

Verveling

51. Ben je weleens verveeld geweest tijdens de les?

* Markeer slechts één ovaal.

- nooit (vink bij de vraag hieronder alleen de eerste optie aan)
- zelden, soms of vaak (vink bij de vraag hieronder vanaf de tweede optie aan waarom dat zo was)

52. Waarom was je weleens verveeld? (meerdere antwoorden mogelijk) * Vink alle toepasselijke opties aan.

- ik ben nooit verveeld geweest tijdens de les
- het werk was niet uitdagend genoeg
- het werk was te moeilijk
- de leerstof was niet interessant
- de leermethoden zijn niet interessant (bijvoorbeeld lesboek)
- de leerstof was niet van toepassing voor mij
- geen interactie met de docent
- geen interactie met medestudenten

Mindset

Vink aan in hoeverre je het eens of oneens bent met onderstaande stellingen

Let op, de keuzemogelijkheid is vanaf nu weer méér, namelijk 6 opties

53 Ik denk dat mijn intelligentie iets aan mij is waar ik zelf niets aan kan veranderen

* Markeer slechts één ovaal.

	1	2	3	4	5	6	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

54. Ik denk dat ik een bepaald niveau van intelligentie gekregen heb en dat niet kan veranderen

* Markeer slechts één ovaal

	1	2	3	4	5	6	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

55. **Ongeacht wat mijn capaciteiten nu zijn, denk ik dat ik mijn intelligentie altijd kan veranderen**

* Markeer slechts één ovaal.

	1	2	3	4	5	6	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

56. **Om eerlijk te zijn, denk ik niet dat ik kan veranderen hoe intelligent ik ben**

* Markeer slechts één ovaal.

	1	2	3	4	5	6	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

57. **Ik denk dat ik mijn intelligentie kan veranderen**

* Markeer slechts één ovaal.

	1	2	3	4	5	6	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

58. **Ik kan nieuwe dingen leren, maar ik denk niet dat ik het vermogen heb om mijn intelligentie te veranderen**

* Markeer slechts één ovaal.

	1	2	3	4	5	6	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

59. **Ik denk dat ik met voldoende tijd en moeite mijn intelligentie kan veranderen**

* *Markeer slechts één ovaal.*

	1	2	3	4	5	6	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

60. **Ik denk dat ik het vermogen heb om mijn intelligentie te veranderen op den duur**

* *Markeer slechts één ovaal.*

	1	2	3	4	5	6	
helemaal niet mee eens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	helemaal mee eens

Algemeen

(tot slot en ga ook hierbij uit van afgelopen schooljaar)

61. **Geslacht**

* *Vink alle toepasselijke opties aan.*

- Man
 Vrouw

62. **Leeftijd ***

63. **Opleiding ***

64. **Niveau**

- niveau 1
 niveau 2
 niveau 3
 niveau 4

65. **Leerjaar**

* *Vink alle toepasselijke opties aan.*

- eerste jaar
- tweede jaar
- derde jaar
- vierde jaar

66. Geboorteland *

67 Huishouden

Vink alle toepasselijke opties aan.

- ik woon samen met beide ouders
- ik woon samen met één ouder
- ik woon alleen
- ik woon met familie / vrienden

68. Baan ouders

** Vink alle toepasselijke opties aan.*

- beide ouders hebben een betaalde baan
- één ouder heeft een betaalde baan
- beide ouders hebben geen betaalde baan
- ik weet het niet

69. Hoogst genoten opleiding van (een van de) ouders

** Vink alle toepasselijke opties aan.*

- lagere school
- middelbare school
- hogere school
- universiteit
- ik weet het niet

70. Datum *

71. Wil je nog iets toevoegen aan je gegeven antwoorden of nog iets anders melden? Voel je vrij dat hieronder te doen.

Mogelijk gemaakt door



