



# Motivations to have a Second Career as a Teacher in Vocational Education and Training

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## Abstract

In Sweden, upper secondary vocational education and training (VET) teachers must have high relevant vocational experience from a previous career, but 44% do not have a teaching certificate and thus are not formally qualified. However, there are significant differences between the 12 national VET programs in this respect. For example, 68 percent of the Child Recreation Program teachers are qualified, but only 28 percent of the HVAC and Property Maintenance Program teachers. The overall aim of this study is to identify and understand factors that motivate individuals to choose VET teaching as a second career in Sweden. As the Factors influencing teaching choice (FIT-Choice) scale has been rarely used in a Swedish VET context, a secondary aim is to test its suitability in this context. Thus, we investigate Swedish VET teachers' choice of a second career, using the FIT-Choice scale. The findings show that it has sufficient validity and reliability for investigating Swedish VET teachers' motivational determinants, and that the factors motivating their career change are highly dependent on their former occupation and working conditions. Other important factors include the family-friendly work schedules. The findings contribute to understanding of factors that motivate people to become vocational teachers, which is essential for improving the development of the highly skilled employees required in numerous sectors.

**Keywords** Career change · FIT-Choice scale · Higher education · Upper secondary school · Sweden

## Introduction

This study concerns vocational education and training (VET) teacher shortages and motivations to have a second career as a teacher. In Sweden, all teachers of VET programs in upper secondary school have substantial relevant experience, but

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44% do not have a teaching certificate and thus are not formally qualified (Swedish National Agency for Education, 2019). So, there is a severe shortage of VET teachers with a Higher Education Diploma in Vocational Education in Sweden, which will probably be exacerbated in the future as 56 percent of the current teachers are at least 50 years old. Moreover, many leave the teaching profession for another job (Swedish National Agency for Education, 2019; Ministry of Education, 2018). Hence, there will be an estimated shortfall of 12,500 VET teachers with formal pedagogical training by 2033. Since not all teachers work full time, this equates to a need for an additional 1050 qualified VET teachers annually until 2033 (Swedish National Agency for Education, 2019), rather than the 480 per year currently obtaining a teaching certificate (Swedish higher education authority, 2020). Thus, the pace of education must be doubled to meet anticipated needs.

In many countries individuals can choose the teaching profession and proceed to a teacher education course at a university after graduating from upper secondary school. Thus, it is possible to become a teacher as a first career choice, and at a quite young age for teaching subjects such as mathematics and other core subjects. This is generally true for Swedish teachers too, but not for VET teachers. In order to acquire VET teacher education (VTE) to teach a vocational subject in upper secondary school, an applicant must have sufficient work experience in the relevant occupational sector. Thus, upper secondary school VET teachers must make a second career choice (Bauer et al., 2017; Hof et al., 2011) in order to become certified teachers. However, candidates can apply for 1.5-year long full-time VTE studies without teaching experience. So, most VTE students have already taken the step from a first to a second career as a VET teacher without formal pedagogical education, and thus have been working in a school for some time. In Sweden there are currently no requirements for formal teacher education to work as a VET teacher, but certified teachers will always have priority over uncertified teachers for employment (Ministry of Education, 2011). Moreover, few people would probably disagree that for both social and economic reasons all teachers, including VET teachers, should be well educated.

### **The Swedish Upper Secondary VET context**

In Sweden, there are three kinds of upper secondary school programs: four introductory programs, six providing preparation for higher education and 12 vocational programs (Table 1), which respectively enroll ca. 12, 59 and 29 percent of each cohort of students. The vocational programs prepare students for employment or Higher Vocational Education (Swedish National Agency for Education, 2020).

All VET programs are three years long, and include at least 15 weeks of workplace-based learning in one or several workplaces. The rest of the education is school-based and most of the industry-specific training is in workshops on school premises where the vocational teachers are responsible for teaching both theoretical and practical aspects of the focal vocation. Since 2011 it has been possible to attend an upper secondary VET program as an apprentice, receiving at least

**Table 1** Percentages of teachers who were certified, female and more than 50 years old (Swedish National Agency for Education, 2019, 2021) on each of the 12 VET programs (Swedish National Agency for Education, 2011) in Swedish Upper Secondary School

	VET program	% certified (2019)	% female (2018/19)	% > 50 years old (2018/19)
High certification programs	Child Recreation Program	68	71	52
	Restaurant Management and Food Program	64	53	54
	Health and Social Care Program	60	89	56
	Business and Administration Program	59	64	59
	Handicraft Program	58	88	33
	Hotel and Tourism Program	54	76	52
Low certification programs	Natural Resource Use Program	42	51	44
	Building and Construction Program	38	4	65
	Vehicle and Transport Program	36	9	62
	Electricity and Energy Program	35	7	67
	Industrial Technology Program	34	8	57
	HVAC and Property Maintenance Program	28	3	52

50 percent of the education at one or several workplaces (Ministry of Education, 2010) and consequently being taught mainly theoretical elements in school. In both the apprenticeship and more school-based variants of the education, students’ workplace-based learning is supervised by an experienced employee and graded by a VET teacher. Students who successfully complete either variant are awarded the same kind of diploma. Moreover, in both the school-based and apprenticeship variants the VET teachers are responsible for the industry-specific training, as a traditional VET teacher and as a kind of quality-controller or supervisor, respectively. Through their networks the VET teachers are supposed to know the most suitable workplaces and supervisors for their students. Thus, for the quality of the education it is highly important for VET teachers to maintain contact with the occupational sector that they left to become a teacher.

The table shows a strong correlation between proportions of qualified and female teachers ( $r=0.877$ ), and a weaker, inverse correlation between proportions of female teachers and teachers who are least 50 years old ( $r=-0.604$ ).

Since 44 percent of VET teachers in Sweden are uncertified, programs with higher proportions (the Hotel & Tourism, Child Recreation, Restaurant Management & Food, Health & Social Care, Business & Administration, and Handicraft Programs) are classed here as high certification programs. Programs with a lower proportion of certified teachers (Natural Resource Use, Building & Construction, Vehicle & Transport, Electricity & Energy, Industrial Technology, and HVAC & Property Maintenance Programs) are classed as low certification programs. Similarly, participants in the study presented here who were associated with these

programs are respectively referred to as high certification and low certification groups. These characteristics are important to understand when interpreting and discussing results of the study and their implications.

### **Consequences of the Certified VET Teacher Shortage**

As briefly introduced in the first section of this paper, the shortage of certified VET teachers is problematic, partly because much of the future workforce is being trained by unqualified teachers. A third (approx. 100,000) of all upper secondary school students per year in Sweden attend a three-year VET program (Swedish National Agency for Education, 2020) and should have the same rights to have qualified and well-educated teachers as the two thirds of students who attend higher education preparatory programs. Therefore, it is important to identify and increase knowledge of motivational factors that induce individuals to switch careers in favor of teaching, especially as a VET teacher. This is crucial for formulating effective strategies to lower barriers and increase the attraction of VET teaching as a second career. Teacher shortages have been problematic and discussed for a long time. In an international perspective, Sutcher et al. (2016) argue that society can either increase the teaching profession's attraction or lower the requirements to become a teacher in order to increase recruitment. The latter is not a favored option for Swedish schools, due to governmental demands that qualified teachers should help efforts to maintain Sweden's position as a leading knowledge nation (Ministry of Education, 2016). The Swedish National Agency for Education concludes that the most important measure to address the problem of teacher shortages is to strengthen the profession's attractiveness (The Swedish National Agency for Education, 2019). This is also important because high numbers of unqualified teachers have negative effects on pupils' learning outcomes according to the Swedish Schools Inspectorate (2019).

However, any aspiring Swedish vocational teachers must consider and take two steps. First, they must choose to leave their former career and start a second career as a teacher. They can then work as a vocational teacher without a formal teaching qualification (as 44 percent currently do), or apply to enroll VTE leading to a Higher Education Diploma in Vocational Education and thus become a certified teacher.

### **Aims and Research Questions**

In order to identify effective strategies to increase numbers of certified VET teachers in the future it is important to acquire knowledge about the process and factors that make people want to take the step from their first career. Thus, the overall aim of this study is to identify and understand factors that motivate individuals to choose VET teaching as a second career in Sweden. For this, we apply the Factors Influencing Teaching as a Choice (FIT-Choice) Scale developed by Richardson and Watt (2006) and Watt and Richardson (2007, 2012). This instrument reportedly has strong advantages for analyses of motivational factors that influence choices to start a career as a teacher (Fray & Gore, 2018). Since the FIT-Choice Scale has not been

frequently used in a Swedish VET context a secondary aim is to test it in the focal context. The following research questions (RQs) are addressed:

RQ1: How suitable is the FIT-Choice scale for probing teachers' motivational factors in the Swedish VET context?

RQ2: What are the most important motivational determinants of Swedish VET teachers' choice of a second career?

RQ3: What are the differences in motivational determinants between VET teachers of *high* and *low certification programs*?

The next section describes the FIT-Choice Scale and its use in the study. The following sections summarize previous research on motivations to become a teacher, methodological aspects (including analytical considerations) and results related to categories addressed in the FIT-Choice scale survey. Finally, we discuss the findings regarding motivational factors and their potential utility in addressing the mentioned problems in both Sweden and wider contexts.

## The FIT-Choice Scale

The FIT-Choice scale draws on Expectancy-Value Theory (EVT), particularly the argument that "...individuals' choice, persistence, and performance can be explained by their beliefs about how well they will do on the activity and the extent to which they value the activity" (Wigfield & Eccles, 2000, p 68). The FIT-Choice scale was initially developed by Richardson and Watt (2006) and Watt and Richardson (2007, 2012), and has been subsequently used and adapted by several researchers (e.g., Berger & D'Ascoli, 2012; Berger & Girardet, 2015). Although the initial framework was not intended to probe motivations of career switchers, with some modifications it has proven validity for second-career VET teachers since they tend to have similar motivational profiles to first-career teachers (Berger & D'Ascoli, 2012; Richardson & Watt, 2005). Giersch et al. (2021) have also recently shown that it is a fruitful instrument for comparing motivational factors of different groups, which is an important aspect of RQ 1 addressed in this paper.

The original instrument is a questionnaire with three main sections and 56 grouped items in total. The three sections are preceded by several background questions and one asking respondents to briefly state their main reason/s for choosing to become a teacher (Watt & Richardson, 2007). In the original questionnaire presented by Watt and Richardson (2007) the three sections are *Motivations*, *Beliefs About Teaching* and *Your Decision to Become a Teacher*. All sections have prefacing statements such as 'I choose to become a teacher because ...' inviting Likert-type responses ranging from 1 (not at all important) to 7 (extremely important). See Watt and Richardson (2007) for a detailed description of the original instrument.

In this study, the version of the FIT-Choice scale adapted by Berger and D'Ascoli (2012) was applied, with some minor adjustments. This is a questionnaire with 55 items, divided into the same three sections as the original. Each section probes

respondents' ratings of statements concerning several constructs related to teaching, as shown in Table 2. We decided to keep a construct, *Satisfaction with choice*, that Berger and D'Ascoli (2012) excluded, because of its relevance in this study.

However, we replaced the construct *Fallback career* with *Opportunity* (Berger & D'Ascoli, 2012) because the latter seems to be more suitable in Swedish contexts, where earlier research implies that chance, coincidence and opportunity might be important (Berner, 1989). Since Swedish VET teachers need a quite successful previous career to develop the occupational knowledge required for VTE they are unlikely to view teaching as a fallback career.

All items were translated to Swedish and some linguistic adjustments were made. Since all the respondents were working as teachers a few items in future tense were changed to present tense. To confirm our translations, we also compared them to translations in other studies that used the instrument in languages other than English (Berger & D'Ascoli, 2012; Brandmo & Nesje, 2017).

### Motivations to become a Teacher

In a scoping review of 70 empirical studies published in 2007–2016 about why people choose teaching, Fray and Gore (2018) found that 63 of the articles primarily focused on three types of motivation (altruistic, intrinsic and extrinsic) to become a teacher. Examples of *altruistic* reasons include a desire to help and support students (Jungert et al., 2014; Struyven et al., 2012; Thomson & Turner, 2009) and contribute to society (Flores & Niklasson, 2014; Jungert et al., 2014; Struyven et al., 2012). Examples of *intrinsic* motivation include interest in the subject matter, passion for teaching (Struyven et al., 2012), and/or desire to work with children or adolescents (Balyer & Özcan, 2014; Flores & Niklasson, 2014; Sinclair, 2008). Two categories of *extrinsic* motivation to become a teacher have been identified (Fray & Gore, 2018). One is related to lifestyle outside of work, including, for example: balancing family commitments and work (Struyven et al., 2012; Weiss & Kiel, 2013), flexible working hours (Jungert et al., 2014) and to a limited extent holidays (Struyven et al., 2012). The other extrinsic motivation category is associated with working conditions, including (for example) income (Balyer & Özcan, 2014; Jungert et al., 2014), good working conditions (Sinclair, 2008), and job security (Aksu et al., 2010; Jungert et al., 2014).

According to Fray and Gore (2018), the most widely used instrument to examine factors that influence the choice to teach is the Factors Influencing Teaching as a career choice (FIT-Choice) scale developed by Richardson and Watts (2006) and Watt and Richardson's (2007, 2012), which draws on Expectancy-Value Theory (EVT) (Wigfield & Eccles, 2000). Studies using the scale have shown that intrinsic values, perceived teaching ability, desire to work with adolescents, desire to contribute to society, and positive teaching and learning experiences are the most highly rated factors. Extrinsic factors such as job security and time for family are also important motives, but have lower ratings. However, regarding teaching as a fallback career rarely seems to be an important motivational factor for choosing to work as a teacher (Stellmacher et al., 2020).

**Table 2** Description of the instrument

Sections and constructs	No. of items	Example of item
<b>Motivations</b>		
Ability	3	'I choose to become a teacher because ...' <i>I = Not at all important; 7 = Extremely important</i>
Intrinsic career value	4	I have good teaching skills I have always wanted to be a teacher
Opportunity	3	The opportunity to teach arose
Job security	3	Teaching will offer a steady career path
Time for family	5	School holidays will fit in with family commitments
Enhance social equity	2	Teaching will allow me to raise the ambitions of underprivileged youth
Shape future of youth/Make social contribution	5	Teaching will allow me to influence the next generation
Work with youth	4	I want a job that involves working with adolescents
Prior teaching and learning experiences	3	I have had good teachers as role models
Social influences	3	People I have worked with think I should become a teacher <i>I = Not at all; 7 = Extremely</i>
Perceptions about teaching		
Expert career	2	Do you think teaching requires high levels of expert knowledge?
High demand	3	Do you think teachers have a heavy workload?
Social status	6	Do you think teachers feel valued by society?
Good salary	2	Do you think teachers earn a good salary? <i>I = Not at all; 7 = Extremely</i>
Decision to become a teacher		
Social dissuasion	4	Did others tell you teaching was not a good career choice?
Satisfaction with choice	3	How happy are you with your decision to become a teacher?

Studies on VET teachers' motivation using the FIT-Choice scale are sparse. Thus, Berger and D'Ascoli (2012) conclude that to find motivated VET teachers it seems:

most appropriate to look in companies for individuals who have a high confidence in their abilities to train colleagues, and who are strongly interested both in their professional field and in training apprentices. Individuals with these characteristics should be high on aptitude, intrinsic value and social utility value, which all associate with professional commitment (p. 332).

Berger and D'Ascoli (2012) also found that opportunity and both prior teaching and learning experiences are important motivational factors, and that VET teachers perceive teaching to be a challenging occupation. Hence, they believe their job is challenging and requires expertise and knowledge. In addition, Stellmacher et al. (2020) conclude that the most important motives for future VET teachers' career choice are subject-specific and educational interest. In the same study the authors suggest that "measures for attracting new students should also be individually adapted to the motives for their career choice. For example, in a counselling interview, the motives for choosing a profession should be discussed [...]" (p. 215).

In summary, intrinsic motivational factors (interests in the subject matter and/or the professional field, and desires to work with young people, educate and contribute to society) seem to be the most important determinants of people's choice of career as a VET teacher (Berger & D'Ascoli, 2012; Berger & Girardet, 2015; Jehee et al., 2020; Stellmacher et al., 2020). Berger and Girardet (2020) have also shown that the mentioned motivational factors have implications for vocational teachers' sense of responsibility for their relationships with students and classroom management style. This further highlights the importance of research based on the FIT-Choice scale to improve understanding of factors influencing VET teachers' choice of a second career. As already mentioned, it was initially designed and used to probe people's reasons for choosing teaching as a first career, but it also has proven suitability for exploring those of career-switching teachers (Berger & D'Ascoli, 2012). Moreover, most studies in which the scale has been applied to probe VET teachers' reasons have been performed in countries where people must (as in Sweden) change career to be a VET teacher. Thus, it has apparent suitability for use in Swedish contexts, but clearly this requires verification.

Previous research on Swedish VET teachers' transitions from work as an occupational practitioner to the teaching profession is sparse and features of the transition process have not been recently characterized. However, a few Swedish studies have suggested that a change of career to teaching is often triggered by coincidence (Berner, 1989), occupational injuries, and/or interest in working with adolescents (Andersson et al., 2012; Berner, 1989; Hårdig, 1995). Berner (1989) identified a desire for better working conditions as a trigger for switching career to VET teaching, but this conflicts with more recent international findings. For example, Berger and D'Ascoli (2012) concluded that career switchers motivated by social utility value and having more time for family perceived their prior occupation as being socially meaningful and having good working conditions.



## Materials and Methods

The Swedish national study-administrative system called LADOK was used to find participants. The questionnaire was subsequently sent by email to all (347) VTE alumni and current VTE students who were or had been registered for a VTE course at one of the 10 Swedish universities between 2011 and 2021. After emailing two reminders, 133 completed questionnaires were received. Thus, the response rate was 36%. To select teacher students that were working as a VET teacher the questionnaire first asked, 'Do you have employment as a vocational teacher?' The analysis presented here focused on responses of participants (113) who answered 'Yes'. The initial question was followed by a number of background questions, for example about respondents' wages and experience of both teaching and their previous occupation. There was also one free text item that asked the respondents to describe why they changed career. Excerpts of the answers are used to exemplify commonly expressed perceptions related to statistical data.

The response rate can be considered low, and may be at least partly due to old email addresses in the LADOK system, which has records of email addresses that people used when they entered VTE. For some alumni this may be as long as 10 years ago and some probably have new email addresses.

The results of the survey were entered into SPSS (version 27), which was used for all calculations. The first analytical step was to calculate Cronbach's  $\alpha$  coefficients to assess the internal consistency of the 16 constructs and thus the instrument's reliability in the focal context (Table 3). There is "no standard, threshold, or criterion value for an acceptable alpha" (Barbera et al., 2021, p. 258), but we chose to consider values lower than 0.7 as indicating low internal consistency. This resulted in removal of the items concerning *Opportunity* and *Expert career*, and one item each regarding the constructs *Intrinsic career value* and *Satisfaction with choice* to strengthen the reliability of the analysis. In a second step, three sets of mean scores and standard deviations for the constructs were calculated (for the whole cohort, and both the *high* and *low certification* groups by the analytical tool descriptives in SPSS (Table 4). The third and final step included analysis of the results in relation to previous findings, claims and conclusions.

## Results

The mean age of the 113 respondents was 46 years (range: 29 to 63 years) and they included representatives of teachers of all VET programs. Nearly 90 percent were employed in a public school and most (61%) had no experience of any kind of teaching when they chose to become a VET teacher. Following categories in the survey, results here are presented under the headings *Motivations*, *Perceptions about teaching* and *Decision to become a teacher*.

### Motivations

Table 4 shows mean scores and standard deviations of the motivational constructs, for the whole cohort and both *high* and *low certification* groups. In terms

**Table 3** Constructs, numbers of items covering them, mean scores and Cronbach's  $\alpha$  values. Emboldened values are lower than the 0.7 threshold set for including constructs in further analysis

Motivation	n items	mean	$\alpha$
Ability	3	5.51	0.825
Intrinsic career value*	3	5.98	0.881
Opportunity	3	5.4	<b>0.625</b>
Job security	3	4.31	0.765
Time for family	5	3.69	0.857
Enhance social equity	2	5.12	0.822
Shape future of youth/Make social contribution	5	5.64	0.871
Work with youth	4	5.65	0.919
Prior teaching and learning experiences	3	4.49	0.868
Social influences	3	4.06	0.829
Perceptions about teaching			
Expert career	2	5.60	<b>0.543</b>
High demand	3	5.43	0.798
Social status	6	3.97	0.817
Good salary	2	3.61	0.892
Decision to become a teacher			
Satisfaction with choice*	2	6.26	0.914
Social dissuasion	4	2.71	0.757

\* One item removed

**Table 4** Mean scores and standard deviation for the motivational factors

Motivations	Total cohort	<i>Low certification</i> teachers	<i>High certification</i> teachers
	<i>m (sd)</i>	<i>m (sd)</i>	<i>m (sd)</i>
Ability	5.51 (1.02)	5.48 (0.96)	5.60 (1.14)
Intrinsic career value	5.98 (1.10)	5.79 (1.23)	6.35 (0.65)
Job security	4.31 (1.45)	4.45 (1.32)	4.04 (1.67)
Time for family	3.69 (1.61)	3.89 (1.46)	3.30 (1.85)
Enhance social equity	5.12 (1.55)	5.08 (1.59)	5.20 (1.48)
Shape future of youth/Make social contribution	5.64 (1.14)	5.51 (1.17)	5.90 (1.05)
Work with youth	5.65 (1.40)	5.58 (1.46)	5.80 (1.28)
Prior teaching and learning experiences	4.49 (1.57)	4.66 (1.49)	4.15 (1.70)
Social influences	4.06 (1.73)	4.39 (1.61)	3.39 (1.81)

of motivation to become a VET teacher *Intrinsic career value* was rated highest ( $m=5.98$ ), but with clear differences between the *high* and *low certification*

groups ( $m=5.79$  and  $6.35$ , respectively). The standard deviations show that the scores are clustered more closely around the mean for the latter ( $sd=0.65$ ) than the former ( $sd=1.23$ ). One Business and Administration Program teacher illustrated this kind of motivation as follows:

I like to educate, especially on VET programs with the apprenticeship variant. It is very interesting. It is a varying job where I both get to stand in the classroom to teach and meet my students in their internships and see them develop there.

The quoted person likes to teach and seems to find the possibilities to meet the students in both school and working life as apprentices especially attractive.

The motivational factor with the second highest scores was *Work with youth* ( $m=5.65$ ), for which differences between *high* and *low certification* respondents were less pronounced ( $m=5.58$ ,  $sd=1.46$  and  $m=5.80$ ;  $sd=1.28$ ). The third most highly rated factor was *Shape future of youth* and thus make a social contribution ( $m=5.64$ ), which also received higher ratings from *high certification* respondents ( $m=5.90$ ) and there were small differences in standard deviation between them and the *low certification* group ( $sd=1.17$  and  $1.05$ , respectively).

Many textual responses to the questionnaire concern the two constructs *Work with youth* and *Shape future of youth*. For example, regarding working with young people, an Electricity and Energy Program teacher stated that:

[...] I feel that it is not the subject as such that has my greatest focus, rather, my great interest is in the young people themselves, their development and progress, education and future.

Another example of such a motivational factor associated with the social mission of the teaching profession, noted by a Vehicle & Transport Program teacher, was the "Opportunity to give young people the conditions to become good citizens". These quotations highlight wider perspectives in the teaching profession. Hence, most of the free text answers regarding social issues were provided by *low certification* teachers.

The three questions regarding respondents' *Ability to teach* also elicited high scores ( $m=5.51$ ), with a small difference between the two means ( $m=5.48$  and  $5.60$ ). In contrast, the mean scores for motivational factors were lowest, overall and for both *high* and *low certification* groups of respondents, for *Time for family* ( $m=3.69$ ,  $3.30$  and  $3.89$ , respectively). The second lowest rated construct was *Social influences* ( $m=4.06$ ), for which there was a small difference between the *high* and *low certification* groups:  $m=3.39$ ,  $sd=1.81$  and  $m=4.39$ ;  $sd=1.61$ , respectively).

## Perceptions about Teaching

Table 5 presents means and standard deviations of scores for the three constructs related to perceptions about teaching of the total cohort and both the *high* and *low certification* groups. The responses show that the cohort found the job quite demanding

**Table 5** Mean scores and standard deviations for items regarding Perceptions about teaching

Perceptions	Total cohort	<i>Low certification</i> teachers	<i>High certification</i> teachers
	<i>m (sd)</i>	<i>m (sd)</i>	<i>m (sd)</i>
High demand	5.42 (1.06)	5.29 (1.12)	5.70 (0.90)
Social status	3.97 (0.95)	3.89 (0.86)	4.11 (1.10)
Good salary	3.61 (1.50)	3.62 (1.48)	3.60 (1.57)

( $m=5.42$ ), and the former group found it slightly more demanding than the latter ( $m=5.70$  and  $5.29$ , respectively). However, textual responses indicate that many of the respondents regarded their former job as more demanding, and the associated stress as a reason for changing career. For example, a Handicraft Program teacher stated that he or she “wanted to find an interesting alternative profession when the physical workload became too high in my previous job”. The construct *Social status* (explored with the largest number of items) seems to be less important, with a mean score for the whole cohort of  $3.97$ . Interestingly, however, there are large differences in scores between the six items related to the construct, ranging from  $m=3.07$ ,  $sd=1.22$  for *high morale* to  $m=5.34$ ,  $sd=1.25$  for *high-status occupation*.

Both the *high* and *low certification* respondents indicated that their perceptions about a VET teacher’s salary (overall  $m=3.61$ ) was not an important factor. However, 43 percent of the respondents stated that their salary increased when they changed careers to VET teaching.

### Decision to become a Teacher

This section reports results regarding two constructs: *Satisfaction with choice* and *Social dissuasion* (Table 6), which respectively received the highest and lowest mean scores. This indicates that the respondents were highly satisfied ( $m=6.26$ ) with their choice of a VET career but social dissuasion ( $m=2.71$ ) plays a minor role in the decision to become a VET teacher.

Many textual responses to the questionnaire were related to the construct *Satisfaction with choice*. For example, a Health and Social Care teacher stated that, “I enjoy the teaching role. It is an exciting, independent and creative profession. A profession that gives meaning to life!” Similarly, a Restaurant Management and Food teacher stated, “That’s the best decision I’ve ever made!”.

**Table 6** Mean scores and standard deviations of scores for items About the choice to teach

About the choice	Total cohort	<i>Low certification</i> teachers	<i>High certification</i> teachers
	<i>m (sd)</i>	<i>m (sd)</i>	<i>m (sd)</i>
Satisfaction with choice	6.26 (0.99)	6.17 (1.14)	6.43 (0.85)
Social dissuasion	2.71 (1.47)	2.75 (1.46)	2.61 (1.51)

The absence of work at anti-social times was also significant for the teachers of female-dominated programs, as several mentioned such working conditions. This may explain why larger proportions of people that become teachers of these programs proceed to higher education to change career. For example, an advantage mentioned by a Health and Social Care teacher was “Never again being called on a Christmas Eve night” and another mentioned: “No evenings and weekends”. The advantage of avoiding heavy industrial work that can result in injuries was also mentioned by 18 percent of the informants. One Vehicle and Transport teacher stated: “... I began to feel that my body was starting to hurt more and more”. This quotation reflects a general opinion that injuries, aches and pain may influence a career change to VET. Andersson et al. (2013) also suggest that becoming a VET teacher is a common Plan B when injuries force workers to change their occupations.

## Discussion

In accordance with the aim to identify and understand factors that motivate individuals to choose VET teaching as a second career in Sweden and the three RQs, the results are discussed in this section under the following headings: *FIT-Choice scale in the Swedish VET context*, *Swedish VET teachers' motivational determinants* and *Differences in motivational determinants*.

### FIT-Choice Scale in the Swedish VET Context

Cronbach's Alpha values were at least 0.7 for 14 of the 16 constructs of the FIT-Choice scale (Table 3), indicating that it has acceptable internal consistency for exploring reasons for Swedish VET teachers' choices to change career, although it was originally used to survey initial-career teachers' reasons (Berger and D'Ascoli, 2012). The two constructs that did not meet the Alpha criterion, *Expert career* and *Opportunity*, were not further considered. *Opportunity* was included in the FIT-Choice scale by Berger and D'Ascoli (2012) to replace the construct *Fallback career*. This change was clearly not suitable in the context of our study. However, questions about opportunity are probably not completely irrelevant because of earlier indications that opportunity and chance might be important (Bernier, 1989). Thus, further development of questions related to the construct is required to fit this educational context.

The lowest  $\alpha$ -value (0.543) was obtained for the construct *Expert career*, probed using just two questions. This may be because  $\alpha$ -values tend to be low when too few questions are used to assess a construct (Frisk, 2021). So, a proposal for further use of the *Expert career* construct in the FIT choice scale in VTE contexts is to add another related question to potentially raise the internal consistency. In sum, the FIT-Choice scale fits the Swedish VTE context very well and thus is a promising tool for investigations of motivational determinants.

## Motivational Determinants of Swedish VET Teachers

This study shows that there is obvious variation in Swedish VET teachers' ratings of factors influencing their choice to become a teacher. The motivational factor with the highest mean (5.98) score was *Intrinsic career value*, concerning participants' feelings about teaching. This is consistent with previous findings (Berger & D'Ascoli, 2012; Berger & Girardet, 2015; Jehee et al., 2020; Stellmacher et al., 2020). Factors of a more altruistic type, such as *Shape future of youth/Make social contribution* (5.64) and *Enhance social equity* (5.12) were also highly rated. This may be partially due to the common portrayal of VET students in the public discourse in Sweden as having pedagogical difficulties and special educational needs (Björk-Åman et al., 2021). Many VET teachers have made the same journey through the educational system as their students and are now willing to help them form a brighter future in working life and as citizens.

In accordance with Stellmacher et al. (2020) and Struyven et al. (2012) we found that extrinsic factors such as *Job security* (4.31) and *Time for family* (3.69) were less important factors ( $m=4.31$  and  $3.69$ , respectively). This could be regarded as a very promising finding as an old saying in Sweden is that 'You only become a teacher for the long summer holidays'. Clearly, as Struyven et al. (2012) note, it is far better if people choose to become teachers for long-term commitments and a genuine interest in teaching and helping adolescents. Equally clearly, this does not explain the differences between programs with high and low proportions of certified teachers, which can be seen as an overall pattern in making a second career choice to become a VET teacher. Instead, other aspects, such as daytime work rather than shift work, and better working environments, in combination with family situations, may be explanatory factors. However, effects of such factors may be at least partly rooted in historical gender definitions and occupations rather than the urge to become a teacher. Thus, the skewed traditional divisions regarding who does and does not work in different occupations, and their impacts, require further investigation.

Moreover, responses to the open-ended questions included the comments that "Age took its toll ... Hard to get new interesting jobs after 50". As more than 56 percent of VET teachers in Sweden are over 50 years old (Swedish National Agency for Education 2019), becoming a VET teacher can be seen as an option regardless of interest in education. Thus, choosing a second career as a VET teacher can also be seen as a chance to secure income. Nevertheless, many informants highlighted the advantage of VET teaching as "a good opportunity to get away from the heavy work in the workshop but still be active in the industry". Thus, the change may not be very large due to the ability to stay in a previous community of practice as a VET teacher. This raises a key question: What factors motivate decisions not only to become a VET teacher but also to seek an academic education and become a certified VET teacher? Our results indicate that they vary. Better salary and working hours may be strong motivators for teachers of female-dominated programs, thus, *Extrinsic* motivation (Fray & Gore, 2018) to become a teacher is related to flexible working hours and balancing work and family. So, being able to remain in the original profession tends to attract respondents in male-dominated programs. However, this does not explain why some, but not others, want to obtain academic qualifications. Another aspect is that the females tend to have obtained higher upper secondary school grades (Graetz & Arizo, 2019) and thus may be less stressed about enrolling for higher VTE education. Another significant

factor is that teachers of programs with relatively high proportions of certified teachers are also younger (Table 1). Thus, the likelihood of becoming a certified VET teacher may be enhanced by early career changes, and better working hours and salary may be triggers in early stages, while inability to remain in the first profession may be more important later in working life, when acquiring VTE is more problematic.

## Differences in Motivational Determinants

The results clearly show differences in motivational factors related to gender, proportion of qualified teachers, and age. Teachers of programs with a low proportion of qualified teachers tended to rate most constructs less highly than teachers in the *high certification* group. A contributory, age-related, factor may be that high motivation to enter higher education in the form of VTE is an association between recent completion of upper secondary education and insights into educational matters. Another aspect is that programs with a high percentage of certified teachers are female-dominated, and female respondents tended to mention the better working hours and conditions as triggers to enter higher education.

Among motivational factors (Table 4), *intrinsic career value* was the most highly rated construct by both the *high* and *low certification* groups, but it was more highly rated by the former group (mean values: 6.35 and 5.79 on the 7-grade scale, with standard deviations of 0.65 and 1.23, respectively). In contrast, job security was rated more highly by the *low certification* group than the *high certification* group (mean values 4.45 and 4.04, respectively), indicating that the latter are less worried about losing their employment. Stellmacher et al. (2020) argue that this construct is a rare motivational factor when making a second career choice, but our results suggest that it has some impact, especially for teachers of programs with low proportions of certified teachers. So, the constructs need to be understood and interpreted as some aspects (e.g., *Job security*, *Time for family*, *Prior teaching and learning experiences*, and *Social influences*) may be more important than a low rating indicates.

In conclusion, factors that motivate a career change are highly dependent on former occupation and working conditions. So, is it possible to increase the *low certification* group's motivation to obtain formal qualifications? Factors such as age and gender are difficult to affect. However, many informants stated that maintaining connections with their previous occupation was important when entering the educational field, so closer collaboration between schools and relevant occupational sectors may assist attraction of potential VET teachers. Notably, the Swedish education system has long been governed by political ideas and the latest reform in 2011 hampered VET students' ability to enter higher education since upper secondary students cannot apply for VTE without extended academic studies (Swedish National Agency for Education, 2020). So, since 2011 many former upper secondary students have needed to proceed with further academic studies as adults at upper secondary level in order to be qualified for higher education. Thus, the gap between being an occupational practitioner and becoming a certified VET teacher has been widened by political decisions. This may also partially explain the higher proportions of certified teachers associated with programs dominated by females, as they

generally have higher grades from upper secondary school (Graetz & Arizo, 2019), and hence smaller bridges to cross into higher education and VTE.

The informants' ideas of teaching's demands and value can provide useful insights into both their profession and motivations for joining it. Ratings of the *high* and *low certification* groups for the construct *High demand* were 5.70 (sd=0.90) and 5.29 (sd=1.12), respectively. So, there is an apparent correlation between proportions of certified teachers and valuation of the educational mission. The *Social status* construct was also rated more highly by the *high certification* group, presumably because their previous occupations have lower status in Sweden. Thus, these teachers' social status rises and the construct is a significant factor in the decision to become a certified VET teacher. These findings are also consistent with the conclusion by Berger and D'Ascoli (2012) that suitable persons have interest in their professional field as well as professional commitment.

Regarding social status, teachers of programs that have successfully recruited, in some way, high proportions of certified teachers also rated *Satisfaction with choice* (of VET teaching) more highly than the *low certification* group (mean=6.43, sd=0.85 and mean=6.17 and sd=1.14, respectively). Regardless of whether this is related to programs or occupational sectors, satisfaction clearly correlates with educational preferences associated with traditional patterns in each industry. For example, healthcare is traditionally a highly regarded profession in society and many employees take various academic courses as parts of career paths in the sector (National Board of Health & Welfare, 2021). However, this is less common in the industries associated with programs with low proportions of certified teachers. So, traditional patterns of different industries affect VET teachers' willingness to proceed to higher academic education such as VTE.

## Conclusions and Further Research

Results of this study have several implications. They show that the FIT-Choice scale has adequate reliability for collecting relevant data in Swedish VET settings. In addition, the participants represented all the Swedish VET programs and use of the national study-administrative system LADOK for sampling proved to be useful, despite a low response rate. A similar sampling procedure in conjunction with in-depth interviews may provide further valuable information regarding factors motivating choices of a second career. The results also corroborate concerns that previous political reforms may have further eroded potential future VET teachers' ability to engage in higher education. Thus, new reforms that enable higher education and collaboration between schools and relevant occupational sectors may help efforts to identify suitable persons and increase numbers of certified VET teachers.

In overall, the study contributes to understanding of motivational factors of persons entering higher education, which is needed to develop knowledge in an era of industries wanting highly skilled employees.

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## Declarations

The authors have no competing interests to declare that are relevant to the content of this article.

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