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To cite this article: Kristiina Ojala , Ulpukka Isopahkala-Bouret & Mervi Varhelahti (2021) Adult graduates' employability and mid-career trajectories after graduation with Finnish UAS Master's degree, Journal of Education and Work, 34:1, 67-80, DOI: [10.1080/13639080.2021.1875125](https://doi.org/10.1080/13639080.2021.1875125)

To link to this article: <https://doi.org/10.1080/13639080.2021.1875125>



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Published online: 24 Jan 2021.



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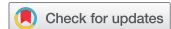
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Adult graduates' employability and mid-career trajectories after graduation with Finnish UAS Master's degree

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ABSTRACT

Graduate employability research typically focuses on young graduates' entry to the labour market. Little is known about the careers of adults who attain higher education degrees in mid-life. This article explores Finnish University of Applied Sciences (UAS) Master's degree graduates' mid-career trajectories using retrospectively collected longitudinal survey data (N = 1025) on their employment relations, transitions and career breaks. The specific research questions are as follows: (1) What are the types of mid-career trajectories of the adult graduates with Finnish UAS Master's degree? (2) What is the prevalence of the different career trajectories among the sample of graduates? (3) In what ways different career trajectories are able to take advantage of graduation with a Master's degree? As a result, we recognised five types of mid-career trajectories: rising career, renewing career, entrepreneurial career, continuous career and unstable career. Adult degrees can re-orient and enhance different career trajectories, e.g. by providing formal qualifications, new expertise and entrepreneurial skills, as well as by validating prior experience. Understanding the nature of career trajectories of adult graduates at a Master's level is interesting not only in the Finnish but also in the international context and this study opens up a rich array of opportunities for further studies.

ARTICLE HISTORY

Received 17 January 2019
Accepted 11 December 2020

KEYWORDS

Adult graduates; graduate employability; mid-career trajectory; Master's degree; career typology research

Introduction

Graduate employability research typically focuses on young graduates' ability to get a foot in the door of the graduate labour market and the progress of their early careers (Akkermans and Kubasch 2017). Little is known about the careers of adults who attain higher education degrees in mid-life. There are an increasing number of graduates, especially those who attend Master's programmes, who are employed prior to attending university and study part time while working (Jamieson et al. 2009; Vuorinen-Lampila 2018). There are Master's programmes specifically dedicated to adults, in which eligibility requires a certain number of years of professional experience (Posselt and Grodsky 2017; Arene 2016; Ojala 2017).

The award of a Master's degree frequently leads to high expectations for professional career advancement (Vuorinen-Lampila 2018). A Master's degree and advanced professional education provide economic advantages in comparison with Bachelor's degree graduates (Posselt and Grodsky 2017). However, despite the fact that graduates typically attempt to gain the best relative position possible in the educational distribution with respect to his or her talents and opportunities (Van der Ploeg 1994), it is unclear whether a degree has a different resource value for adult graduates.

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Not all adult graduates will apply for the types of jobs that justify the premium costs of higher education (Tomlinson 2007; Vuorinen-Lampila 2018). For example, the most commonly reported benefit of higher education for adults is not necessarily increased income because they have, in general, already established employment and high income compared with younger graduates (Ojala 2017; Jamieson et al. 2009). They still perceive, more often than not, higher education credentials as necessary for enhancing employability (Siivonen and Isopahkala-Bouret 2016).

A question remains, however, regarding whether the careers of adult graduates change after graduation. The purpose of this study is to explore the variety of adults' mid-career trajectories after graduation, and the way they take advantage of a graduate degree.

Adult graduates' employability and career advancement

Traditionally a 'career' has been associated with transitions from one job to another in a forward and upward orientated way, so eventually, career progression provided a higher status in the organisational hierarchy. A graduate degree is important for mid-career transitions, particularly in entry to managerial and professional jobs (Isopahkala-Bouret 2015). Graduation with an advanced degree can allow adults to change jobs or gain new responsibilities in the job they already occupy; thus, it can enhance their career mobility and progress, or alternatively, their employment stability (Kinos and Rousu 2017; Siivonen and Isopahkala-Bouret 2016; Jamieson et al. 2009; Brennan et al. 2000).

These findings resonate with what is known, in general, about the economic benefits of higher education. Individuals with higher education receive a 'graduate premium' in the form of higher wages, improved status, increased opportunities to advance in occupational careers and to move up the socioeconomic ladder and a lower likelihood of unemployment (Baum, Ma, and Payea 2013; Brynner et al. 2002, 30). However, there is a commonly held view that the more graduates there are, the more the economic- and career-related benefits will spread among them at a lower level due to the 'ceiling effect', and thus the average return of higher education might be expected to decline¹ (Brynner et al. 2002, 30). Not all adult graduates will benefit from their new degree.

Although adult graduates' careers have received relatively little attention in earlier research, theories developed to understand the 'adaptability' and 'multi-directionality' can be used to understand the variety of their post-graduate trajectories. Career conceptions have shifted to perpetually changing, flexible and adaptive career patterns and possibilities. (Clarke 2009; Baruch 2004.) New career conceptions include aspects of expertise renewal, social networking, personal transformation and choice as part of career development. Baruch (2004) labelled this new kind of career system as a multi-directional career – people can (or must) choose from a number of options, and there is no single way for achieving career success.

The emergence of new career conceptions reflects uncertainty and unpredictability in the dynamic labour markets, such as an increase of projects and teamwork, as well as growing diversity in individual skills, lifestyles and expectations (Baruch 2004; Järvensivu 2014).² Adults in the mid-career have to acquire an updated skill set, undertake formal studies and engage in lifelong learning in order to be competitive in the labour market (e.g. Clarke 2008; Jamieson et al. 2009; Siivonen and Isopahkala-Bouret 2016). Moreover, the twenty-first century has witnessed an increase in part-time work, contingent work, 'gig' work (e.g. freelance or contract work), self-employment and multiple job holding (Akkermans and Kubasch 2017; Järvensivu 2014). As a result, also the graduate employability has become more complex (Teichler 2018).

In some prior studies on graduate employability, 'career path' or 'career trajectory' is used simply as an organising term to identify different pursuits in a labour market history (e.g. Kivinen, Nurmi, and Kanervo 2002; Edgar et al. 2016). In other studies, career is understood as a broad concept combining the objective career steps with subjective perceptions and reflections on career outlook (e.g. Kyhä 2011). In this study, we use the term 'career trajectory' to emphasise the progressive and changing nature of careers. Career trajectories emphasise not only a hierarchical progression but also the idea of moving in different directions in/between organisations and also between employment,

unemployment and education (cf., Sullivan 1999). Indeed, multi-directional career trajectories can move forward or backward, they can remain static or involve sideways moves, changes of direction and changes of aspirations (Baruch 2004). All these trajectories can provide inner satisfaction and autonomy, although they are not recognised by the objective career success measures, such as income, job title and status.

Research context and questions

As Akkermans and Kubasch (2017) suggest, one prominent avenue for career research is the study of specific career paths of certain target groups. In this study, we will focus on graduates with a Master's degree from Finnish Universities of Applied Science (UAS). The Finnish UAS Master's degree, established in 2005, is an advanced degree that provides qualification at the same level as the Master's degree from universities, although it differs in specific content and structure (Ojala 2017). The degree programmes consist of 60 or 90 European Credit Transfer and Accumulation System (ECTS) credits and require 1.5–2 years to accomplish as a part-time degree (Neuvonen-Rauhala 2012).

The UAS Master's degree programmes are professionally oriented and the thesis work, for example, is a work development project (Neuvonen-Rauhala 2012). There is a requirement of 2 years of work experience after Bachelor's degree, which is a uniquely Finnish feature (Ammattikorkeakoululaki 14.11.2014/932; Arene 2016). All participants in the programme are, therefore, by definition, adult graduates. The average age of UAS Master's degree graduates is 39 years (OKM 2019).

Until today, prior research on employment situation and labour market return of Finnish graduates has focused principally on Bachelors' degree in UAS sector (e.g. Böckerman, Haapanen, and Jepsen 2015; Korhonen, Mäkinen, and Valkonen 2001) and Master's degree in university sector (e.g. Kivinen, Nurmi, and Kanervo 2002; Puhakka and Tuominen 2011; Rouhelo 2008). Finnish universities have collected systematic career monitoring data of the Master's degree graduates already for 10 years (https://www.aarresaari.net/career_monitoring) and UAS has started a similar career monitoring of Bachelor's and Master's degrees in 2019 (<http://uraseurannat.wordpress.tamk.fi>). The employability and careers of UAS Master's degree graduates have not been extensively studied (see, however, Ahola and Galli, L. 2012; Kinos and Rousu 2017; Ojala 2017; Ahonen and Rouhelo 2020). This might be because the degree is relatively new and the number of the UAS Master's degree graduates is rather small. By the end of 2019, the total number of graduates was 24 996 (Vipunen 2020). However, the number of graduates' is increasing year by year.

In this study, our purpose is to explore the UAS Master's degree graduates' mid-career trajectories using retrospectively collected longitudinal survey data (N = 1025) on their employment relations, transitions and career breaks. The specific research questions are as follows:

- (1) What are the types of mid-career trajectories of the adult graduates with Finnish UAS Master's degree?
- (2) What is the prevalence of the different career trajectories among the sample of graduates?
- (3) In what ways different career trajectories are able to take advantage of graduation with a UAS Master's degree?

Research data and methods

Graduate survey

We collected data on career trajectories through a large-scale graduation survey (N = 1025). We surveyed the graduates' work histories after completing the UAS Master's degree programme and used each person's job sequence as a basic datum, including unemployment intervals and transfer outside of the workplace (see Spilerman 1977). The retrospective collection of longitudinal data has

become an established method in social research for obtaining information about key events in a life course (Elliott 2005). It is efficient way of collecting detailed longitudinal data.

In the survey, the respondents were able to use an open-ended, written statement form to record the different phases of their career development following graduation. They recorded all the main activities they had been involved in since the attainment of the UAS Master's degree, up to the answering date of the survey questionnaire. In this way, an accurate self-recording of the early stages of the post-graduate career trajectories was obtained. In addition, for each main activity, the survey asked the respondents to provide 1) his or her principal activity,³ 2) profession or occupation, 3) date the employment/activity started (month/year), 4) date the employment/activity ended (month/year), 5) the employer,⁴ 6) the job position,⁵ 7) whether work corresponded with education in terms of level of job position and 8) whether work corresponded with education in terms of field. The respondents were asked to answer yes or no for items 7 and 8.

As indicated above, the respondents were asked to evaluate the correspondence of their employment and level of education. Placement from education to work is usually evaluated as the correspondence between the level and field of education and work. In this study, the examination of the correspondence of work and education was based on the self-assessment of the graduates. In the questionnaire, the graduates assessed for each of their reported employment relationships whether the job in question was equivalent to the level and the field of the acquired UAS Master's degree. This was to see whether a graduate had reached a job for which the expected level of education is a Master's degree (Kyhä 2011, 142–143).

Respondents

The survey respondents were Master's degree graduates' from 17 Universities of Applied Sciences from all around Finland, with wide-ranging regional coverage. The respondents graduated within the period of 2006–2011, and the survey data were collected in 2012 (i.e. they had graduated 1 to 5 years earlier). The respondents represented three major fields of study in UAS Master's programmes: technology and transport, business and administration and social services, health and sports. Table 1 summarises the background information of the respondents.

Analysis methods

In our analysis, we relied on the tradition of career typology research based on cross-sectional survey data (See especially: Rouhelo 2008; Kyhä 2011). As Spilerman (1977) observes, career trajectories can be constructed from work histories by seeking patterns and classifying types of career. In this study, we created a typology of mid-career trajectories by classifying the content of the career survey into a small number of relatively homogeneous categories and subgroups with respect to their main features (Spilerman 1977, 590). We examined the career trajectories of the graduates from the point of view of employment, unemployment and transfer outside of work. As far as employment was

Table 1. Background information of the survey respondents: gender, age and fields of study.

		f	%
Gender	Man	409	38
	Woman	683	62
Age	Under 35 years old	211	20
	35–44 years old	411	39
	45–54 years old	355	33
	55 years or older	84	8
Fields of study	Field of technology	359	33
	Field of business	247	23
	Field of social services and health	486	44

concerned, we examined different employment relations, their number, frequency and quality in the timeframe following graduation (e.g. Rouhelo 2008, 120–121.)

In addition, we quantified the prevalence of each career type in our data (i.e. the frequencies and percentages were calculated). The quantification was part of the classification of the career types and not aimed at the generalisability of all UAS Master's degree graduates. We were interested in how different career types were distributed in our data sample. In addition, the frequencies and percentages increased the accuracy and reliability of the classification, added value to the exploration of the categories, and made the analysis process more transparent for the reader (Silverman 2006).

In modelling types of career trajectories, the emphasis was placed on the beginning of the post-graduation career. More precisely, we looked at whether there had been any career change within 1 year after completing the UAS Master's degree in comparison to changes that happened over a year/several years after graduation. This is because the degree has a more direct impact on career advancement relatively soon (within a year) after graduation. A 'ceiling effect' can be seen in the 'graduate return' obtained in the period after leaving higher education. Later, other factors, such as work experience, also influence career development, reducing the effect of higher education (cf. Brynner et al. 2002, 52.)

Limitations

The data in this study were survey data of the graduates within the period of 2006–2011 and thus were not register based. The response rate in this study was 36%. In the 2000s, many surveys were characterised by response rates below 50% (Laaksonen, Matikainen, and Tikka 2013). It was not possible to perform deficiency analyses by comparing the background variables of the respondents and the non-respondents. Thus, we acknowledge that our data sample is not representative and that the types of career trajectories may be represented differently in our data sample than what their prevalence with respect to the total population of the UAS Master's degree graduates is. Moreover, it is worth noting that in total the respondents (N = 1025) in this study are only 21% of the number of graduates with UAS Master's degree (N = 4911), from all fields, in years 2006–2011 when our respondents graduated (Vipunen 2020).

For the reason of increasing the relevance of this study, an analysis of the content coverage was performed in as much detail as possible. The researchers may have already had a relatively large amount of advanced information regarding the subject (Laaksonen, Matikainen, and Tikka 2013.) Our data have rather equal coverage of the sample for the graduates from the selected major fields of the UAS Master's degrees, which increase the reliability of our findings (Laaksonen, Matikainen, and Tikka 2013). For example in 2012, when the survey was conducted, the number of UAS Master's degree graduates from the field of business was 342, from the field of technology 390 and from the field of social services and health 633 (Vipunen 2020). Moreover, in regards to our research questions one and two, our overall sample size (N = 1025) is much larger than what previous studies have used in similar career typology research (See Rouhelo 2008; Kyhä 2011).

When selecting a retrospective research design to collect the information from the respondents' career histories, we realised that a disadvantage of the design was that graduates might not remember the past accurately enough (Elliott 2005). We also could not identify jobs from the start of each respondent's career, only the self-reports of their jobs after graduation with the UAS Master's degree. As a result, we may have been comparing graduates at different points in their career trajectories (Edgar et al. 2016, 362). In addition, it must be taken into account that the respondents were dissimilar in age (See Table 1), which could have an impact on their rates of career advancement (Spilerman 1977, 560–561).

Mid-career trajectories of graduates with a UAS Master's degree

Our analysis produced five types of career trajectories, which we named as follows: rising career, renewing career, entrepreneurial career, continuous career and unstable career⁶ (See Table 2). First, in

Table 2. Types of mid-career trajectories of the graduates.

Rising career
<ul style="list-style-type: none"> ● Professional mobility is vertical ● Permanent full-time or temporary full-time employment; mostly permanent employment ● Work tasks correspond to the level of education and to the field of education, at least as the career progresses
Renewing career
<i>Permanent employment after completing the UAS Master's degree</i>
<ul style="list-style-type: none"> ● Working in two or more jobs ● Temporary full-time employment changes into permanent full-time employment after graduation ● Professional mobility is horizontal; sometimes, it also changes hierarchically from one level to another ● Work tasks correspond mainly to the level of education and to the field of education
<i>Change/renewal of employment after completing the UAS Master's degree</i>
<ul style="list-style-type: none"> ● Working in two or sometimes more jobs ● Mainly permanent full-time employment ● Professional mobility is horizontal; sometimes, it also changes hierarchically from one level to another ● Work tasks correspond mainly to the level of education and to the field of education ● There may sometimes be unemployment at the beginning of the career
<i>Career after completing the UAS Master's degree</i>
<ul style="list-style-type: none"> ● Starting to work in a new job after graduation, mainly one permanent full-time employment ● Work tasks correspond mainly to the level of education and to the field of education
Entrepreneurial career
<ul style="list-style-type: none"> ● Becoming an entrepreneur soon after completing the UAS Master's degree or working as an entrepreneur already before completing the UAS Master's degree, and this entrepreneurial career continues after degree completion ● Entrepreneurship corresponds mainly to the level of education and to the field of education
Continuous career
<ul style="list-style-type: none"> ● In the same career as before completing the UAS Master's degree ● Working in one mainly permanent full-time job ● Employment has begun before the completion of the UAS Master's degree, often years before ● Work tasks correspond mainly to the level of education and to the field of education
Unstable career
<ul style="list-style-type: none"> ● Working in several jobs ● Based mainly on temporary full-time and/or temporary part-time employment ● Professional mobility is horizontal or changes hierarchically from one level to another ● There are both work tasks that correspond and do not correspond to the level of education and to the field of education ● There is in some cases unemployment or studying at different career stages

the rising career graduates were advancing hierarchically in their careers. Second, the renewable type of career trajectory involved one of the three sub-types: temporary contract changed to permanent employment relationship, a new job started after full-time studies or a person changed places of work. Third, those with the entrepreneurial career path became entrepreneurs soon after completing the UAS Master's degree or were already working as entrepreneurs before completing the programme. The fourth type, the continuous career, contained the graduates who had only been in one long-term employment relationships before and after graduation. The final career type was the unstable career, in which the graduates had many different jobs and temporary employment relationships.

We present the prevalence of these five types of mid-career trajectories among our respondents in [Table 3](#). In our data sample, 15.9% of the UAS Master's degree graduates were placed in the rising career category, while 29.4% were in the renewing type career trajectory. Only 2.4% of the graduates were placed in the entrepreneurial career trajectory. The majority of the sampled graduates were in the continuous career category (42.7%). The final type of career trajectory was the unstable career, in which 8.1% of the respondents were placed.

The following sections provide a detailed description of the types of mid-career trajectories of the graduates with UAS Master's degrees and how they were able to take advantage of graduation.

Rising career

The main characteristic of the rising type of trajectory was that the graduates progressed in their careers vertically and into more challenging work tasks. A majority of the graduates in this career

Table 3. Prevalence of career trajectories among the survey respondents (%).

Rising career 15.9% (n = 160)
<ul style="list-style-type: none"> ● Career advancement has occurred within a year after completing the UAS Master's degree: 61.3% (n = 98); or over a year/several years after graduation: 38.8% (n = 62) ● 2.5% (n = 4) report that their work does not correspond to their level of education
Renewing career 29.4% (n = 295)
<i>Permanent employment after completing the UAS Master's degree, 9.8% (n = 29)</i>
<ul style="list-style-type: none"> ● Temporary full-time employment changes into permanent full-time employment after graduation within a year: 51.7% (n = 15); or over a year/several years after graduation: 48.3% (n = 14) ● 10.3% (n = 3) report that their work does not correspond to their level of education
<i>Change/renewal of employment after completing the UAS Master's degree, 63.4% (n = 187)</i>
<ul style="list-style-type: none"> ● Change/renewal of employment within a year after graduation: 62% (n = 116); or over a year/several years after graduation: 38% (n = 71) ● 18.2% (n = 34) report that their work does not correspond to their level of education
<i>Career after completing the UAS Master's degree, 26.8% (n = 79)</i>
<ul style="list-style-type: none"> ● 20.3% (n = 16) report that their work does not correspond to their level of education
Entrepreneurial career 2.4% (n = 24)
<ul style="list-style-type: none"> ● Have become an entrepreneur soon after completing the UAS Master's degree: 54.2% (n = 13) ● Working as an entrepreneur already before completing the UAS Master's degree, and career continues after completing the degree: 46% (n = 11) ● 12% (n = 3) report that entrepreneurship does not correspond to their level of education
Continuous career 42.7% (n = 429)
<ul style="list-style-type: none"> ● 25.9% (n = 111) report that their work does not correspond to their level of education
Unstable career 8.1% (n = 81)

trajectory moved upward within 1 year after completing the Master's degree (see Table 3). For graduates in this rising career type, it can be said that the degree has achieved its promise (e.g. Baum, Ma, and Payea 2013). Hopes of advancing in one's career were visible in the study of Ahola and Galli, L. (2012), which revealed that many of the UAS Master's degree graduates were goal-oriented in their career development. The graduates had applied for the education programme because they had a career goal they wanted to realise, and they used education as a means of accomplishing their career objectives. Graduates thought that education would be wasted if they could not utilise it in their career progression.

The rising career trajectory included transitions from operational-level positions to different kinds of expert positions, as well as from expert position up to the middle and top managerial positions. Especially in public health care and social services, Master's degree is a requirement for advancing to managerial jobs; therefore, graduation with UAS Master's degree will benefit many women who work in that sector (Ahonen and Rouhelo 2020). Despite the actual job position, almost everyone in this career trajectory perceived that their advanced work duties corresponded well with their level of education. The desire to move forward is also reflected in our analysis in that sense that, for some of the graduates, their employment had shifted from permanent to temporary when they advanced in their careers. Therefore, they had been prepared to take temporary employment instead of permanent work and employment stability in order to move up in their careers.

Renewing career

The renewing type of career trajectory involves renewing one's career through new employment relationships, jobs or places of work. In this career type, we identified three different variations of renewing career trajectories. The first sub-group included graduates who did not change a job, but whose employment contract changed from temporary to permanent and, despite a few exceptions, graduates reported that the permanent employment corresponded with their level of education. This may be seen as an example of 'social contract' between employers and employees (Tomlinson

2012). The employees develop their skills to meet the needs of the employer, and this may be rewarded by a permanent job.

The second sub-group of the renewing career trajectory included graduates who changed to another job after graduation. Most of them changed within a year after graduation and some found a new job after a year (See more details in Table 3). The second sub-type of the renewing career trajectory is somewhat similar to the 'mobile career' of Finnish university graduates (Kivinen, Nurmi, and Kanervo 2002; Rouhelo 2008). The third sub-group consisted of graduates whose new employment had followed full-time studies and begun immediately after the completion of the UAS Master's degree programme. Full-time studies indicate that adults may have exit their old professional careers prior to the Master's degree studies. However, UAS Master's degree is not primarily used to change from one profession to another (Ahonen and Rouhelo 2020). In this last renewing type, the graduates stayed in one employment relationship after graduation, which may be due to the fact that they had found a corresponding job and elected to stay there.

It can be assumed that a completed Master's degree and the competence gained during the programme led to a permanent or new employment relationship. The degree itself and the acquired expertise ensured the employment relationship and also maintained the employability of the graduates. In particular, this can be seen in the case of the graduates whose employment relations changed within 1 year after completing the degree. Ojala's (2017) study revealed that the graduates benefited most from completing the UAS Master's degree programme because it increased their job-specific skills and led to growth in their general abilities. Employers were also satisfied with how the education responded to the requirements of working life (Ojala 2017). However, in our sample, one fifth of graduates in the renewing career trajectory started in a new job that did not correspond with the Master's level of education (see Table 3).

Entrepreneurial career

The entrepreneurial career trajectory was characterised by the private enterprise of the graduates (c. f., Kivinen, Nurmi, and Kanervo 2002). Promoting entrepreneurship is one of the major tasks of UAS in Finland (e.g. Honkanen and Ahola 2003). For example, in the joint entrepreneurship strategy for UAS, the goal is that one of every seven graduates of UAS will begin an entrepreneurial career within 10 years of graduation (OPM 2009, 26). Overall, in Finland, higher education-based entrepreneurship has been strongly promoted in the policy goals in the 2000s (OKM 2015). However, despite the strategies and policies, the number of graduates with entrepreneurial careers among our sample is low. The national statistics on the entrepreneurial careers of UAS Masters' graduates in Finland (2012–2016) support this finding (Vipunen 2020). It is noteworthy that the survey did not take into account part-time entrepreneurship, although almost half of the entrepreneurs are part-time in Finland (Lith 2010).

The advantage that the entrepreneurial career trajectory may take from graduation with the UAS Master's degree is the capacity and maybe the courage to start entrepreneurial careers, as some have started a private enterprise after graduation. The degree may have also strengthened the graduates' ongoing entrepreneurial careers. In the study of Kivinen and Nurmi (2007) the graduates who worked in an occupation that was closely related to their field of study tended to be more often self-employed than those who worked in an occupation that was not closely related to their studies. This is largely because access to some independent professions requires graduation from a certain field of study as an entry qualification. However, the low number of full-time entrepreneurs among graduates raises a question regarding how entrepreneurship is integrated into the learning processes in the UAS Master's programmes. Does it encourage graduates to pursue entrepreneurship? Assumingly, the degree programme may have been tailored to better meet the needs of employers and employees rather than those of entrepreneurs. There has been a need to increase the professional expertise of the employees and to develop the pathways for continuing education (Ojala 2017). Most of the students were already working professionals and

could utilise their working environments and networks when developing their competences (Arene 2016).

Although attitudes towards entrepreneurship have become more positive in Finland, very few people see entrepreneurship as a worthwhile employment option (Honkanen and Ahola 2003). As Honkanen (2010) among the highly educated entrepreneurship is considered a more difficult way to earn an income instead of moving to the paid employment sector. Even so, the risks related to economic and political changes in working life may influence the willingness of adults to start a career as an entrepreneur. According to Kanervo (2006), highly educated graduates can become entrepreneurs when it is an appropriate means of employing themselves, demonstrating their competence or obtaining a better return on their education.

Continuous career

Individuals with this career trajectory experienced no change in career after graduation. In other words, the graduates were working in the same career/job as before graduation. They worked in one mainly permanent full-time job, and their work tasks largely corresponded to the level and field of their education. This type of continuous career is close to what Kivinen, Nurmi, and Kanervo (2002) have defined as 'permanent career' and Rouhelo (2008) and Kyhä (2011) as 'stable career'. The difference is that for UAS Master's degree graduates, the continuous career trajectory may started years before the graduation, mostly even before starting their Master's programme.

One fourth of our respondents who were in the continuous career trajectory did not consider their work to correspond with their new level of education; Master's degree was an over-qualification. Some continued in operational-level jobs because they had had trouble to progress in career. Prior research has shown that the top reasons that prevent career mobility of UAS Master's degree graduates are a shortage of graduate-level jobs in the (regional) labour market and high job competition. Moreover, many UAS Master's degree graduates are loyal to their home region, have family obligations and, therefore, are not willing to move after work. (Ojala and Isopahkala-Bouret 2019.)

On the other hand, the reason that the graduates remained in the continuing trajectory can be explained by the fact that they never intended to move forward in their career. For example in Ojala's (2019) study men planned to change jobs less often than women, which was probably due to the men's better wages and position in working life already prior to graduation. Especially in the male-dominated sector of manufacturing and construction, employers have offered permanent contracts, which may increase the prevalence of continuing careers for men and graduates with technology major; in contrast in the female-dominated sector of health care and social services employers has offered mainly temporary employment (Larja 2019).

Although we could not identify visible career advancement, continuous career trajectory may benefit from graduation in some alternative ways. A great majority of graduates who were in the continuing career trajectory had a work that corresponded with their educational level, even though they had been in the same job prior to graduation (see Table 3). They had probably completed the UAS Master's degree to validate their already well-earned work experience and expertise with the degree (Isopahkala-Bouret 2015). Likely, the graduates already had established a good social position and reputation, and by completing the UAS Master's degree programme they acquired the associated educational level. Isopahkala-Bouret (2015) found that mid-age professionals wanted to earn a new Master's degree because such a degree was commonly demanded of people in their position – positions they already had prior to their graduate studies. In addition, it can be assumed that the degree also helps an individual to keep the job if, for example, there are redundancies in the workplace (Brennan et al. 2000).

Moreover, achieving a Master's degree in mid-career can also increase employability by improving self-confidence, self-understanding and identity, acquiring new friendships and contacts, changing attitudes and participation in organisations as well as improving know-how and work performance (e.g. Ojala 2017; Isopahkala-Bouret 2015; Ahola and Galli, L. 2012). It is also important to know that

employers sometimes suggest that their employees pursue UAS Master's degrees. For the employers, the degree programme provides a great opportunity for further education of the employees to meet the changes at work.

Unstable career

In Finland, 63.5% of total workforce has permanent full-time employment, while 9.9% work with full-time temporary contracts (Statistic of Finland 2017). In general, the stability of employment relationships of UAS Master's degree graduates is very strong (Statistics of Finland 2019). However, a minority of graduates in our study was placed in the unstable career trajectory, which was characterised by temporary, short-term employment and highly varied job assignments. These graduates' careers involved mainly temporary full-time and/or temporary part-time employment. Many had experienced also periods of unemployment. They also had work tasks that sometimes corresponded and sometimes did not correspond with the level of their education (See Table 3). This type of career trajectory reminds Rouhelo's (2008) 'unstable career' and Kyhä's (2011) 'mixed career'.

Here, the effects of the UAS Master's degree are most unclear and visible career advancement is unnoticeable. Precarious work and temporary employment contracts are not necessarily a problem. This may be due to the fact that the changing nature of work has become commonplace for some of the graduates. It should also be noted that careers are more contingent on the economic fates of the employing firms, and therefore heterogeneity across working lives has increased (Mayer 2001).

Discussion

Master's programmes at Finnish Universities of Applied Sciences are preparing their graduates towards career advancement and access to demanding expert jobs (Arene 2016). In this study, we have analysed the variety of career trajectories of UAS Master's degree graduates based on a large-scale graduation survey. Moreover, we were interested in which mid-career trajectories allowed the adult graduates to best take advantage of the Master's degree and which remained stable with no visible change. We identified five different career types: rising career, renewing career, entrepreneurial career, continuous career and unstable career. These trajectories had similarities with the career types of graduates with Master's degrees from Finnish universities (e.g. Kivinen, Nurmi, and Kanervo 2002; Kyhä 2011; Rouhelo 2008). However, the difference in comparison with young graduates was that the UAS Master's degree graduates had already a prior (Bachelor's) degree and a foot in the labour market; thus, career changes became a focus of our attention.

Among our sample of graduates, almost an equal number of graduates either made a career transition (vertical or horizontal) or remained in a same career trajectory as prior to graduation for different reasons. In particular, the promises of the UAS Master's degree programme were fulfilled in the rising career type; the graduates advanced in their employment, and their higher education led to upward mobility and more challenging work assignments. The renewable career is especially characterised by new kinds of horizontal (Kinos and Rousu 2017) as well as multidirectional career opportunities (see Baruch 2004). The graduates in these two types of career trajectories are able to benefit significantly from their completed degrees (Tomlinson 2007; Ojala 2017). For the continuous, entrepreneurial and unstable career trajectories, it was more unclear what the effects of graduation were. Nevertheless, as our analysis has shown, adult graduation may re-orient and enhance different career trajectories in multiple ways, e.g. by providing formal qualifications (rising career), new expertise (renewing career) and entrepreneurial skills (entrepreneurial career), and by validating prior experience (continuing career).

Further, we found that despite the type of career, a majority of graduates reported that their work tasks corresponded to the Master's degree-level qualifications they had obtained. Nevertheless, in our study, there were also respondents who did not perceive their work to correspond with their upgraded level of education, and this was emphasised in the continuing career trajectory (See Table

3). It is important to discuss the mismatches between the graduates' level of education and the demands of their jobs as well as the risk of over-education for many jobs that did not traditionally demand graduate-level qualifications (Tomlinson 2012; Kinos and Rousu 2017).

It is also good to note that the adult graduates may not be more closely tied to a particular career type; rather, there are several options and career trajectory can change with the graduate's life course and due to the rapid changes in the labour market. For example, unstable career type, which was still rather unusual, may become more common in the near future and will entail aspects of both the rising and renewing careers. From this point of view, understanding the nature of career trajectories of adult graduates at a Master's level is interesting not only in the Finnish but also in the international context, and will contribute to the development of new career conceptions (Baruch 2004; Clarke 2009).

As a main implication of our study, the mid-career typology will provide a conceptual tool for adult graduates' career guidance and counselling. More individualised focus on students' career aspirations during their studies could genuinely benefit graduates, their employers and at the same time increase the value of adult degrees in general. Moreover, higher education institutions need to align their graduate employability strategies along the dynamic changes in working life and career (Akkermans and Kubasch 2017; Järvensivu 2014). Different trajectories identified in this study make adult graduates' mid-careers visible and encourage higher education institutions, working life and students to better communicate with each other to reach a common understanding of the nature of Master's studies and graduate employability.

This study opens up a rich array of opportunities for further studies. The current career trajectories could be augmented with additional analysis on the field-specific differences on the prevalence of the types of graduate careers. Moreover, it needs to be further investigated how the graduates' attributes, such as age, gender, economic background and prior education relate to the evolution of career trajectories. In our study, we already acknowledged that there are differences in mid-career trajectories in female-dominated public sector (especially, health care and social services) and male-dominated private sector (e.g. technology). Finally, we recommend in-depth career interviews to be conducted as the research on mid-career trajectories and the benefits of adult graduation advances.

Notes

1. The alternative view is that the economy expands to accommodate graduates: the more graduates there are, the more high-level jobs are created (Brynnner et al. 2002, 30).
2. The emergence of new types of career patterns does not mean that all employment relations have changed. So-called normal employment relationships, i.e. full-time, permanent employment contracts, have remained the main form of labour market participation in Finland. The qualitative changes at work do not appear in statistics. (Vuorinen-Lampila 2018; Statistics of Finland 2017; 2013).
3. The respondent was asked to fill in the appropriate number: 1 = permanent full-time employment, 2 = temporary full-time employment, 3 = permanent part-time employment, 4 = temporary part-time employment, 5 = entrepreneur, 6 = full-time qualifying study, 7 = unemployment, 8 = parenting leave (maternity, paternity, parenting and/or child care leave), 9 = other.
4. The respondent was asked to fill in the appropriate number: 1 = state, government enterprise, 2 = municipality, public organisation owned by a group of municipalities, municipal enterprise, 3 = privately-owned enterprise, 4 = organisation, foundation, parish or the like, 5 = entrepreneur, sole trader or the like, 6 = other.
5. The respondent was asked to fill in the appropriate number: 1 = top-level manager, 2 = middle-level manager or other superior position, 3 = developing, planning or other expert position, 4 = educational, training or guidance position, 5 = operational-level position, 6 = entrepreneur, 7 = other.
6. We did not model the career types of the graduates who were outside the workplace (n = 15). These graduates had hardly any employment after graduation. They were typically unemployed or on family leave or they had transitioned to a full-time graduate student after completing a Master's degree. In addition, 21 of the respondents of the questionnaire did not respond to the question regarding career development.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the Academy of Finland [(HighEmploy) 2608069911]; The Finnish Work Environment Fund [117418].

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References

- Ahola, S., and L. Galli, L. 2012. "New Degree for a New Career? Career Development of Finnish Polytechnic Master's Degree Graduates." *Journal of Education and Work* 25 (5): 537–553. doi:10.1080/13639080.2012.718747.
- Ahonen, P., and A. Rouhelo. 2020. "Ylemmästä Ammattikorkeakoulututkinnosta Osaamista Ja Uusia Urapolkuja. [Competence and New Career Paths from UAS Master's Degree]." In *TALK Online Magazine*. Turku: University of Applied Science.
- Akkermans, J., and S. Kubasch. 2017. "Trending Topics in Careers: A Review and Future Research Agenda." *Career Development International* 22 (6): 586–627.
- Arene. 2016. "Master's Degree Studies in Universities of Applied Sciences as a Reformer of Expertise and an Educational Innovation". Arene ry. Accessed 26 October 2018. http://www.arene.fi/wp-content/uploads/Raportit/2018/arene_masters-degree-studies-in-universities-of-applied-sciences.pdf?t=1526901110
- Baruch, Y. 2004. "Transforming Careers: From Linear to Multidirectional Career Paths. Organizational and Individual Perspective." *Career Development International* 9 (1): 58–73. doi:10.1108/13620430410518147.
- Baum, S., J. Ma, and K. Payea. 2013. "Education Pays 2013. The Benefits of Higher Education for Individuals and Society." In *Trends in Higher Education Series*. New York: Collegeboard.
- Böckerman, P., M. Haapanen, and C. Jepsen, Discussion paper No. 9079. 2015. "Back to School? Labor-market Returns to Vocational Postsecondary Education." In *IZA, Forschungsinstitut zur Zukunft der Arbeit*. Germany: Institute for the Study of Labor.
- Brennan, J., J. Mills, T. Shah, and A. Woodley. 2000. "Lifelong Learning for Employment and Equity: The Role of Part-time Degrees." *Higher Education Quarterly* 54 (4): 411–418. doi:10.1111/1468-2273.00168.
- Brynnner, J., P. Dolton, L. Feinstein, G. Makepeace, G. Malmberg, and L. Woods. 2002. *Revisiting the Benefits of Higher Education*. Centre for Research on the Wider Benefits of Learning, Institute of Education. London. <https://researchonline.lshtm.ac.uk/id/eprint/11846>
- Clarke, M. 2008. "Understanding and Managing Employability in Changing Career Context." *Journal of European Industrial Training* 32 (4): 258–284. doi:10.1108/03090590810871379.
- Clarke, M. 2009. "Plodders, Pragmatists, Visionaries and Opportunists: Career Patterns and Employability." *Career Development International* 14 (1): 8–28. doi:10.1108/13620430910933556.
- Edgar, T., K. J. Silk, L. C. Abroms, T. B. Cruz, W. D. Evans, S. S. Gallagher, G. A. Miller, A. Hoffman, J. M. Schindler-Ruwisch, and S. E. Sheff. 2016. "Career Paths of Recipients of a Master's Degree in Health Communication: Understanding

- Employment Opportunities, Responsibilities, and Choices." *Journal of Health Communication* 21 (3): 356–365. doi:10.1080/10810730.2015.1080332.
- Elliott, J. 2005. *Using Narrative in Social Research. Qualitative and Quantitative Approaches*. London: Sage Publications.
- "Ammattikorkeakoululaki 14.11.2014/932. [UAS Law 14.11.2014/932]." Finlex data bank. Accessed 22 June 2020. <https://finlex.fi/en/>
- Honkanen, V. 2010. "Yrittäjäksi Ryhtyneiden Korkeakoulutettujen Työssä Menestyminen Viidessä Euroopan Maassa. [Graduate Entrepreneurs' Employment Success in Five European Countries]." In *Research Unit for the Sociology of Education*. University of Turku: RUSE.
- Honkanen, V., and S. Ahola. 2003. *Kulttuurin Koulutus Ja Uudet Urat. Ammattikorkeakouluista Kulttuurialalta Valmistuneiden Koulutuskokemukset, Työllistyminen Ja Yrittäjyys. [Graduate's Educational Experiences, Employment and Entrepreneurship in the Field of Culture of the University of Applied Sciences.]*. Turku: University of Turku.
- Isopahkala-Bouret, U. 2015. "Educational Credentialing of an Aging Workforce: Uneasy Conclusions." *Adult Education Quarterly* 65 (2): 83–99. doi:10.1177/0741713614564048.
- Isopahkala-Bouret, U. 2017. "Benefits of Higher Education in Mid-life: A Life Course Agency Perspective." *Journal of Adult and Continuing Education* 23 (1): 15–31. doi:10.1177/1477971416672807.
- Jamieson, A., R. Sabates, A. Woodley, and L. Feinsten. 2009. "The Benefits of Higher Education Study for Part-time Students." *Studies in Higher Education* 34 (3): 245–262. doi:10.1080/03075070802597010.
- Järvensivu, A. 2014. *Tarinoita Suomalaisesta Työelämästä [Stories of Finnish World of Work.]*. Helsinki: Työterveyslaitos.
- Kanervo, O. 2006. *Korkeasti Koulutetut Ja Työ. Valintojen Rationaalisuus Eurooppalaisessa Vertailussa. [Highly Educated and Working. The Rationality of Choices in European Comparison.]*. Turku: University of Turku.
- Kinos, S., and S. Rousu. 2017. "Mitä Kuuluu 10 Vuotta Täyttäneelle Sosiaalialan Ylemmälle Ammattikorkeakoulututkinnolle Ja Tutkinnon Suorittaneille Työelämässä?" [What's up to 10-year-old University of Applied Sciences Master's Degree in the Social Field and to the Graduate's in the Working Life?]. *Janus Sosiaalipoliittikan Ja Sosiaalityön Tutkimuksen Aikakauslehti* 25 (3): 257–265.
- Kivinen, O., and J. Nurmi. 2007. "Job Requirements and Competences: Do Qualifications Matter? in U. Teichler (Ed) *Careers of University Graduates. Views and Experiences in Comparative Perspective.*" In *Higher Education Dynamics*, 131–142. Vol. 17. Dordrecht, Netherlands: Springer.
- Kivinen, O., J. Nurmi, and O. Kanervo. 2002. *Maisteriopista Työuralle. Suomalaiset Korkeakoulutetut Eurooppalaisessa Vertailussa. [From Master's Education to Working Life. Finnish University Graduates in European Comparison.]*. Helsinki: Ministry of Education.
- Korhonen, K., R. Mäkinen, and S. Valkonen. 2001. *Sosiaali- Ja Terveysalan Tutkinnolla Työelämään. [Going into Working Life with a Degree of Social Services and Health]*. Jyväskylän yliopisto: Koulutuksen tutkimuslaitos.
- Kyhä, H. 2011. *Koulutetut Maahanmuuttajat Työmarkkinoilla. Tutkimus Korkeakoulututkinnon Suorittaneiden Maahanmuuttajien Työllistymisestä Ja Työurien Alusta Suomessa. [Educated Immigrants in Employment Markets. A Study on Higher Educated Immigrants' Employment Opportunities and Career Starts in Finland.]*. Turku: University of Turku.
- Laaksonen, S.-M., J. Matikainen, and M. Tikka, eds. 2013. *Otteita Verkosta. Verkon Ja Sosiaalisen Median Tutkimusmenetelmät. [Excerpts from the Net. Research Methods of Network and Social Media]*. Tampere: Vastapaino.
- Larja, L. 2019. "Työvoiman Hankinta Toimipaikoissa Vuonna 2018. [Labor Recruitment in Work Places in 2018]." *TEM-analyseja 94/2019*. Helsinki: Työ- ja elinkeinoministeriö. Accessed 10 June 2020. http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/161727/Ty%C3%B6voiman%20hankinta%20toimipaikoissa%20vuonna%202018_.pdf
- Lith, P. 2010. *Yrittäjäksi Palkkatyön Tai Eläkkeen Ohella.* [An Entrepreneur in Addition to Paid Employment or Pension]. Helsinki: Tilastokeskus. 27 June 2019. http://tilastokeskus.fi/artikkelit/2010/art_2010-11-10_005.html
- Mayer, K. U. 2001. "The Paradox of Global Social Change and National Path Dependencies: Life Course Patterns in Advanced Societies." In *Inclusions and Exclusions in European Societies*, edited by A. E. Woodward and M. Kohli, 89–110. London: Routledge.
- Neuvonen-Rauhala. 2012. "Developing the Work-based Mission of the Universities of Applied Sciences – Case: The Professional Master's Degree." In *Higher Education Research in Finland. Emerging Structures and Contemporary Issues*, edited by S. Ahola and D. M. Hoffman, 407–419. Institute for Educational Reserch. Jyväskylä: University of Jyväskylä.
- Ojala, K. 2017. *Ylemmät Ammattikorkeakoulututkinnot Työmarkkinoilla Ja Korkeakoulujärjestelmässä. [The University of Applied Sciences Master's Degree in the Labor Market and Higher Education System]*. Turku: University of Turku.
- Ojala, K. 2019. "YAMK-tutkinnon Suorittaneiden Urakokemukset Ja Tyytyväisyys Uralla Etenemiseen – Palkka Määrittää Tyytyväisyyttä Uraan. [Career Experiences and Satisfaction with Career Advancement among UAS Master's Degree Graduates: Salary Determines Career Satisfaction]." *Työelämän Tutkimus* 17 (3): 202–218.
- Ojala, K., and U. Isopahkala-Bouret. 2019. "Kova Kilpailu Ja Kotiseutu-uskollisuus YAMK-tutkinnon Suorittaneiden Uralla Etenemisen Jarruina." In *Kohti Oppimisyhteiskuntaa – Koulutuspolitiikan Uusi Suunta Ja Korkeakoulutuksen Muuttuva Maisema. [Towards a Learning Society – The New Direction of Education Policy and the Changing Landscape of Higher Education]*, edited by H. Nori, H. Laalo, and R. Rinne, 219–245. Turku: University of Turku.
- OKM. 2015. *Yrittäjyyden Ja Yrittäjämäisen Asenteen Tukeminen Suomalaisissa Korkeakouluissa. [Supporting Entrepreneurship and Entrepreneurial Attitude in Finnish Higher Education Institutions]*. Helsinki: Ministry of Education and Culture.

- OKM. 2019. "Tilannekuvaa Korkeakoulutuksesta Ja Tutkimuksesta. [A Snapshot of Higher Education and Research]." Opetus- ja kulttuuriministeriö, korkeakoulu- ja tiedepolitiikan osasto. Accessed 22 June 2020. <https://minedu.fi/documents/1410845/4154572/Korkeakoulujen+tilannekuvaraportti/7c8ab5b4-62ee-1dd6-57ee-4d040075e200>
- OPM. 2009. "Yrittäjyyskasvatuksen Suuntaviivat. [Guidelines for Entrepreneurship Education]." In *Opetusministeriön Julkaisuja 2009:7*. Koulutus- ja tiedepolitiikan osasto.
- Posselt, J. R., and E. Grodsky. 2017. "Graduate Education and Social Stratification." *Annual Review of Sociology* 43 (1): 353–378. doi:10.1146/annurev-soc-081715-074324.
- Puhakka, A., and V. Tuominen, eds. 2011. *Kunhan Kuluu Viisi Vuotta – Ylemmän Korkeakoulututkinnon Suorittaneiden Työurat. [As Long as Five Years Have Passed – Careers for University Master's Degree Graduates]*. Tampere: Tampere University Press.
- Rouhelo, A. 2008. *Akateemiset Urapolut. Humanistisen, Yhteiskuntatieteellisen Ja Kasvatustieteellisen Alan Generalistien Urapolkujen Alkuvaiheet 1980- Ja 1990-luvuilla. [Academic Career Paths. The Early Career Phases of Generalists in the Fields of Humanities, Social Science and Education in the 1980's and 1990's]*. Turku: University of Turku.
- Siivonen, P., and U. Isopahkala-Bouret. 2016. "Adult Graduates' Negotiations of Age(ing) and Employability." *Journal of Education and Work* 29 (3): 352–372. doi:10.1080/13639080.2014.939161.
- Silverman, D. 2006. *Interpreting Qualitative Data. Methods for Analyzing Talk, Text and Interaction*. Third Edition ed. London: Sage Publication.
- Spilerman, S. 1977. "Careers, Labor Market Structure, and Socioeconomic Achievement." *American Journal of Sociology* 83 (3): 551–593. doi:10.1086/226595.
- Statistics of Finland. 2013. "Labour Force Survey. Employment and Unemployment 2013, 2 Employment and Unemployment in 2013." Helsinki: Statistics Finland. Accessed 7 May 2019. http://www.stat.fi/til/tyti/2013/13/tyti_2013_13_2014-04-01_kat_002_en.html
- Statistics of Finland. 2017. "Labour Force Survey. Employment and Unemployment 2017, 2 Employment and Unemployment in 2017." Helsinki: Statistics Finland. Accessed 7 May 2019 http://www.stat.fi/til/tyti/2017/13/tyti_2017_13_2018-04-12_kat_002_en.html
- Statistics of Finland. 2019. "Employment of Recent Graduates Improved." Helsinki: Statistics Finland. Accessed 27 June 2019. https://tilastokeskus.fi/til/sijk/2017/sijk_2017_2019-01-24_tie_001_en.html
- Sullivan, S. E. 1999. "The Changing Nature of Careers: A Review and Research Agenda." *Journal of Management* 25 (3): 457–484. doi:10.1177/014920639902500308.
- Teichler, U. 2018. "Higher Education and Graduate Employment: Changing Conditions and Challenges." INCHER Working Paper; 10. Accessed 10 May 2019 https://www.uni-kassel.de/einrichtungen/fileadmin/datas/einrichtungen/incher/Aktuelles/Working_Paper10_Teichler_2018.pdf
- Tomlinson, M. 2007. "Graduate Employability and Student Attitudes and Orientations to the Labour Market." *Journal of Education and Work* 20 (4): 285–304. doi:10.1080/13639080701650164.
- Tomlinson, M. 2012. "Graduate Employability: A Review of Conceptual and Empirical Themes." *Higher Education Policy* 25 (4): 407–431. doi:10.1057/hep.2011.26.
- Van der Ploeg, S. 1994. "Educational Expansion and Returns on Credentials." *European Sociological Review* 10 (1): 63–78. doi:10.1093/oxfordjournals.esr.a036316.
- Vipunen "Opetushallituksen Tilastopalvelu 2020. [Vipunen-education Statistics Finland]." Accessed 1 June 2020. <https://vipunen.fi/fi-fi>
- Vuorinen-Lampila, P. 2018. *Korkeakoulutuksen Eriytyvät Työelämätulokset. [Diverging Employment Outcomes of Higher Education]*. Jyväskylä: University of Jyväskylä.