

RETENTION OF WORKING UNIVERSITY STUDENTS IN HIGHER EDUCATION: INSIGHTS FROM THE ESTONIAN CONTEXT

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Estonian Business School

**RETENTION OF WORKING UNIVERSITY
STUDENTS IN HIGHER EDUCATION:
INSIGHTS FROM THE ESTONIAN CONTEXT**

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by

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Success, in its truest sense, is an elusive and ever-evolving notion. It is not something you can hold or see; it is a feeling that brews inside you, a whisper that tells you, ‘I’ve grown, I’ve changed, and I’ve contributed something of worth’. The world around us tends to present success as a list of achievements—career milestones, financial prosperity, a certain social standing. But the reality? It is far more elusive and personal than that. To chase the kind of success defined by others is to embark on a journey that, at its heart, is hollow. True success is deeply rooted in individual fulfilment, in becoming more than what you were yesterday, and in making the world around you better in even the smallest way.

There is something poetic about Ralph Waldo Emerson’s (2017) reflection on success:

“... To laugh often and much; to win the respect of intelligent people and the affection of children; to earn the appreciation of honest critics and endure the betrayal of false friends; to appreciate beauty; to find the best in others; to leave the world a bit better, whether by a healthy child, a garden patch, or a redeemed social condition; to know even one life has breathed easier because you have lived. This is to have succeeded...”

What Emerson is really getting at is that success is not just about the big wins. It is about the subtle victories, the unnoticed acts of kindness, and the invisible bonds we form with the people around us. In many ways, these are the most important measures of success—the ones that do not come with trophies, promotions, or social applause. Instead, they manifest in the warmth of a smile shared, the peace found in helping someone else breathe easier, and the quiet satisfaction of knowing you did the right thing, even when no one was watching.

If there is one undeniable truth, it is that no one achieves success alone. Every journey is supported, knowingly or unknowingly, by a network of people who lend their time, wisdom, and encouragement. The idea of the ‘self-made’ person is a brutal myth. Behind every achievement are mentors who offered guidance, friends who provided emotional support, and even the critics who, in their way, pushed us to be better. It is a collective effort. And perhaps the most beautiful part of success is acknowledging that it is

not only yours. It belongs to everyone who helped you reach where you are now. The applause may be yours to receive, but the work, the process, the lessons—they are shared by many.

As I stand at the culmination of this long and transformative journey, I am deeply aware of the many people who have made this achievement possible. This dissertation is not merely a product of my individual efforts but a reflection of the collective wisdom, support, and encouragement of numerous individuals who have walked beside me along the way.

First and foremost, my heartfelt appreciation goes to Professor Kaire Põder. Her constant support, insightful critiques, and invaluable guidance have been the foundation upon which this work was constructed. Her academic rigour and profound wisdom have not only shaped this research but also significantly contributed to my growth as a scholar. I am also deeply indebted to Professor Niveditha Pankova, whose keen insights have been instrumental in bringing clarity and depth to my work. Her collaborative spirit and creative approach have greatly enriched this dissertation.

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As I close this chapter, I sense a new wind stirring and a refreshing breeze from the sea as I gaze towards new horizons and the endless expanse ahead. Fortunately, I carry with me the lessons learnt, the friendships forged, and the rich collection of experiences that have been part and parcel of this PhD journey. These memories and insights will serve as my compass, guiding me through the uncharted waters that lie ahead. I may falter, I may soar, I may drown, I may dive, but in each moment, I will continue to become. Thank you to everyone who has been a part of this remarkable journey.

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LIST OF PUBLICATIONS

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4. Toyon, M. A. S. (13-14 October, 2022). *The monochromatic reality of working students in Estonia: Who cannot afford to be university students without a paid job?* Open and closed societies: Historical reasons and modern consequences of inequality in Japan and Europe, Asia Centre, University of Tartu, Tartu, Estonia.
5. Toyon, M. A. S. (28–30 June, 2022). *Students' trust in universities for future employment: Understanding from the Estonian context*. Ph.D. Summer School in economics, management, political science, law and public administration, Doctoral School in Economics and Innovation, Happsalu, Estonia.
6. Toyon, M. A. S. (19-21 May, 2021). *(Re)Formation of social capital in a small region: Exposing the experiences from Sillamäe*, 10th international conference of young folklorists: lore makers and law breakers: tradition, change, and people, University of Tartu, Tartu, Estonia.

ABSTRACT

Student retention is a relevant institutional priority for higher education institutions, as it is closely connected to academic outcomes, institutional reputation, and overall development (Tinto, 2012). While student retention has been widely studied, understanding how it unfolds for working students, an increasingly common yet underexamined group in higher education, remains a pressing empirical challenge (Summer et al., 2023). Employment during studies is no longer a marginal experience but a structural reality across European higher education systems: nearly 80% of students in Eurostudent countries work alongside their studies (Hauschildt et al., 2021). For many, employment provides financial stability, valuable skills, and professional experience; however, integrating work, study, and personal obligations can also increase the risk of reduced academic engagement, programme change, or withdrawal from higher education (Kocsis & Pusztai, 2020).

Existing literature recognises that retention does not hinge on any single factor but emerges from a complex mix of influences, including students' individual situations, academic and social experiences, and the broader external conditions that shape their studies (Kehm et al., 2019). Understanding what matters for retention therefore requires attention not only to students' personal resources but also to the institutional conditions that create supportive academic environments. It demands a deeper understanding of how socio-demographic factors, including economic, cultural, familial, and workplace capital, intersect with students' academic trajectories. Individual factors such as financial stability, gender, age, qualification studied, and field of study; familial capital, or the level of family support; and workplace capital, gained through employment, all can shape students' academic experiences, influencing both their risk of dropout and overall educational outcomes. Beyond these material and structural dimensions, the social environment within universities also plays a decisive role. University social capital, formed through relationships, peer networks, and institutional support, plays a crucial role in fostering engagement. However, working students often struggle to participate fully in the social dimensions of university life, which can lead to feelings of disconnection and isolation. Moreover, employability trust, a form of symbolic capital representing students' confidence in the labour market value of their degree, may be particularly influential for working students.

Because many are already part of the labour market, their perception of whether their studies enhance their career prospects can shape their commitment to persist. A perceived alignment between education and employment may reinforce persistence, while perceived irrelevance or low labour market return can weaken motivation and increase dropout risk.

While these interconnections have been theorised in relation to student success broadly, the ways in which they manifest among working students remain insufficiently understood (Remenick & Bergman, 2020). Retention strategies in many institutions still implicitly assume a non-working student profile, overlooking how employment, social integration, and perceptions of the labour market value of their degree can interact to influence persistence. This knowledge gap highlights the need for an understanding that accounts for the realities of working students and the structural conditions that shape the continuation of their higher education. The Estonian case offers a compelling example in this regard. In Estonia, as well as in countries such as the Czech Republic, Iceland, Norway, Slovenia, the Netherlands, and Romania, combining study with paid work is common practice; moreover, in Estonia, Malta, Poland, and Hungary, one in three students identify primarily as workers (Hauschildt et al., 2021). These pieces of evidence suggest that student employment may not be a side activity but rather a structural feature of higher education participation. Understanding retention in Estonia thus requires recognising the dual identity of students as both learners and workers. Without recognising this complexity, universities may continue to rely on retention approaches that are insufficiently informed by empirical evidence about the experiences of working students in increasingly diverse higher education contexts.

Building on these insights, this research aims to provide evidence of how socio-demographic factors and institutional conditions shape the dropout intentions of working students in higher education. To explore these dimensions, this research sought to answer the overarching question: **How can universities better accommodate the expectations of working students to improve retention?** To address this overarching question, the following sub-questions were posed: (1) What socio-demographic factors influence dropout intentions among working students? (2) How do perceptions of university social capital correlate with the dropout intentions of working students? (3) What specific support services do working students perceive as important for integrating academic, professional, and personal responsibilities? In pursuit of these answers, this

commentary synthesises insights from three articles published in distinct academic journals, offering an integrated understanding of the issue.

The research employed a quantitative methodology, utilising statistical techniques such as non-parametric tests, factor analysis, structural equation modelling, and Chi-square automatic interaction detection. Data for this study come from the Eurostudent VII survey (2018–2021), a cross-national project collecting harmonised information on higher education students across Europe. In Estonia, the Eurostudent VII survey was conducted from February to July 2019, resulting in a sample size of 1,902 working students. The survey covers nationally representative samples of students enrolled in tertiary education and provides detailed information on their socio-economic background, living and study conditions, employment during studies, use of support services, and perceptions of higher education.

The findings highlight that certain socio-demographic factors significantly influence dropout intentions among working university students in Estonia. For instance, gender has a statistically significant effect on the intention to abandon studies entirely, with male students more likely to consider leaving university than female students, though it does not influence decisions to change programmes. Age significantly affects the likelihood of changing study programmes, with younger students being more inclined to reconsider their academic path, but it does not have a statistically significant impact on intentions to abandon higher education. Qualification level also plays a role, as bachelor's students are more likely to consider changing their study programmes than master's students, but it does not significantly affect the likelihood of leaving university altogether. Field of study is highly significant for both outcomes, with students in arts and humanities and ICT more prone to reconsider their programmes and more likely to express intentions to abandon their studies. Parental educational attainment, however, does not have a statistically significant effect on either programme changes or intentions to leave university. Financial difficulties significantly increase both the likelihood of changing programmes and the intention to abandon studies. Likewise, education-job mismatch has a statistically significant effect, with students working in jobs unrelated to their studies more likely to consider both changing their programme and abandoning university. Work hours also influence both outcomes, as students working 1-20 hours per week are significantly more likely to reconsider their studies compared to those working longer hours.

Moreover, the findings highlight that university social capital has a statistically significant influence in reducing the dropout intentions of working students. In fact, the findings revealed that university social capital consists of four key dimensions: teacher–student relationships, support service satisfaction, peer networks, and employability trust. Among these, teacher–student relationships emerged as the strongest factor, followed by employability trust, support service satisfaction, and peer networks. What makes the teacher–student relationship so influential is the sense of motivation, support, and engagement it creates. Students felt encouraged when lecturers motivated them to do their best work, provided helpful feedback, and showed genuine interest in their ideas and experiences. Employability trust also played an important role, reflecting students’ confidence that their degree would be valued in the labour market and relevant to their future careers. While peer networks and support services contributed positively to university social capital, their effects were smaller, suggesting that meaningful academic relationships and a clear sense of career relevance are especially important for working students.

The findings also showed that teacher-student relationships, support service satisfaction, and peer networks influence dropout intentions both directly and indirectly through employability trust. Each of these factors positively predicted employability trust, which was, in turn, negatively related to dropout intentions. In other words, students who experience supportive relationships, reliable services, and a strong sense of connection at university are more likely to believe in the symbolic value of their degree, which reduces their likelihood of considering dropout. At the same time, these factors also had a direct effect on dropout intentions, with teacher-student relationships showing the strongest influence and peer networks the weakest. This pattern suggested partial mediation: employability trust explains part of the effect, but each factor also shapes dropout intentions in its own way. That means teacher-student relationships stand out as the most influential, both by strengthening employability trust and by directly reducing dropout intentions, followed by support service satisfaction and peer networks, which play smaller yet meaningful roles. In this context, support service satisfaction presented a more complex relationship with dropout intentions. While working students generally appreciated available services, these did not always address the core challenges working students face in integrating academic, professional, and personal responsibilities. However, when mediated by employability trust, support services demonstrated a meaningful potential

to reduce dropout intentions, suggesting that aligning support more closely with working students' career aspirations and long-term educational goals can enhance their persistence.

Furthermore, the findings show what types of support services working students consider important when combining academic, professional, and personal responsibilities. The results show that satisfaction with university support services varies depending on field of study, age, working hours, and how closely students' jobs align with their studies. For study support services such as tutoring, mentoring, and academic writing, three groups were identified. Students in ICT and social sciences reported moderate satisfaction but also a significant number who felt they did not need support. Those in natural sciences and arts were more satisfied overall, especially when their work matched their field of study. In contrast, students in business and health were less satisfied and showed higher disinterest. Satisfaction with learning facilities, including libraries and computer centres, was generally higher. ICT and natural sciences students, particularly younger ones, expressed the greatest satisfaction, while others were more neutral. Support for balancing studies and jobs was rated much lower. Students in long-degree programmes were especially dissatisfied, and younger bachelor's and master's students whose jobs did not match their studies also expressed strong dissatisfaction. Similar patterns appeared in support for balancing studies and family life: ICT and business students were least interested, while education and health students reported moderate satisfaction. Students working fewer hours tended to rate these supports more positively. Support for work-life preparation also showed clear age differences. Younger students, particularly those up to 21 years old in business, arts, and humanities, were least satisfied, whereas those aged 25 to under 30 years and students whose employment matched their studies were more positive. In general, the level of satisfaction was higher when education and employment were aligned. Further, this research underscores the importance of tailored support services for working students, addressing their unique needs in balancing study, work, and family responsibilities. Key needs vary by weekly working hours and job alignment with education. Students working fewer than 20 hours in aligned roles require flexible schedules, remote learning, and time management support, while those in misaligned roles need skill-bridging and cross-training opportunities. Those working over 20 hours benefit from evening or weekend classes, online resources, and job advancement services, with non-aligned workers requiring career transition support.

Taken together, these findings suggest that universities can better accommodate the expectations of working students by adopting a multidimensional approach to retention. This approach involves addressing socio-demographic inequalities through targeted financial and academic support, strengthening university social capital by fostering positive teacher-student relationships and peer networks, designing flexible, career-aligned learning opportunities that reflect the realities of student employment, and enhancing the perceived value of higher education through meaningful connections to the labour market and long-term career development. By presenting these findings, this research offers valuable insights for educators, higher education institutions, and stakeholders in education management.

Keywords: cultural capital, dropout, employability trust, higher education, peer network, retention, social capital, support services, teacher-student relationships, working student

1. INTRODUCTION

Student retention in higher education has long been recognised as a critical issue for universities, policymakers, and researchers, given its far-reaching implications for academic success, institutional stability, and workforce development (Braxton et al., 2013; Tinto, 2012). While extensive research has explored student retention, little attention has been given to the specific challenges faced by working university students, those who must balance academic responsibilities with paid employment (Summer et al., 2023). This issue is particularly relevant in Estonia, where more than 53% of students work while studying, compared to the OECD average of 39% (EC, 2022; OECD, 2022). The scope of this phenomenon makes it essential to understand the factors that influence the persistence of working students in higher education.

Working students make up a growing share of the student population, integrating coursework with the demands of paid work (Hauschildt et al., 2021; Männasoo et al., 2022). Over the past several decades, higher education reforms in Estonia, such as the abolition of tuition fees and the adoption of the Bologna Process, have aimed to widen access and strengthen the links between education and the labour market (Helemäe & Saar, 2000; Saar et al., 2008; Krull & Trasberg, 2006; Mlekuž et al., 2018; Tamtik & Kirss, 2015). These reforms also reshaped the relationship between the world of work and higher education, bringing the overlap between practical and theoretical training and creating more diverse study routes and career pathways (Saar et al., 2008; Tamtik & Kirss, 2015). Gradually, participation in paid work during studies became a common part of student life, reflecting broader labour market expectations and students' efforts to finance their education while gaining practical experience (Beerkens et al., 2010). Moreover, the growing emphasis on getting higher qualifications is often linked to stronger employment prospects and improved earning potential (Psacharopoulos & Patrinos, 2018). Longer study pathways for getting higher qualifications may provide career advantages but can also involve additional time and financial commitments, making economic considerations a more central part of students' educational decisions. The Estonian Education Strategy 2021–2035 (EMER, 2021) acknowledges the evolving conditions by emphasising the importance of inclusivity, lifelong learning, and flexibility in higher education to better accommodate diverse student needs.

Nevertheless, balancing academic, professional, and personal responsibilities remains a demanding aspect of the student experience. Earlier research also points to financial pressures, rigid institutional structures, and labour market expectations as continuing challenges for working students (Beerkens et al., 2010; Joamets & Vasquez, 2019).

The consequences are reflected in dropout statistics. Recent data reveals that the number of dropouts in Estonia increased from 4,824 in 2020 to 5,704 in 2021, representing an 18.2% rise in just one year, with bachelor's programmes experiencing the highest dropout rates and underlining the growing difficulty of sustaining academic commitments while working (Statistics Estonia, 2023). This issue is compounded by the increasing diversity of Estonia's student population, including local and international students, full-time and part-time learners, and students of varying ages, all of whom bring different pressures and support needs. Universities face significant challenges in designing retention measures that can respond effectively to such varied circumstances (Chantrea et al., 2015).

Institutional limitations further compound the risk of dropout by restricting the range and quality of support available to students. While some universities provide financial aid, academic counselling, and career support, others struggle with funding shortages, limited faculty availability, and inadequate infrastructure, leaving working students with fewer opportunities for academic and professional success (Dovladbekova et al., 2006). Beyond institutional shortcomings, growing scepticism about the value of higher education further exacerbates retention issues. Many working students question whether their investment in university will translate into meaningful employment, given the rising cost of living and stagnating wages. The OSKA report (2020) highlights employment disparities, with fields like health and education offering better prospects than hospitality or technical disciplines, weakening trust in the system. Research (Arum & Roksa, 2011) reveals that many students see little improvement in critical thinking, reasoning, or writing skills during college. Specifically, 45% showed no gains after two years, and 36% after four years, challenging the idea that college reliably prepares students for the workforce. For working students integrating study and employment, these weak returns heighten the risks of switching programmes, dropping out, or disengaging from higher education altogether (Chantrea et al., 2015).

Despite these systemic issues, working students are not passive recipients of disadvantage; they bring resources that can support persistence, including social capital (networks and relationships—at university, at work, and in the community—that provide information, encouragement, and practical help), cultural capital (study skills, academic literacy, and dispositions valued in higher education, often developed through prior learning and workplace experience), and family capital (parental and kin support, expectations, and caregiving or material assistance) (Joanis et al., 2014; Pusztai, 2014, 2015; Wyatt, 2018). However, universities often fail to recognise or leverage these forms of capital in their retention strategies. Instead, prevailing approaches assume a one-size-fits-all model of the full-time student, asking those who combine study with employment to set aside their lived realities. Tierney (1999) characterises this pressure to conform to rigid academic norms as ‘cultural suicide’. The result is a persistent misalignment between what students bring to higher education and what institutions expect, which creates barriers to persistence (Pusztai et al., 2022).

Altogether, the above discussion reveals a structural mismatch between students’ own resources and institutional arrangements, placing working students at risk of disengagement and motivating a closer examination of what matters for their retention.

The issue of student retention has been widely studied, with research identifying key factors such as financial pressure, time management difficulties, and limited social integration as critical barriers to academic success (Beerkens et al., 2010; Brixiova & Égert, 2012; Curtis & Shani, 2002; Dundes & Marx, 2006; Hauschildt et al., 2021). Seminal works, such as Tinto (1993) and Bean and Metzner (1985), provide important insights into retention dynamics. A substantial body of research identifies various factors influencing student retention, including age (Kasworm, 2003), gendered work-study patterns (Lee et al., 2015; Kessels & Houtte, 2021; Stone & O’Shea, 2013), financial needs and work commitments (Jacoby, 2015; Thomas, 2002), the effectiveness of student support services (Tinto, 2012), career readiness within the curriculum (Bowl, 2001; Robotham, 2012), the integration of employability into education (Knight & Yorke, 2003; Tong, 2024), and discipline-specific qualifications (Tomlinson, 2017; Yorke & Longden, 2004). More recent studies emphasise the significance of teacher-student relationships and peer networks in fostering student engagement (AlKhudari, 2023; Hattie, 2003; Kehm et al., 2019; Pusztai, 2014).

In fact, two dominant perspectives emerge in the literature on student retention. The first perspective emphasises student agency, particularly the ways in which socio-economic backgrounds, financial constraints, and personal motivation influence retention. Scholars argue that students from disadvantaged backgrounds experience greater financial pressures, forcing them to engage in employment to fund their education, which can lead to increased stress, reduced academic engagement, and a higher likelihood of dropping out (Beerkens et al., 2010; Dovladbekova et al., 2006; Mägi et al., 2011; Masevičiūtė et al., 2018). Research has identified socio-demographic factors—including age, gender, and parental education levels—as significant factors of student persistence. Younger students may struggle with self-regulation and time management, making them more susceptible to academic disengagement, while older students, who often have additional responsibilities such as family obligations and full-time employment, face greater pressures that affect their ability to remain enrolled (Kasworm, 2003; Stone & O'Shea, 2013). Gendered patterns in work-study dynamics also shape student retention. Studies suggest that female students, particularly those with caregiving responsibilities, encounter additional challenges in balancing work and education, which may contribute to higher dropout rates compared to their male counterparts (Leathwood & Read, 2009; Lee et al., 2015; Kessels & Houtte, 2021).

The second perspective within the literature examines the role of institutional structures in shaping student retention. Scholars argue that universities are responsible for creating support systems that accommodate diverse student needs (Pusztai et al., 2022). Research has shown that institutions offering flexible course schedules, academic counselling, and faculty engagement tend to have higher retention rates (Carreira & Lopes, 2019). A critical aspect of institutional support is the development of social capital, which refers to the networks, relationships, and resources that enable students to navigate academic challenges successfully. Research suggests that students with strong social capital are more likely to persist in their studies, as these relationships help them overcome academic difficulties, foster a sense of belonging, and provide emotional and financial support (Pusztai, 2014).

From the discussion above, it is evident that while the existing literature offers valuable insights into student retention, significant gaps remain.

First, much of the existing research did not distinguish between working and non-working students, overlooking the distinct experiences of those

who combine paid employment with higher education. In countries such as Estonia, where more than half of all students work during their studies, and often not only by choice but also by necessity, this subgroup cannot be treated as a marginal category. The Estonian case is particularly distinctive because of its exceptionally high rate of student employment compared to the OECD average and because many students are ‘non-conventional’ workers, engaging in substantial employment that directly competes with study time rather than light or casual work. Yet, very little research has addressed how this unique structural context shapes retention dynamics.

Second, although socio-demographic factors such as age, gender, and parental background have been widely examined in relation to general student persistence, their interaction with employment status has rarely been systematically analysed in relation to the retention of working students. This omission is especially important in Estonia, where lifelong learning is strongly celebrated and where older students represent a visible share of the university population. For these students, persistence can be shaped not only by age but also by the simultaneous need to combine study with full-time employment and family responsibilities. Moreover, Estonia has one of the highest proportions of working students in Europe (Beerkens et al., 2010; Hauschildt et al., 2021), making the interaction between study and employment a mainstream rather than marginal experience. Finally, as a knowledge-intensive country, Estonia places strong cultural value on higher education, yet parental background continues to play a critical role. Students from families with lower levels of education may lack the cultural and informational resources needed to navigate academic life, and when combined with the necessity of working, this can heighten the risk of dropout. Taken together, these circumstances show that persistence among working students in Estonia cannot be explained by demographics or employment alone, but by how these factors interact with one another and with institutional expectations, creating new vulnerabilities such as the intention to change study programmes or to abandon higher education completely.

Third, the role of social capital in retention is well documented in general, but its specific importance for working students remains underexplored. Social capital, in the form of supportive peer networks and strong relationships with faculty, helps students access guidance, motivation, and a sense of belonging, which are consistently linked to persistence (Pusztai, 2014). However, working students often have limited opportunities to participate in campus life, making it harder to build these ties. The absence

of such connections not only reduces their access to academic support but can also erode their sense of integration into the university community. In Estonia, this challenge is particularly significant because higher education carries meaning beyond individual study: it is closely tied to the country's knowledge-based economic strategy and is widely regarded as a marker of social status. When students lack strong academic and social networks, they may begin to doubt whether their investment in higher education will provide sufficient personal and professional returns. These doubts move beyond immediate concerns about belonging and touch on broader questions about the symbolic value of a degree itself. It is in this context that the issue of employability trust becomes crucial. Employability trust, in this context, refers to students' confidence that the effort and resources they invest in their studies will result in stable and meaningful employment. For working students, this trust is especially critical: while they often rely on employment to finance further study, the very act of working reduces the time and energy available for academic engagement. This creates a paradox in which the necessity of work undermines the educational investment that is meant to secure better employment in the future. That means if employability trust weakens, working students may be more inclined to contemplate switching programmes or perhaps dropping out of higher education entirely.

Fourth, while institutional support is widely recognised as a factor in student persistence, research has often treated it in overly general terms. Several studies (e.g., Carr & London, 2017; Oldfield & Baron, 2000) examine student services as a single, aggregated practice, yet this approach obscures how different forms of support are experienced by different groups of students. These services include study support services (e.g., organised tutoring, academic writing assistance, bridging courses, and mentoring); the availability and quality of learning facilities (libraries, computer centres, and workplaces); support for balancing studies with employment; support for balancing studies with family responsibilities; and preparation for future work life. Working students, in particular, may evaluate institutional provision in ways that diverge sharply from the traditional full-time student model. This creates two related problems. First, when satisfaction with support is measured only in aggregate with traditional non-working full-time students, the underlying mechanisms influencing dropout intentions remain unclear. A student may express overall dissatisfaction, but whether this is driven by unmet academic, career, or family-related needs is left unspecified. Second, when studies (Martirosyan, 2015; Nwenyi & Baghurst, 2013) consider specific forms of

provision, such as tutoring, facilities, or career counselling, they rarely connect these systematically to the socio-demographic profiles of students. As a result, universities lack evidence about which groups of working students benefit from which services and under what conditions. In Estonia, this issue is especially consequential. Universities operate under resource constraints, meaning that investments in support services must be targeted or carefully allocated. Yet without knowing whether, for example, older students prioritise flexible scheduling or student parents require childcare, institutions risk allocating resources in ways that do not address the actual drivers of dropout. Furthermore, because employment while studying is the norm rather than the exception (e.g., Beerkens et al., 2010), workplace dynamics, such as the alignment between study and job roles or the intensity of employment, directly shape how students perceive the usefulness of support. Ignoring this interaction leads to strategies that are misaligned with students' realities.

Taken together, the Estonian case illustrates a structural mismatch in which personal circumstances and institutional conditions intersect to shape whether working students persist or withdraw. On the one hand, most students in Estonia must engage in substantial employment to cover living and study costs, which limits their time and energy for academic participation. On the other hand, universities largely operate according to a full-time student model, with rigid course schedules, limited evening access to facilities, and support services that do not always accommodate the realities of working students. This combination means that working students are often forced to prioritise paid work over their studies, while universities provide little flexibility. As a result, the risk of dropping out, changing programmes, or disengaging from academic life can become significantly higher. Existing retention strategies often address these dimensions in isolation, for example, focussing on financial aid without considering scheduling flexibility or investing in career services without addressing weak peer and faculty networks. Such piecemeal approaches cannot capture the full complexity of working students' experiences. What is needed instead is an integrated understanding of how these factors combine, including socio-demographic attributes, teacher-student relationships, peer networks, targeted support services, and students' employability trust, in order to design retention strategies that respond to the expectations of working students. This need leads directly to the research question of this dissertation.

The main research question guiding this research is: **How can universities better accommodate the expectations of working students to improve retention?** To answer this, the following sub-questions are addressed:

- (1) What socio-demographic factors influence dropout intentions among working students?
- (2) How do perceptions of university social capital correlate with the dropout intentions of working students?
- (3) What specific support services do working students perceive as important while integrating academic, professional, and personal responsibilities?

The first sub-question of the research explores the socio-demographic factors that might influence dropout intentions among working students, such as gender, age, parents' educational background, field of study, financial situation, living arrangements, education-job alignment, and the number of hours worked. Understanding these factors can help identify students at risk of leaving university and provide insights into strategies to improve retention and support their academic journey. The second sub-question examines whether social connections within the university, including relationships with teachers and peers, as well as satisfaction with support services, really matter in the retention of working students. Finally, the third sub-question seeks to evaluate the satisfaction levels of these students with existing services while analysing how perceptions of these services vary according to the socio-demographic characteristics of working students.

Understanding how institutions can better support working students is essential to improving retention rates and ensuring equitable access to education. This research focusses on bridging the gap between the needs of working university students and the capacity of higher education institutions to support them effectively. While the challenges faced by the student demographic are well-documented, existing institutional strategies often fail to accommodate the realities of working students who are combining academic commitments and paid employment (Remenick & Bergman, 2020). This failure has long-term consequences, not only for students, many of whom abandon their studies due to financial, social, or academic pressures, missing out on the opportunities higher education provides, but also for universities and society, both of which rely on a well-educated workforce to drive economic growth, social mobility, and innovation. For universities, retention directly affects financial stability,

institutional reputation, and their mission to promote equitable education (Braxton et al., 2013). The dropout of working students exposes systemic weaknesses in accommodating diverse learning needs, undermining efforts to create inclusive academic environments. On a societal level, high dropout rates contribute to the underutilisation of cultural and human capital, hindering economic development and perpetuating social inequalities (Thomas, 2002). In Estonia, where higher education is vital to a knowledge-based economy, student retention is both a moral and economic imperative. Supporting working students in completing their studies is essential not only for their individual advancement but also for developing a skilled workforce that fosters innovation and long-term economic growth.

This research adopts a quantitative methodology and leverages data from the Eurostudent VII survey, a comprehensive dataset capturing the experiences, challenges, and perceptions of working university students across Estonia and other European contexts. This dataset offers robust demographic, social, and academic insights into students' circumstances, making it a suitable foundation for addressing the research objectives. To analyse the data effectively, this research has drawn on a range of statistical techniques. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) have helped identify and validate key constructs related to the expectations, satisfaction levels, and dropout intentions of working students. Structural Equation Modelling (SEM) has been applied to test the relationships between perceptions of university social capital and academic persistence. Alongside SEM, Chi-squared Automatic Interaction Detection (CHAID) has provided insights into how different combinations of variables contribute to satisfaction with support services. Finally, nonparametric tests have been used to examine associations between factors, capturing the links between students' socio-demographic characteristics and their perceptions of institutional support.

This dissertation is based on three original publications. These three original publications, which will be cited throughout the manuscript using their corresponding Roman numerals, are listed below:

- I. Toyon, M. A. S. (2024), Sociodemographic attributes and dropout intentions of working university students: Evidence from Estonia. *Societies*, 14(7), 116.
<https://doi.org/10.3390/soc14070116> (ETIS1.1)

- II. Toyon, M. A. S. (2024). Effect of university social capital on working students' dropout intentions: Insights from Estonia. *European Journal of Investigation in Health, Psychology and Education*, 14(8), 2417-2434.
<https://doi.org/10.3390/ejihpe14080160> (ETIS1.1)
- III. Toyon, M. A. S. (2024). Organising student support services: A closer look at the career support needs and satisfaction levels of working university students in Estonia. *International Journal of Organisational Leadership*, 13(3), 564-591.
<https://doi.org/10.33844/ijol.2024.60431> (ETIS1.1)

The rest of the commentary is organised into several chapters:

In the second chapter, I briefly explore relevant literature on working students. I also reflect on existing retention models and different theoretical perspectives on student retention, focussing on socio-demographic factors and university social capital elements such as teacher-student relationships, peer networks, support services, and employability trust, as well as retention responses related to these factors.

The third chapter describes the research methodology, data sources, and computational techniques employed in the empirical studies (Studies I, II, and III) included in this dissertation. It also outlines the measures taken to ensure validity, reliability, and ethical integrity in the research. In the fourth chapter, I provide a general discussion, highlighting the influence of cultural, economic, familial, and workplace capitals on dropout intentions and substantiating the effect of university social capital in reducing dropout intentions. Additionally, I examine the factors of social capital, such as teacher-student relationships, peer networks, support service satisfaction, and employability trust. I also explore the association of different socio-demographic factors with support services and the specific support needs of working university students. Furthermore, I discuss the contributions and implications of the research, its limitations, and suggestions for future research.

The conclusion chapter summarises the entire dissertation, reiterating the key findings and insights.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1. Working student and retention

2.1.1. Working student

The question of who working students are does not have a straightforward answer. Working students, often encompassed within the broader category of non-traditional students, bring a unique set of characteristics and experiences to the field of higher education. Non-traditional students are typically defined as those who diverge from the traditional university student profile in several significant ways. According to Gilardi and Guglielmetti (2011), these students are often older than the typical university age, generally being 23 or 25 years old or older at the time of enrolment. They are usually employed, working full-time or part-time, which significantly influences their ability to focus solely on their studies. Additionally, they may come from lower socioeconomic backgrounds, affecting their access to resources and support systems.

Similarly, Bowl (2001) broadens the definition to include mature students who do not follow the conventional path of entering higher education immediately after completing secondary school. These students often have characteristics that set them apart from traditional students, such as being financially independent, having family and childcare responsibilities, and entering higher education through non-traditional routes like access courses or community-based educational programmes. Bamber and Tett (2010) emphasise that non-traditional students, particularly those from working-class backgrounds, often lack the cultural and social capital traditionally associated with academic success. This lack of capital can make it challenging for them to navigate the academic environment effectively. In this context, cultural capital refers to the knowledge and skills needed to navigate academic environments, while social capital encompasses networks and relationships that provide support. Without these, students may struggle to integrate into university life and access essential resources. Carreira and Lopes (2019) define non-traditional students primarily by their employment status at the time of enrolment,

noting that these students tend to be older and come from less educated family backgrounds. They often face higher dropout rates and live closer to their educational institutions due to professional and family commitments. Webber (2014) highlights that working students often feel out of place in higher education environments due to their lack of necessary cultural, social, and economic capital. The admissions process, including interviews, can be a critical juncture where their accumulated capital and potential to acquire further capital are assessed. Webber (2014) suggests that working students require increased support, including pastoral care, study skills, and emotional support, to navigate the academic journey.

In addition, Bowl (2001) highlights the emotional and psychological barriers these students encounter, including feelings of isolation and inadequacy. Webber (2014) illustrates the emotional labour involved in the admissions process and how non-traditional students often perceive themselves as needing to 'prove' their worthiness for higher education. This emotional burden can affect their academic performance and persistence. Meuleman et al. (2015) use Bourdieu's theory (1984, 1986, 1989) to describe how non-traditional students often feel like 'fish out of water' in the university environment. These students, who are frequently the first in their family to attend university, struggle with the transition due to a lack of cultural and social capital. They often come from low-income backgrounds and rural or remote areas and may face additional challenges such as adapting to a new culture, language barriers, and social isolation if they come from different countries to pursue higher education. Carreira and Lopes (2019) find that non-traditional students benefit significantly from early-stage support, such as pre-enrolment preparatory courses and being grouped with peers of similar backgrounds. These approaches aid in alleviating the initial impact and adaptation period for these students. Nevertheless, there is a deficiency in this particular situation and a requirement for retention measures that specifically cater to the needs of students who are employed (Carreira & Lopes, 2019).

However, Carreira and Lopes (2019) highlight the significance of providing support from the beginning of a student's academic journey since they found that non-traditional students are more prone to leaving their studies in the first year. Wardley et al. (2013) explore the impact of institutional commitment on student retention. Traditional students, aged 17-21 years, show higher institutional commitment, influenced mainly by university and organisational support features. These students value campus integration, social activities, and support services that enhance

their overall university experience. In contrast, non-traditional students, aged 22-55+ years, prioritise the academic environment as the key factor influencing their commitment. These students often face challenges balancing their studies with other responsibilities like work and family, resulting in lower levels of institutional commitment compared to their traditional counterparts. Bamber and Tett (2010) highlight the importance of ongoing support throughout the academic journey. They suggest moving beyond access initiatives and providing sustained support to ensure that non-traditional students can succeed and feel a sense of belonging within the academic community. The process entails addressing both intrinsic issues, such as academic readiness and cultural capital, and external factors, like family responsibilities and financial pressures.

In contrast, Curtis and Williams (2002) and Hughes (1983) provided a synthesis of non-traditional students, advocating for an in-depth examination of evolving demographics in higher education and focussing on their increasing presence and unique needs. The traditional support measures typically focus on factors relevant to traditional students, such as campus integration and social activities, which are less applicable to working students. Carreira and Lopes (2019) argue that discretionary educational policies tailored to the specific needs of non-traditional students are essential for their academic success and reducing dropout rates. Roberts (2011) focusses on removing challenges and developing retention strategies for non-traditional students in higher education, particularly addressing the needs of those from lower socioeconomic backgrounds, part-time students, mature students, and first-generation university attendees by adapting non-traditional pedagogical practices.

Furthermore, Kurantowicz and Nizinska (2013) define working students broadly to include first-generation students, those from lower socioeconomic backgrounds and ethnic minority groups, mature students, and students with disabilities. They emphasise the need to go beyond traditional retention practices and identify three key patterns of retention practices: biographical, institutional, and relational. Highly motivated students with substantial cultural capital and self-esteem use biographical practices to navigate the academic environment independently when institutional support is lacking. Institutional practices require a supportive organisational culture within the institution, which is often missing in higher education (Kurantowicz & Nizinska, 2013). Relational practices, the most common and successful, involve the formation of supportive peer networks and social relationships that help students persevere despite

challenges. In a similar tone, Christie et al. (2018) emphasise the importance of retaining non-traditional students and explore how the symbolic prestige of a university can help build self-confidence and a greater sense of personal accomplishment among these students. They advocate for a university education that fosters new ways of thinking, skills, and a lifelong passion for learning. Likewise, Bamber and Tett (2010) highlight the importance of recognising the distinct challenges faced by non-traditional students. They argue that universities must provide sustained support beyond mere access, addressing both internal and external factors influencing student learning. Webber (2014) calls for a more inclusive approach in higher education, where the focus shifts from merely opening doors to non-traditional students to providing the necessary support for them to thrive. It includes recognising their unique backgrounds and life experiences.

Indeed, working students, a significant subset of non-traditional students, bring diverse experiences and face unique challenges in higher education. The definition of ‘working students’ has thus become problematic due to its broad scope and the diverse characteristics it encompasses. This heterogeneity makes it challenging to develop a one-size-fits-all approach to support these students. Bamber and Tett (2010) argue that traditional and non-traditional student classifications are overly simplistic and do not account for the actual realities of students’ lives. Holton (2017) agrees with this and analyses the traditional/non-traditional binary, suggesting that individual and other contextual factors should be considered to provide a more accurate understanding of these students’ experiences.

From the above discussion, it is evident that the definition of working students is complex and varies across research perspectives. While existing studies provide valuable insights, they may not always fully capture the realities of working university students in Estonia. Many scholars, including Carreira and Lopes (2019) and Webber (2014), examine working students in contexts where financial hardship is the primary driver of employment and where non-traditional students frequently experience lower levels of cultural and social capital. However, these dynamics may not align with the Estonian context, where employment during studies is often motivated by career aspirations, financial independence, or personal development rather than economic necessity alone. Scholars such as Bamber and Tett (2010) argue that non-traditional students, particularly those from working-class backgrounds, often lack the cultural and social capital necessary to navigate academic environments. Meuleman et al.

(2015) describe how students from disadvantaged backgrounds frequently struggle to integrate into university life, experiencing feelings of isolation and exclusion. However, in Estonia, working students may not necessarily lack these forms of capital. Unlike in other contexts where first-generation university attendees are common among working students (Christie et al., 2018), Estonian students who work while studying may come from diverse socio-economic backgrounds and possess similar levels of cultural and social capital to their non-working peers. Bowl (2001) and Roberts (2011) emphasise the need for institutional support tailored to working students, advocating for flexible learning arrangements, financial aid, and social integration strategies. While these recommendations are broadly relevant, the specific needs of Estonian working students may differ. They may be likely to require greater flexibility in deadlines and class schedules rather than extensive pastoral or emotional support, as proposed by Webber (2014). Wardley et al. (2013) and Kurantowicz and Nizinska (2013) highlight the role of institutional commitment in student retention, particularly for those integrating multiple responsibilities. Nevertheless, the extent to which such institutional support influences working students in Estonia remains relevant.

Given these complexities, a universally applicable definition of working students is challenging. However, for the purposes of this dissertation, working students are defined as those who combine university study with paid employment. This definition provides clarity while acknowledging the diversity within this group. While there are differences in background, the common challenges persist, including the need to balance academic and professional responsibilities, manage financial independence, and navigate institutional expectations.

2.1.2. Retention

Understanding what retention truly entails is crucial for effectively retaining students in higher education. However, the literature on this topic offers a variety of definitions and reflects the diverse contexts and institutional requirements of educational institutions worldwide.

Retention, attrition, and persistence are key concepts in discussions about student success in higher education. Each term has distinct meanings and implications for institutional strategies and student outcomes. Hagedorn (2012) discussed these concepts extensively, citing foundational works by Astin (1975, 1984, 1993) and Tinto (1987) to highlight the limitations of a

binary approach. Students' statuses can change over time: those who drop out might later return to school, and those who stay might eventually leave. This fluctuation depends on various factors, including personal circumstances and educational goals. Achieving a perfect classification of dropouts versus non-dropouts is challenging unless considering students who have either completed their education or passed away (Hagedorn, 2012). Additionally, students often take diverse educational paths, such as attending multiple institutions or taking breaks, further complicating traditional retention metrics.

Retention refers to an institution's ability to keep students enrolled from one academic year to the next, or until they complete their programme (Hagedorn, 2012). This metric reflects how well the institution supports student success. Dropout rates measure the percentage of students who leave their studies before completing their programme, indicating potential gaps in institutional support or student engagement (Hagedorn, 2012). Attrition, often used interchangeably with dropout rates, tracks the reduction in student numbers due to dropping out or transferring, providing insight into student departure patterns (Hagedorn, 2012). Persistence focusses on individual students' continued enrolment in their educational journey, regardless of whether they stay at the same institution (Hagedorn, 2012). It highlights their determination and resilience to overcome personal, academic, and financial challenges to complete their education (Delen, 2011; Reason, 2009). Tinto (1975, 1987, 1998) described persistence from the student's perspective, focussing on course completion and individual goals. Schatzel et al. (2011) describe 'stopouts' as students who take breaks but eventually return, while 'stayouts' are those who do not return.

The discourse on retention in higher education is complex, reflecting the diverse experiences and pathways students navigate. Traditionally, retention has been defined simply as staying in school until graduation, while dropping out has been seen as leaving early. However, this binary perspective does not adequately capture the diverse realities of students' lives (Hagedorn, 2012). Terms synonymous with 'dropout' include 'attrition', 'withdrawal', and 'non-completion', while antonyms include 'retention', 'persistence', 'continuance', 'completion', and 'success'.

To truly grasp student retention, which is often viewed through the lens of institutional success rather than individual student experiences, it is important to flip the perspective (Hagedorn, 2012). Retention is not just a

matter of institutional success or failure; it also involves understanding the individual experiences, struggles, and motivations of the students themselves. Hagedorn (2012) advocates for a more inclusive approach, using multiple perspectives to better reflect student progress. For instance, retention needs to consider the student's initial intentions and desired achievements because students enter higher education with diverse goals. Some may aim for a degree, while others might seek specific skills or certifications for personal development or career advancement. Traditional metrics of retention, which typically focus on whether a student remains enrolled until graduation, may not fully capture the success of students with different objectives. When students achieve their personal goals, such as gaining specific knowledge or skills, their departure from the institution does not necessarily indicate a failure of retention. Instead, it can reflect a successful outcome that aligns with their original intentions. Recognising this complexity calls for a measure that captures how students experience and evaluate their ongoing participation—not just whether they remain enrolled or graduate (Hagedorn, 2012). Retention can be understood as a process that unfolds over time, shaped by students' shifting motivations, circumstances, and institutional experiences. To grasp this evolving process, it is crucial to look at the early signs of withdrawal rather than waiting until students officially leave. Building on this broader perspective, the present dissertation adopts dropout intention as a proxy for retention.

In fact, this dissertation adopts dropout intention as a proxy for retention due to its predictive value in understanding student withdrawal. The justification for this choice rests on how retention is understood in this work, not as a fixed, binary outcome but as a dynamic and evolving process. Traditional retention indicators such as graduation rates or official dropout counts are static measures. They simply record whether a student completed a degree or left the system at a given point in time. While useful for institutional benchmarking, such measures say little about the lived process of retention: they cannot explain why students begin to doubt their continuation, nor the multiple pathways students consider before reaching the final outcome. A student's educational journey involves repeated evaluations of whether their current circumstances, institutional environment, and long-term goals remain aligned. Capturing this evaluative process requires a more sensitive measure than retrospective completion statistics, and dropout intention provides exactly this.

Seen in this way, dropout intention reflects the decision-making stages embedded in the process of persistence. Students rarely withdraw

suddenly; instead, they progress through a period of questioning, weighing alternatives, and signalling doubts before making a final decision. Expressions such as ‘I am considering leaving’ or ‘I may switch programmes’ are not trivial—they represent real moments in which persistence becomes fragile (Findeisen et al., 2024). In this dissertation, dropout intention is therefore treated as a multidimensional construct that includes both the intention to abandon higher education entirely and the intention to change study programmes. Although these paths differ in immediate consequence, both are rooted in the same underlying uncertainty about the sustainability of continuing in the current educational trajectory. In fact, for many working students, a change of programme may be less a sign of persistence and more a prelude to eventual withdrawal, particularly when the underlying financial or institutional pressures remain unresolved. By combining both forms of intention into a single construct theoretically, this study recognises them as different expressions of the same broader risk to retention.

The choice of using intention is strongly supported by behavioural theory. According to the theory of reasoned action (Fishbein & Ajzen, 1975) and its successor, the theory of behaviour (Ajzen, 1991), behavioural intention is the most immediate predictor of actual behaviour. Empirical research consistently demonstrates that students who express dropout intentions are far more likely to withdraw than those who do not (Bean & Metzner, 1985; Yorke & Longden, 2004). Intentions therefore function as a validated early-warning signal: while not every intention translates into behaviour, the presence of intention reliably marks students at higher risk. Importantly, intentions also capture motivational and psychological dimensions that are invisible in official records. A student who remains enrolled but expresses serious dropout intentions may already be disengaged academically and socially, placing them on a trajectory of reduced performance or eventual withdrawal. Retention research that ignores intention risks overlooking this critical transitional stage between full engagement and actual dropout. More recently, Findeisen et al. (2024) showed that intentions do not simply mark a single decision point but often follow a trajectory, shifting gradually from low risk to high risk. Their study found that dropout intentions are consistently linked to actual dropout and confirm that dropout intention is not just a perception but a meaningful signal of risk.

The relevance of dropout intention is particularly pronounced for working students, who form the focus of this dissertation. Their circumstances are

often fluid and unpredictable. An increase in working hours or a change in family responsibilities can quickly alter their ability to continue in higher education. Official retention measures, which record only the final act of withdrawal, cannot capture these shifts in student outlook. Dropout intention, by contrast, provides a real-time window into how students are experiencing pressures as they unfold. For instance, a student who reports that they are considering changing programmes may be responding to the difficulty of aligning rigid course schedules with irregular work shifts. Another who expresses an intention to leave altogether may be reacting to mounting financial strain. In both cases, dropout intention surfaces these challenges at a stage when institutions could still intervene before the decision crystallises into actual withdrawal.

By adopting dropout intention as its outcome, this dissertation also advances a particular conceptual stance on retention. Retention is understood here as a continuous negotiation between students' personal circumstances and the institutional conditions they encounter. It is not simply about whether a student ultimately graduates but about how they navigate the ongoing challenges that threaten persistence along the way. Dropout intention, therefore, is not treated as a secondary proxy but as a substantive part of the retention process itself. It marks the point at which the balance between personal pressures (such as employment or family responsibilities) and institutional support (such as services, teacher relationships, or employability prospects) becomes unstable. By focussing on intentions, this study looks at retention as a lived process rather than a simple outcome, and it does so at a stage when the risks are visible but still reversible. Most importantly, it captures retention at the moment when it matters most, when students are still making decisions and when universities still have the opportunity to support them.

2.2. Overview of existing frameworks of student retention

The study of student retention has evolved over the decades, producing numerous theoretical models that seek to explain why students either persist in or leave higher education. Each model reflects a different perspective, shaped by varying assumptions about the factors that influence student retention. Among these, Tinto's model of institutional action (2012) has been particularly influential in providing a structured approach to understanding how institutions can promote student success by creating supportive academic and social environments. However, its strengths and limitations become evident when compared to other key models, such as

those of Spady (1970), Astin (1975, 1993), Bean and Metzner (1985), and Cabrera et al. (1992).

The intellectual roots of Tinto's institutional action model (2012) can be traced back to early sociological theories of student departure, most notably Spady's (1970) adaptation of Durkheim's theory of academic suicide (Durkheim, 1951), which posited that students who fail to integrate into the academic and social life of an institution are more likely to drop out. According to Spady (1970), students' integration and their persistence are determined by the interactions they have within their academic and social settings. The sociological perspective of this model, which emphasises the role that the school environment and peer support have in the retention of students, is the model's strongest point (Hadjar et al., 2022). Nevertheless, its focus on social integration tends to overlook critical dimensions, such as academic engagement, which are addressed in Tinto's later work. Building on Spady's work (1970), Tinto's departure model (1975, 1987) introduced a more inclusive framework that has become one of the well-known theories in dropout research. Tinto's departure model posits that student persistence involves three stages: separation, transition, and incorporation. According to this model, the college experience is portrayed as an initiation process in which students must distance themselves from their former communities to successfully integrate into the institutional atmosphere. The advantage of this departure model is its longitudinal approach, which considers the dynamic nature of students' integration into both academic and social systems over time (Hadjar et al., 2022). Yet, critics argue that its assumption of separation from past communities may alienate non-traditional students, such as those with strong familial or cultural ties, whose persistence may depend on maintaining those connections (Hadjar et al., 2022).

Astin's theory of involvement (1975, 1993) offers a distinct but complementary perspective to Tinto's work (1975). Astin's theory (1975, 1993) provides an understanding of how student inputs (characteristics and backgrounds) and environments (educational experiences) influence outputs (educational outcomes). The scholar offers a distinct perspective by emphasising the quantity and quality of physical and psychological energy that students invest in their college experience. According to Astin (1975), the more students are involved in academic and extracurricular activities, the higher their likelihood of staying in school. This theory's strength is that it takes a college experience as a whole and considers student involvement in all of its dimensions. Tinto (1987) and Pascarella

and Terenzini (2005) support Astin's view (1975), noting that extracurricular involvement promotes social skills and social integration. Such involvement helps students build a sense of community and belonging, which are crucial for retention. Moreover, programmes aimed at increasing student engagement, such as first-year experience courses, learning communities, and student organisations, have been shown to improve retention rates, particularly for newly admitted students (Kuh, 2009; Kuh et al., 2007).

However, Astin's model (1975) has limitations. It risks oversimplifying retention by implying that increased involvement inherently results in improved retention, without adequately addressing the quality or context of that involvement. Wolf-Wendel et al. (2009) critique this oversimplification, noting that not all forms of involvement are beneficial; some may even distract from academic responsibilities and potentially hinder academic achievement. Furthermore, Astin's model has been criticised for its limited applicability to non-traditional students, who often face different challenges and barriers compared to traditional students. Bean and Metzner (1985) argue that the retention of non-traditional students is shaped less by their engagement in campus life and more by external factors that exist outside the university environment. These students, often balancing numerous responsibilities, face significant challenges that affect their ability to remain enrolled. Financial constraints, family obligations, and work commitments, they suggest, are the key forces that influence their decisions to continue or discontinue their education, making these external pressures more critical to their persistence than the traditional indicators of campus involvement. Building on this perspective, Bean and Metzner (1985) proposed a model specifically for non-traditional students.

Bean and Metzner's (1985) model of non-traditional student attrition represents a significant contribution to understanding the retention of this student population. In this context, non-traditional students are typically older than traditional college students, often enrolled part-time, and frequently work part-time or full-time while attending school. Additionally, they usually have significant family responsibilities. An important advantage of their model is its focus on environmental factors. For instance, their model acknowledges that non-traditional students are significantly impacted by external factors such as work, the financial situation, and family responsibilities, which in turn affect their academic achievement.

Unlike traditional models, Bean and Metzner's model (1985) does not emphasise social integration within the campus community as a primary factor for non-traditional students. Instead, the model incorporates psychological factors such as stress, contentment, and utility, which are essential for understanding a student's choice to continue or withdraw. While Bean and Metzner's model (1985) intentionally de-emphasises campus social integration for non-traditional students, it is possible to argue that it might underestimate the potential benefits of targeted social support systems. For instance, Rovai (2003) highlights that even non-traditional students benefit significantly from social support and integration tailored to their unique needs. Rovai (2003) suggests that a sense of community and belonging can positively influence non-traditional students' persistence and success rates, indicating that targeted support systems can mitigate some of the external challenges these students face. Similarly, Kasworm (2003) argues that these students require a supportive learning environment that acknowledges their life experiences and provides social and academic support. In fact, Kasworm (2003) highlights that adult learners are primarily motivated by career goals and the need to acquire new skills, often enrolling in higher education due to life transitions such as job loss or the need for a career change. They typically choose programmes that are accessible, cost-effective, and relevant to their current life needs, with a significant number enrolling in community colleges and institutions that offer flexible scheduling. Therefore, institutions should develop programmes that foster both academic and social integration, recognising the multi-role lives of non-traditional students (Kasworm, 2003).

However, Cabrera et al. (1992) aimed to bridge the gap between integration and attrition models to develop a more comprehensive understanding of student persistence. Their research revealed significant overlaps between the constructs used in these frameworks. For example, academic integration in Tinto's model (1987) aligns closely with course satisfaction in Bean's model (1980). Similarly, Tinto's concept of institutional commitment parallels institutional quality and fit in Bean's framework. These findings underscore that, despite their different terminologies and emphases, both models describe interconnected processes involving academic, social, and environmental factors that shape student persistence. A notable contribution of Cabrera et al.'s (1992) study is its emphasis on the role of external factors, a key component of Bean's model. They demonstrated that external influences, such as parental approval, financial support, and encouragement from friends, have

significant direct and indirect effects on a student's decision to remain in higher education. This highlights the need for retention frameworks to consider not only institutional and academic factors but also the broader social and economic contexts that influence persistence.

Although Cabrera et al. (1992) provided important insights into student attrition by integrating Tinto's student integration model and Bean's student attrition model, their work is not without criticism. While they aimed to integrate Tinto's and Bean's models, it is possible to argue that the overlap in constructs between the two models (such as academic integration and course satisfaction, institutional commitment, and institutional fit) could lead to redundancy rather than a true integration of theoretical perspectives. Moreover, Cabrera et al.'s integration of Tinto's and Bean's models largely overlooks the pre-existing dispositions and how they influence a student's integration into the academic and social systems of an institution. For example, students from backgrounds involving long working hours may harbour scepticism about the value of higher education, which can influence their levels of commitment and integration regardless of the quality of institutional support offered (Lessky & Unger, 2023). By overlooking these pre-existing factors, Cabrera et al. may have missed a critical dimension in understanding the complexities of student attrition.

Nonetheless, Braxton et al. (2000) critique and build on Tinto's interactionist theory of student departure (1998), which holds that student retention is influenced by student integration into academic and social life. Tinto's theory is essential, but it lacks empirical support and fails to explain social integration, according to the authors. They suggest using active learning, a pedagogical method where students actively participate in learning, to close this gap. They find that class discussions and higher-order thinking activities help students form meaningful connections with peers and faculty, creating a supportive academic environment, while traditional lecture-based teaching, which often uses knowledge-level exam questions, negatively impacts students' sense of belonging and commitment. Braxton et al. (2013) advocate for first-year seminars and living-learning communities that promote active learning and peer interaction to improve student retention. They also stress the importance of faculty development programmes to train educators in active learning strategies and the use of evaluation tools to measure their efficacy.

Recently, Aina et al. (2021) expanded these theoretical foundations by integrating economic and sociological perspectives to examine dropout determinants. Their review emphasises that persistence results from interactions among individual, institutional, and socio-economic factors. Notably, they underscore the importance of relational dynamics, such as peer and faculty connections, and argue that academic and social integration play crucial roles alongside external pressures like labour market conditions. While their analysis acknowledges that financial considerations influence dropout rates, it does not explore how students' expectations about job prospects shape their persistence. For instance, a student may remain enrolled despite financial difficulties if they believe their degree will lead to stable employment, while another may drop out if they perceive the job market as uncertain or misaligned with their field of study. Aina et al. (2021) advocate for tailored policies addressing both financial and relational challenges to reduce dropout rates effectively.

The preceding discussion suggests that the evolution of retention models in higher education reflects the increasing complexity of understanding student retention. Early models, such as those developed by Spady, Bean, and Metzner, emphasised the importance of social and academic integration in student success. These models shaped initial thinking, arguing that students who felt connected to both their academic and social environments were more likely to continue their studies. As retention research advanced, scholars recognised that student experiences extend beyond simply integrating into academic and social spheres. Later models, particularly those focused on student involvement, highlighted the active role students play in shaping their own educational journeys. This shift acknowledged that retention is not only influenced by institutional support but also by the ways in which students engage with learning opportunities and campus life. As a result, student agency became a key factor in understanding how relationships and participation contribute to retention. The involvement model expanded this perspective, offering a broader view of how activities such as extracurricular participation, campus organisations, and academic enrichment programmes support student success.

However, retention is not solely about student agency; institutions also share responsibility for adapting their structures, support systems, and expectations to meet the diverse needs of their student populations. In this context, Tinto's (2012) seminal work on student retention is particularly relevant, as it outlines the institutional conditions necessary to improve

retention and graduation rates in higher education. In the following section, I will explain Tinto's model of institutional action in more detail.

Tinto (2012) identifies four institutional conditions that are crucial for fostering student retention. For instance, a key factor within this framework is the establishment of high expectations. When institutions clearly communicate what is expected from students, particularly in terms of academic performance and effort, students are better equipped to meet these expectations. According to Tinto (2012), support systems play a crucial role in student retention. Academic support, such as tutoring and developmental education programmes, helps students who may start college at a disadvantage. Social support involves creating an inclusive campus environment where students can form meaningful connections with their peers and faculty, reducing feelings of isolation. Financial support is also critical, as economic barriers can be a significant hurdle for many students. Without adequate support in these areas, even the highest expectations can become insurmountable. Assessment and feedback are also essential components of Tinto's framework (2012). Regular assessments and constructive feedback help students understand their progress and identify areas for improvement. Such an ongoing feedback loop is particularly important during the first year of college when students are still adjusting to new academic demands. Another significant aspect of Tinto's institutional action model (2012) is the emphasis on involvement. Tinto (2012) shows that students who are actively involved in their academic and social environments are more likely to persist and graduate. Such involvement can include participating in study groups, engaging in classroom discussions, or joining campus organisations. The classroom, in particular, is a vital space for fostering engagement. Active learning techniques, which encourage students to directly interact with the material and each other, are especially effective in promoting retention. In this way, Tinto's (2012) call for a model of institutional action stresses the need for a proactive approach to student retention.

Despite its strengths, Tinto's institutional action framework (2012) is not without limits. One shortcoming lies in its silence on student satisfaction. While the model stresses the need to align support services with students' needs, it does not explicitly address how students' perceptions of these services, measured through satisfaction, affect their engagement and overall retention. Services may exist on paper, but unless they are perceived as relevant and accessible by students themselves, their effect will be muted. Satisfaction functions as a feedback loop, telling

universities whether their initiatives are actually working. Neglecting this aspect limits the ability of institutions to respond dynamically to the evolving needs and expectations of students, which are central to fostering a supportive educational environment (Kurantowicz & Nizinska, 2013).

Furthermore, Tinto's model of institutional action (2012) rests upon an assumption of institutional uniformity that does not adequately account for the profound disparities in resources and capacities across universities. This renders it critically limited, as less well-resourced institutions may find themselves unable to implement the ambitious academic and social integration strategies the model prescribes. Moreover, its privileging of campus-based engagement rests on the premise that active participation within institutional environments is inherently advantageous, a perspective that risks erasing the lived realities of working students. For these individuals, external pressures such as work commitments, family obligations, and financial insecurity are often far more determinative of persistence than any level of on-campus involvement. Equally troubling is the model's implicit acceptance of a neutral institutional culture, which fails to recognise the structural inequities that marginalise under-represented groups and create additional obstacles to integration. This oversight not only diminishes the model's applicability to diverse student populations but also perpetuates an uncritical view of institutions as universally accommodating spaces. Furthermore, the model's narrow focus on institutional engagement neglects the vital role of external support networks such as families, communities, and workplaces, which often serve as indispensable sources of stability and encouragement for working students.

Tinto's earlier departure model (1987) placed academic and social integration at the heart of persistence. Students were expected to immerse themselves in campus life, with integration achieved through clubs, dormitories, and extensive social networks. This integration model, however, was built around the traditional residential student who can immerse themselves fully on campus. In Estonia, as in many contemporary systems, that model faces limitations. A significant majority of Estonian students work during their studies, with more than half of the student population regularly employed. Many commute from home rather than living on campus; they attend classes and then leave to meet work or family obligations. Tinto (2012) acknowledged this shift, noting that only about a quarter of college students fit the 'traditional' mould. For the rest, including many working students, the classroom becomes the primary

locus of the college experience. This reality means that classic forms of social integration, such as joining clubs, living in dorms, or participating in extensive campus social life, are often less attainable. The applicability of Tinto's integration model in Estonia therefore requires adaptation. Academic integration, understood as students' engagement with learning and their identification with the role of student, remains crucial, but it may need to take place primarily within academic settings such as class discussions, group projects, and interactions with faculty rather than through extracurricular campus life. Social integration for working students might take on different forms, such as short but meaningful faculty and peer interactions in class or online communities, since time for traditional socialising is scarce.

Crucially, there is still more to unpack when it comes to integration. Tinto (2012) suggested that students often must undergo a process of separation, transition, and incorporation into the college community, even 'separating' from past communities to assimilate to the academic culture. For Estonian working students, such separation is often impossible—they cannot leave the workforce or familial responsibilities behind. The limitation here is that Tinto's institutional action model (2012), if applied rigidly, might label working students as 'less integrated' and thus at risk, without accounting for their dual identity as students and workers. Nevertheless, the spirit of Tinto's model, that a sense of belonging and engagement in the university improves persistence, still holds. Research shows that even in non-residential contexts, students who feel connected academically and socially (even in small ways) are more likely to continue. For example, one study noted that first-year university students who develop friendships and peer support are more likely to be retained into their second year (Bennett et al., 2016). In Estonia, where dropout rates spiked by 18.2% from 2020 to 2021 (Statistics Estonia, 2024), improving integration for working students is a priority. This may mean rethinking 'social integration' activities (e.g., offering cohort-based evening programmes for working adults or networking events that include family/employers) and doubling down on academic integration via engaging teaching practices. Tinto's institutional action model (2012) indeed pivots to this focus: it urges institutions to centre their retention efforts on the classroom experience and to create engaging, supportive learning conditions that pull in all students, including those who spend limited time on campus. In sum, academic and social integration are still relevant in Estonia, but their implementation must account for a student body that integrates education with employment.

In summarising the various retention models, it is clear that each framework offers valuable perspectives on the factors influencing student retention in higher education. From early sociological theories to more contemporary institutional and involvement-based approaches, these models collectively contribute to a holistic understanding of student retention. They highlight the interplay between academic and social integration, institutional support, external pressures, and student agency, underscoring the complex nature of retention. However, most models primarily focus on traditional (non-working) students, with limited attention given to those who integrate work alongside their studies. Bean and Metzner's model of non-traditional student attrition (1985) and Cabrera et al.'s (1992) integration of external influences are notable exceptions, acknowledging the impact of financial constraints and family responsibilities on student retention. Even so, these models do not fully capture the distinct challenges faced by working students, particularly in managing academic demands alongside external pressures. As more students enter higher education while juggling employment, it becomes increasingly important to have a deeper understanding of the factors that shape their experiences.

2.3. Bourdieu's theory of practice

The preceding discussion shows that while existing retention models offer useful insights, they do not fully account for the socio-cultural forces shaping working students' experiences in higher education. Too often, these frameworks privilege either individual agency or institutional action without adequately considering how the two can be integrated. Tinto's institutional action model (2012), for example, remains highly influential, yet it assumes that institutional structures are universally accessible and that integration occurs within a neutral institutional environment. Such assumptions obscure the challenges faced by working students, who must navigate economic pressures and competing obligations beyond the university. Addressing these oversights requires a theoretical perspective that extends beyond the institutional domain and into the broader sociological realities that shape student retention. In this regard, Bourdieu's theory of practice (1977), which he later extended in subsequent works (1984, 1986, 1989, 1993), offers a compelling alternative.

Bourdieu's (1977) formula for practice— $\{(\text{Habitus}) \times (\text{Capital})\} + \text{Field} = \text{Practice}$ —demonstrates why working students often struggle to integrate

fully into higher education. Bourdieu (1977) offers three key concepts—habitus, capital, and field—that help explain how students engage with and persist within higher education. Habitus refers to the deeply ingrained dispositions and expectations formed through socialisation, which shape how students perceive and interact with academic institutions (Swartz, 2012). Working students, regardless of their socio-economic background, may experience cultural dissonance when engaging with institutions that privilege middle- and upper-class norms (Reay et al., 2001; Reay, 2015). The academic expectations and institutional culture often reflect values that may not align with the lived experiences of students who balance employment alongside their studies, creating barriers to full engagement and retention. Academic expectations, faculty interactions, and even the language of higher education itself often reinforce a sense of alienation. Tinto (2012) assumes that institutional support mechanisms are sufficient for integration, but Bourdieu (1977) reveals a more complicated truth: students do not enter higher education on equal footing. Even in environments designed to be supportive, some find themselves unable to engage fully due to ingrained social and cultural barriers.

Capital, in Bourdieu's theory (1986), extends beyond economic resources to include cultural, social, and symbolic capital. Cultural capital refers to the knowledge, skills, and linguistic competencies that students inherit, which in turn influence their ability to succeed in academic settings (Lamont & Lareau, 1988; Lareau & Horvat, 1999). Students often arrive at university already fluent in academic norms, confident in seeking help, and adept at navigating institutional resources; those without this advantage face a steeper learning curve (Tierney, 1999). Universities that invest in culturally responsive education and foster intergenerational learning environments can help bridge these gaps (Takagi & Marroquin-Serrano, 2023). Similarly, making institutional processes more transparent and fostering inclusive faculty-student interactions can level the playing field (Archer & Kops, 2020; Chen, 2020). Without such efforts, students lacking cultural capital may disengage from academic life, struggling to advocate for themselves (Enriquez et al., 2014; Wells, 2008; Gale & Parker, 2017).

Social capital further complicates the equation. Relationships with family, peers, and institutional mentors provide crucial networks of support (Ceglie & Settlege, 2016; Daily et al., 2007). Yet, universities often expect students to prioritise institutional engagement over external connections, disregarding the reality that working students frequently rely on outside networks for financial and emotional stability (Reay, 2015; Rovai, 2003).

Bourdieu's framework reveals a critical flaw in Tinto's institutional action model (2012): the assumption that successful integration requires students to detach from prior social ties. In practice, working students depend on relationships beyond academia to sustain them. Kasworm (2003) emphasises that expecting students to immerse themselves fully in university life overlooks the necessity of external commitments. These relationships, far from being obstacles, serve as essential forms of social capital that shape student persistence.

Beyond cultural and social capital, symbolic capital plays a significant role in shaping student success. Symbolic capital refers to the prestige, recognition, and legitimacy that individuals accumulate within a given field (Bourdieu & Wacquant, 2013; Tomlinson, 2008, 2017). In higher education, this translates to credentials, awards, and affiliations that confer status and influence. Students who possess symbolic capital, such as being affiliated with elite (resourceful) institutions or receiving academic distinctions, often find greater opportunities and access to resources (e.g., Gerhards et al., 2018). However, for working students, obtaining symbolic capital can be particularly challenging. They may lack the time or institutional support to pursue extracurricular opportunities, research collaborations, or professional networking events, all of which contribute to the accumulation of symbolic capital. This disparity means that even when working students persist in higher education, they may not gain the same level of institutional recognition as their more privileged peers. Universities that actively work to recognise diverse forms of achievement and create alternative pathways for symbolic capital accumulation can help address these inequities.

This issue extends to an even more complex concern: the value of their education (e.g., Tomlinson, 2008). Symbolic capital is not merely accumulated through academic credentials but also through the perceived legitimacy of the institution and the credibility of its programmes in the labour market. When students believe their university provides them with industry-relevant knowledge, skills, and opportunities, they are more likely to view their degree as a valuable investment. This perception can strengthen their symbolic capital, as degrees from institutions with strong reputations and recognised pathways to employment confer status and enhance career prospects. However, if students lose confidence in their university's ability to prepare them for the labour market, whether due to outdated curricula, weak employer links, or a lack of work-integrated

learning, they may disengage or devalue their qualification, thereby weakening their symbolic capital.

Economic constraints add another layer of complexity. Working students often face financial pressures that force them to prioritise employment over coursework, leading to increased dropout rates (Bozick, 2007; Callender & Jackson, 2005; Wanti et al., 2022). While financial aid programmes exist, they frequently fail to address the specific needs of working students (Mngomezulu et al., 2017; Summer et al., 2023). Universities expect students to prioritise campus involvement, yet this expectation clashes with financial realities. Bourdieu's notion of economic capital demonstrates how financial insecurity directly impacts engagement and retention (Devine-Eller, 2005; Lareau & Horvat, 1999). Without flexible learning structures and adequate financial support, students facing economic hardship remain at greater risk of attrition, regardless of institutional efforts to promote integration.

Bringing these dimensions together, student dropout can be understood as a social practice shaped by the interaction of habitus, capital, and field. Students arrive at university with dispositions formed through their prior socialisation, which influence how they perceive and respond to academic demands. Those with limited cultural capital may struggle to interpret the often implicit expectations of higher education, while a lack of economic capital can force them to prioritise immediate work over study. Social and symbolic capital may either sustain engagement or, if weak, leave students isolated and vulnerable to withdrawal. The workplace adds another layer, providing its own forms of capital but also competing demands that may clash with academic requirements. Within the field of higher education, these capitals are not equally valued, and misalignment between students' resources and the institution's rules can lead to dissonance and eventual departure. From this perspective, dropout is not simply an individual choice or failure but the outcome of structural inequalities that affect how students' capitals are recognised, converted, or constrained within and across the fields of university and work.

In this light, by juxtaposing Bourdieu's structural analysis with Tinto's institutional approach, a more holistic understanding of student retention emerges. Tinto's model (2012) provides valuable insights into institutional conditions that support retention, yet it fails to address the systemic inequalities that shape access and participation. Bourdieu's framework (1977), by contrast, situates retention within a broader sociological context,

highlighting the structural barriers that constrain students' ability to integrate successfully. With that in mind, this research does not claim to be the first to merge Bourdieu's framework with student retention research. Rather, it provides evidence that the absence of Bourdieu's insights in Tinto's widely adopted institutional action model has significant implications, as this model continues to play a dominant role in shaping institutional strategies. Retention, after all, is not merely a function of institutional involvement but a product of broader socio-economic and cultural dynamics.

2.4. Towards an integrated perspective

To understand the retention of working students in higher education, I situate my analysis within an integrated framework that combines Tinto's institutional action model (2012) with Bourdieu's theory of practice (1977). Within this approach I recognise that student persistence is shaped both by institutional conditions (as per Tinto's model) and by the forms of capital students possess (as highlighted by Bourdieu). In the context of Estonia's higher education system, where a majority of students work alongside their studies, this framework addresses unique structural challenges. Key factors include the role of support services, economic, cultural and social capital, teacher-student relationships, peer networks, employability trust, and the influence of workplace capital. Together, these factors form a cohesive narrative explaining why working students stay or leave and how institutions can act to improve retention. In fact, the choice to focus on cultural, economic, and social capital, teacher-student relationships, peer networks, employability trust, support services, and workplace capital is guided by both theory and context. In the previous sections, the reviewed literature highlights many possible influences on student retention, yet not all of them directly reflect the realities of working students. These factors matter because they sit at the point where institutional practices, structural conditions, and everyday student experiences come together. Tinto's institutional action model (2012) highlights the role of support, involvement, and integration, which are reflected in the importance of services, peer networks, and teacher-student relationships. Similarly, Bourdieu's theory of practice (1977), meanwhile, draws attention to cultural, social, and economic capital, showing how unequal access to these resources shapes persistence. In Estonia, their relevance is especially clear: most students work while studying, financial pressures remain high, and many must reconcile academic norms with work and family responsibilities. Employability trust is another key

dimension, as students weigh whether their degree will genuinely open doors in the labour market. Focussing on these selected factors provides a framework that is both theoretically grounded and contextually relevant for understanding and enhancing retention within Estonia's higher education system. In what follows, I discuss these factors, paying particular attention to how they shape the experiences of working students in Estonian universities.

Cultural capital (Bourdieu, 1977) is relevant to this analysis. It encompasses the knowledge, skills, and dispositions that make academic life feel familiar and navigable. Those from families with a strong educational background often inherit an understanding of how universities work. They may instinctively know how to structure an essay, communicate effectively with professors, or make use of institutional resources. In contrast, working students or those from non-academic backgrounds might find themselves at a disadvantage, struggling to grasp the unwritten rules of higher education. Bourdieu (1984) argues that universities tend to reward the cultural capital of the privileged, reinforcing existing social hierarchies. A student unfamiliar with academia's expectations, such as how to network, contribute to seminars, or plan their degree path, can feel lost in an environment that unconsciously favours those who already 'speak the language' of university life. Many working-class or first-generation students face this challenge, often battling self-doubt or imposter syndrome simply because they have not had the same early exposure to academic norms (Lessky & Unger, 2023).

Family capital intersects with cultural capital but deserves distinct attention. Family capital, which refers to the resources, support, and stability a family provides, plays an equally vital role. Living at home with supportive parents can offer a financial safety net, reducing stress and allowing students to focus on their studies. Emotional encouragement from family can be a lifeline during academic setbacks, helping students stay motivated. Crucially, parents' educational backgrounds also make a difference (Aina et al., 2021). Students with university-educated parents often receive insider knowledge: tips on structuring coursework, guidance on career choices, and reassurance when things go wrong. Those without this advantage must figure things out alone, making their journey through higher education significantly tougher. For some, financial stability means they can fully immerse themselves in student life, taking advantage of internships, networking events, and extracurricular activities. Others, however, must juggle part-time jobs to make ends meet, leaving little time

or energy for anything beyond coursework. The result is clear: a widening gap in opportunities, where those with stronger family capital gain yet another advantage. Universities often assume all students arrive equally prepared, but the reality is far more complex. Cultural and family capital, or the absence of them, can shape everything from academic confidence to long-term success. Recognising these hidden inequalities is an important step towards creating a more inclusive and supportive educational system, one that does not just favour those who already know the rules.

In Estonia, the influence of cultural capital on working students manifests in several ways. If a student's habitus (their ingrained dispositions and attitudes, per Bourdieu) has been shaped primarily by the world of work or a non-academic upbringing, the culture of higher education can feel alien. For example, a full-time worker entering university may initially approach studies with a pragmatic mind-set shaped by the workplace, finding academic theory abstract or classroom norms confusing. This misalignment can impair their academic integration and sense of belonging. Moreover, older working students, who form a substantial segment of the student population, may be returning to education after time in the labour market, and the academic habits expected of them (such as regular studying, research skills, or even using digital learning platforms) may not come naturally. They must acquire this cultural capital during their studies, essentially learning the academic culture on the fly. Institutions can mitigate this by explicitly teaching academic skills and norms, thereby converting what Bourdieu calls institutionalised cultural capital (e.g., credentials, knowledge) into accessible forms for those lacking it. For instance, workshops on study skills, writing centres, or mentoring programmes can help working students accumulate the cultural capital needed to succeed. Research suggests that when students intentionally increase their social and cultural capital through information and resources, they can mitigate these challenges of adaptation (Banks, 2019). In the context of retention, recognising cultural capital means that universities should not assume all students start on equal footing; rather, they must proactively help working students crack the code of academic life. By valuing diverse experiences and teaching the unwritten rules, institutions can make working students feel more competent and included, thereby improving their retention.

University social capital, understood as the broader environment of connectedness and trust within a university, is particularly salient for the retention of working students. When a campus fosters an ethos of

approachability and community, students are more likely to seek help and engage (Chen & Starobin, 2019; Wyland et al., 2015). For example, mentoring programmes or cohort models can intentionally create peer networks and link working students with senior students or alumni mentors, tapping into the power of social capital to boost confidence and persistence. Bourdieu (1977) adds that the volume of social capital depends on the size and resources of one's network. A working student who can only spare minimal time for campus life will, by default, have a smaller network, which might consist of just a few classmates or one supportive lecturer. Thus, quality may trump quantity: a single close peer or a supportive tutor can provide crucial social capital that counterbalances a small network. Tinto (2012) also captures the importance of this capital: friendships, study groups, and mentor relationships create a safety net that keeps students engaged and helps them overcome academic or personal difficulties. For working students, building social capital can be challenging, as their time on campus to form bonds is limited, and they may feel 'out of sync' with traditional (non-working) students.

In fact, **peer networks** are widely recognised as central to academic progress and social integration, and their role is especially important in Estonia, where many students combine study with employment. Peer networks built through friendships or study groups can offer reassurance and practical support, but they often privilege more confident or higher-achieving students and leave others marginalised (Brouwer et al., 2022). For working students with limited time on campus, this risk is particularly acute, which makes structured approaches such as peer tutoring valuable in bridging gaps and providing targeted support (Podplota, 2022). Research also shows that smaller, tightly knit peer groups can serve as coping mechanisms for working students, although the quality of these networks matters: supportive peers reduce dropout risks, while weaker groups may exacerbate disengagement (Humlum & Thorsager, 2021). Digital platforms further expand opportunities to connect, offering flexibility for those unable to participate in traditional campus life, although they also carry the risk of distraction or superficial engagement (Kay et al., 2020; AlKhudari, 2023). These dynamics highlight why universities should not leave peer interactions to chance. Purposeful initiatives such as peer mentoring, support centres, and collaborative, work-related projects can transform peer networks into reliable forms of academic and emotional capital. Collectively, the evidence suggests that peer connections are not incidental but integral to student retention, and for working students in particular,

ensuring that these networks are accessible, inclusive, and effectively supported is critical to sustaining engagement and persistence.

Teacher–student relationships represent a vital form of social capital in higher education and are consistently identified as strong predictors of student success, influencing engagement, motivation, and retention (Hattie, 2008; Klem & Connell, 2004). For working students, whose campus presence may be limited, these relationships often provide the main point of connection with the academic community. When faculty are approachable, supportive, and flexible, they become key agents of retention (Hagenauer et al., 2023). Positive interactions, including timely feedback, acknowledgement of individual circumstances, and a willingness to adapt, help students feel valued and supported, particularly during the critical first year of study (Bennett et al., 2016). Conversely, a lack of understanding or rigid attitudes towards students' employment responsibilities can alienate them, reinforcing a sense of not belonging in academia. From Bourdieu's (1986) perspective, teachers not only transmit knowledge but also provide access to cultural and social capital by modelling academic norms, offering mentorship, and connecting students to opportunities such as research projects or professional networks. In this sense, teachers personify the institution: when relationships are strong, they foster trust and belonging, but when they are weak, they can accelerate disengagement and dropout.

The sustainability of such relationships, however, depends on institutional commitment. Faculty development that equips lecturers with relational and inclusive pedagogical skills, as well as strategies for managing workload and stress, is essential (Abdulrahman et al., 2012; Hagenauer et al., 2023). Without systemic backing, even committed educators may struggle to sustain the empathy and responsiveness that working students require. An 'ethics of care' perspective reframes these relationships as central to retention rather than ancillary, highlighting their role in countering disengagement and inequality (Schrock, 2019; Dobson & Owen, 2021). Yet, many lecturers underestimate their influence, attributing attrition primarily to student deficits rather than recognising the institutional and pedagogical dimensions involved (Nairz-Wirth & Feldmann, 2016). This oversight risks neglecting one of the most effective levers of persistence. Evidence shows that teacher actions such as clarity in instruction, flexibility in approach, and encouragement in practice matter as much as, if not more than, broader policy statements. For working students in Estonia, such relationships can provide stability in the face of competing demands,

reinforcing their academic identity and demonstrating that higher education is both attainable and worthwhile.

Student support services have evolved alongside social and economic change, a shift that is especially relevant in Estonia, where many students combine study with employment. While breadth of provision—from wellbeing and tutoring to career counselling—matters, services only make a difference when they are accessible, flexible, and connected to students' daily realities (Carr & London, 2017). Research shows that learning support works best when integrated with wellbeing provision, and uptake improves when stigma is reduced and delivery fits varied schedules (Johnson et al., 2022). Equally, peer networks and cohort communities help counter isolation (Turkpour & Mehdinezhad, 2016), while career services strengthen retention when they provide quality work-integrated learning and clear labour-market alignment (Aprile & Knight, 2019; Engelland et al., 2000). Technology can extend reach, but its impact depends on human guidance and student co-design (Dollinger et al., 2022). Structural measures such as flexible timetabling and employer partnerships further reduce role conflict, and life-design interventions that build adaptability and resilience help students manage competing demands (Camussi et al., 2023). Taken together, the literature suggests that support services act as a form of social capital and are central to retaining working students in Estonia, provided they are accessible, well-integrated, and aligned with labour-market realities.

Economic factors form an undercurrent in any discussion of working students. Economic capital, in Bourdieu's terms, refers to financial resources and assets, and it heavily influences a student's capacity to remain in higher education. Many students work precisely because their economic capital is low, and they need the income to pay tuition, rent, or support their family. In Estonia, many students work out of necessity due to financial constraints and high living costs, treating employment as a survival strategy rather than a choice (Beerkens et al., 2010). The researcher describes the 'monochromatic reality' of these students: a condition in which university students cannot afford to be students without a paid job (Toyon, 2022). This points to structural conditions such as limited scholarships, modest family incomes, or inadequate state support, which force students to seek paid work alongside full-time studies. The consequence is often time poverty and stress, which can undermine academic performance and motivation. Researchers (Kocsis & Pusztá, 2020) find that extensive working hours correlate with weaker academic

outcomes and higher odds of attrition. In Estonia, where full-time students can work unlimited hours, the integration of work and study may contribute to retention challenges, as working during studies seems to be associated with lower student retention and higher dropout risks, implying that working students might constitute a vulnerable group in need of targeted support.

Financial pressure affects retention in several ways. First, the immediate reward of income can compete with the delayed reward of a degree. Faced with pressing financial needs, a student might prioritise extra shifts at work over coursework, gradually disengaging academically. Some may take on a workload that is simply unsustainable, leading to burnout. Second, insufficient economic capital can directly cause stop-outs or dropouts. For instance, if a student cannot pay a semester's tuition or falls into debt, they may have no choice but to leave. Third, the psychological burden of financial strain can erode concentration and mental health, indirectly affecting academic success. Tinto (2012) explicitly acknowledges financial support as part of the support condition necessary for retention. In other words, to uphold high expectations for success, institutions must ensure students have the financial means (through scholarships, grants, work-study programmes, or flexible payment schemes) to actually meet those expectations. For working students, one solution is to reduce the financial necessity to work. If universities (or governments) can increase need-based aid, more students could either work fewer hours or not at all, freeing up time for study and campus engagement. Where increased aid is not feasible, another approach is to structure programmes so that working and studying are compatible (e.g., lighter course loads per term with extended programme duration, without stigma or penalty). It is also worth noting that not all working students are low-income; some work for professional experience or extra earnings. But even for them, economic incentives and pressures play a role in persistence decisions. For example, a lucrative job offer might tempt a student to drop their studies. Therefore, strengthening the economic capital of students (either directly or by lowering the economic costs of studying) is a critical piece of the retention puzzle.

Discussions of student retention are incomplete without considering **employability trust**, which refers to students' confidence that their education will lead to meaningful employment outcomes. For working students, this is especially relevant, as they are constantly weighing the costs of study against the immediate benefits of paid work. In essence, employability trust reflects the degree to which students believe that

completing higher education will enhance their career prospects sufficiently to justify their investment of time, energy, and money. From Bourdieu's (1977) perspective, employability trust is rooted in symbolic capital, since the degree itself represents a credential whose value depends on how it is recognised by employers, industries, and society at large. Yet symbolic capital alone is insufficient. A diploma may be necessary, but if students cannot rely on networks, institutional support, or employer connections to convert that qualification into real opportunities, its promise is weakened. Employability trust, therefore, also draws on social capital: the relationships, mentoring, and institutional linkages that make credentials meaningful in practice. When students are confident that their investment will translate into tangible benefits—a process Bourdieu (1986) describes as capital conversion—they are more likely to persist.

The Estonian labour market makes this dynamic particularly salient. The country's modern economy, especially in the tech and service sectors, offers many students jobs while they are still at university. If students perceive that a degree is not much more beneficial than immediate work experience, their trust in the value of continuing their studies may weaken, directly increasing the risk of dropout. Conversely, if they believe that a degree will enhance their employment opportunities through higher salaries, access to desired professions, or greater job security, they are more likely to persist despite challenges. In this way, employability trust functions as a decisive factor shaping dropout intentions. This trust is not a matter of blind faith but is built on tangible signals, such as the institution's track record, the relevance of its curriculum, and the clarity of its links to the labour market. For example, when universities connect coursework to industry needs, provide internships or job placement opportunities, and demonstrate strong graduate employment rates, they reinforce students' belief in the long-term value of their education. By contrast, if students see graduates struggling to secure meaningful work or encounter curricula that feel disconnected from practical skills, employability trust erodes. In such circumstances, a working student may conclude that remaining in a low-paying but stable job offers greater security than continuing with studies that seem unlikely to deliver sufficient returns.

For this reason, employability trust does more than influence student persistence directly; it can also mediate the effectiveness of institutional support. Even the most carefully designed services will have limited impact if students lack confidence in the long-term value of their studies. Conversely, when employability trust is strong, students are motivated to

engage with support because they see it as part of a larger investment in their future. This bridging role makes employability trust a critical factor in retention: it determines whether support is taken up and acted upon or disregarded as irrelevant. For Estonian working students, whose study trajectories are shaped by the constant balancing of employment and education, the assurance that their degree will yield real career benefits is decisive. Universities can reinforce this assurance by integrating employability into academic life, tailoring programmes to labour market needs, and being transparent about graduate outcomes. When students are convinced that their sacrifice of time and income today will pay off tomorrow, they are more likely to remain committed and complete their studies.

Working students operate at the intersection of two worlds: the academic field and the workplace field, each with its own demands and rewards. The skills and experiences gained from employment can be seen as a form of **workplace capital**. This encompasses practical knowledge, professional networks, on-the-job training, and even the habits of reliability and time management that work instils. Workplace capital can interact with academic life in complex ways (Rugy & Salmon, 2019). On one hand, it may confer advantages: a student who works in a field related to their studies might bring real-world insights to class discussions, find their academic learning more relevant, and build professional contacts that enhance their post-graduation prospects. In some cases, working can reinforce academic motivation. For example, a student might observe higher-level roles at their job that require a degree, which can strengthen their resolve to graduate. On the other hand, workplace capital can be at odds with academic capital. The time and energy spent to acquire workplace capital (through hours on the job) directly reduce the time and energy available to invest in coursework and campus activities. A full-time worker might not be able to take advantage of an unpaid internship or a study-abroad opportunity that could enrich their academic experience, thereby missing chances to accumulate academic capital (like research experience or additional credentials).

Bourdieu's notion of field (Bourdieu, 1977) is useful here: the university and the workplace are different fields with their own logic. Working students must constantly navigate between these fields, often having to convert practices from one field to suit the other. For example, punctuality and efficiency learnt at work may help in meeting academic deadlines, but the workplace habit of practical, hands-on problem-solving might clash

with the more theoretical or abstract nature of university learning. There can also be a tension in identity and priorities. The norms of the workplace often emphasise immediate productivity, whereas academia values reflective learning and long-term payoff. Students may feel pulled by the immediate accountability to an employer versus the self-directed responsibility of being a student. This can create stress and require careful prioritisation. The notion of workplace capital also extends to social relationships at work: many working students are not only students but also colleagues, employees, or maybe supervisors. Those roles can provide emotional support and a sense of accomplishment that might compensate if their student role is less fulfilling. However, if a student's primary sense of achievement comes from work, they may slowly disengage from their academic identity, seeing coursework as secondary.

Higher education institutions can help working students manage these dual roles by creating bridges between work and study. One effective strategy is to formally recognise work-based learning—for instance, by granting academic credit for relevant employment experience or integrating students' professional contexts into coursework and assessments. This approach validates workplace capital as a legitimate form of learning rather than viewing it as a distraction from academic success. Flexible learning arrangements, such as evening classes, hybrid formats, or part-time enrolment options, can also support students who must balance work schedules with study requirements. Some universities in Europe have experimented with cooperative education models (e.g., Aprile & Knight, 2019; Santoro & Gopalakrishnan, 2000), where students alternate between periods of academic study and structured work placements. These models explicitly link the two fields, helping students convert workplace experience into academic capital. The concept of workplace capital also implies that employers have a stake in student success. There is room for collaboration whereby employers can offer flexible hours or tuition assistance, recognising that an educated employee is a long-term asset. From a policy perspective, acknowledging workplace capital means understanding that retention is not solely an academic issue; it is linked to employment practices. In the Estonian context, ensuring that jobs do not become a 'cul-de-sac' that lures students away from finishing their degrees is a collective responsibility of universities and employers. By helping students navigate the demands of both fields, institutions can enable them to gain the benefits of practical experience and higher education credentials—without having to sacrifice one for the other.

2.5. Conceptual framework of the dissertation

Bringing together Tinto's institutional action model (2012) and Bourdieu's theory of practice (1977) provides an integrated lens for understanding and improving working student retention in higher education. Tinto (2012) underscores the institution's responsibilities: establishing clear expectations, providing robust support (academic, social, financial), delivering feedback, and fostering engagement. These are the levers universities can pull to enhance retention. For working students in Estonia, this means universities can create conditions that accommodate and engage them, ranging from classroom pedagogies to support services, so that they feel integrated into academic life despite external obligations. Tinto (2012) shows that these conditions matter most in the classroom, which is where many working students predominantly interact with the institution. Bourdieu (1977) adds a critical understanding of why students may struggle to meet institutional expectations. It highlights that students come with unequal distributions of capital. Those lacking sufficient cultural capital may not automatically know how to navigate university, so the institution must impart those competencies (e.g., through orientation and ongoing academic support) to level the field. Those with limited social capital on campus require facilitated opportunities to connect, such as mentor programmes or learning communities, to build a network that can support them. Students under financial strain (economic capital deficits) need institutional intervention to ensure basic needs are met so they can focus on studying. In essence, while Tinto outlines what institutions must do, Bourdieu explains why such interventions are necessary in the first place.

By synthesising these views, I arrive at a conceptual framework where institutional action and student capital interact. Retention of working students in higher education is not just about motivating individual students or offering one-off solutions, but about reshaping institutional structures to be more inclusive of those who study and work.

At this stage of the discussion, it is crucial to examine the conceptual model in relation to Figure 2-1, exploring how it maps out the key factors influencing dropout intentions and identifying institutional interventions that could mitigate student withdrawal.

The framework is built on the foundation of university social capital, which can be seen as the network, resources, and relationships that

contribute to student retention. This encompasses teacher-student relationships, peer networks, and support service satisfaction, all of which directly influence university social capital. These elements work collectively to strengthen students' sense of connection and belonging within the institution, which is central to reducing dropout intentions and managing the competing pressures of work and study. When students experience supportive relationships with faculty, reliable peer networks, and accessible services, they are more likely to feel that the university is invested in their success. This sense of institutional care creates a safety net that counterbalances the challenges of combining academic and work responsibilities. In this way, university social capital plays a direct role in lowering dropout intentions.

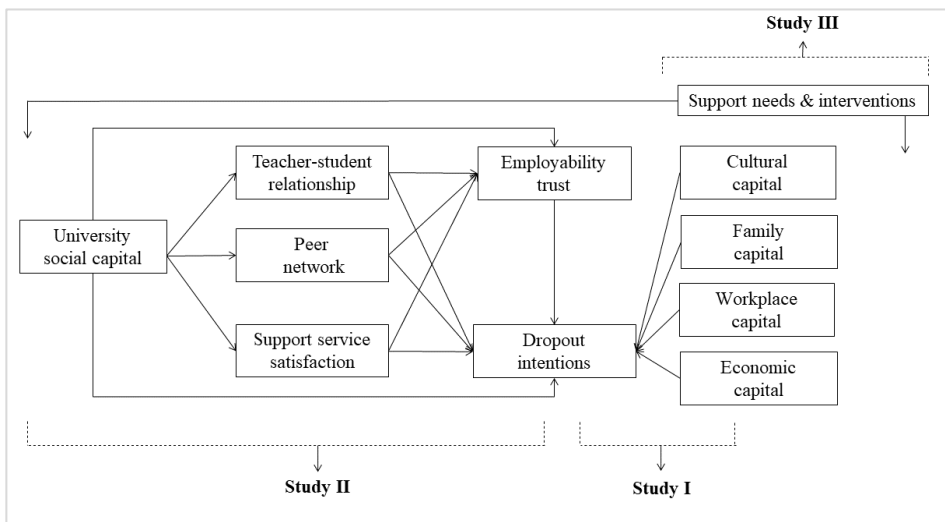


Figure 2-1. Conceptual framework of the dissertation

Another key core element of the framework is employability trust, or students' confidence in the career value of their degree. The influence of teacher-student relationships, peer networks, and support services on dropout intentions is mediated by this employability trust. Without it, even strong institutional support may not be enough to encourage persistence. For instance, a student might have positive interactions with professors and peers, yet if they doubt that their qualification will lead to better

opportunities than the job they already hold, their motivation to stay enrolled weakens. Conversely, when employability trust is high, the benefits of academic support, peer engagement, and student services are amplified, as students see them as investments in a future that will yield tangible rewards. This makes employability trust not just an additional factor but a crucial bridge linking institutional action to student persistence.

The effectiveness of institutional levers is further complicated by the forms of capital that students bring with them. Students' intentions to drop out are directly associated with these capitals because they determine the extent to which students can access, interpret, and benefit from the opportunities available in the higher education field. Cultural capital, including academic literacy, familiarity with higher education, and disciplinary norms, influences how easily students navigate the university environment. Those without prior exposure to academic culture may struggle to interpret expectations, limiting the benefits of support services unless institutions make the hidden curriculum more explicit. Family capital provides stability through parental education, living arrangements, and emotional or practical support. Where family support is limited, universities can compensate by fostering stronger institutional ties. Economic capital also plays a decisive role: financial security enables focus and flexibility, while financial strain creates time poverty and stress that increase the risk of dropout. Targeted financial aid that reduces the need for long working hours, along with flexible study pacing, can amplify the positive impact of social capital. Finally, workplace capital can either support or hinder persistence. When employment aligns with a student's field of study and supervisors are supportive, work experience can reinforce academic learning and strengthen employability trust. However, excessive or unrelated work hours often erode study time and increase the likelihood of withdrawal. Students' dropout intentions are therefore directly linked to these different forms of capital, as each shapes the balance between risk factors and resources that influence persistence in higher education.

Taken together, I argue that retention cannot be explained solely by institutional actions or individual agency. It emerges from the interplay between institutional resources and the resources students hold. Institutions strengthen persistence when they not only provide support but also recognise the unequal distribution of cultural, family, economic, and workplace capital among their students. By actively working to convert

and compensate for these differences, universities can ensure that their support structures truly reduce dropout intentions rather than reproduce existing inequalities.

The conceptual model, as illustrated in Figure 2-1, visually maps these relationships, positioning dropout intentions as the central dependent variable. The research is organised into Studies I, II, and III, each addressing a different aspect of student retention. Study I examines the relationship between different socio-demographic factors and dropout intentions, exploring how students' economic, cultural, familial, and workplace resources influence dropout intention. This directly addresses the sub-question: **What socio-demographic factors influence dropout intentions among working students?** Study II investigates the relationship between university social capital and dropout intentions, focussing on how teacher-student relationships, peer networks, and support services affect retention. This answers the question: **How do perceptions of university social capital correlate with the dropout intentions of working students?** Study III assesses students' perceptions of institutional support and seeks to evaluate their satisfaction with existing services while analysing how these perceptions vary according to the socio-demographic characteristics of working students. This addresses the question: **What specific support services do working students perceive as important while integrating academic, professional, and personal responsibilities?**

It is important to note that this framework (e.g., Figure 2-1) is not an all-encompassing model for student retention in higher education but serves as a structured guide to address the specific research questions and goals of this dissertation. The framework organises the exploration and findings systematically, ensuring a coherent approach to answering the research questions. For instance, the research is structured into three empirical studies (e.g., Study I, II, and III). It is important to note that the studies are labelled with Roman numerals for identification purposes only, and this does not imply any hierarchy or order of importance among the findings. All findings are equally important and contribute to answering the research questions posed in this dissertation.

3. METHODOLOGY

3.1. Research design

The research specifics, as highlighted in Figure 3-1, detail the study’s focus, approach to inquiry, methodological framework, and other key elements that structure the research. In this research, I focused on the retention of working university students in higher education. The aim of my inquiry was to better understand the factors that shape their decisions to stay in higher education.

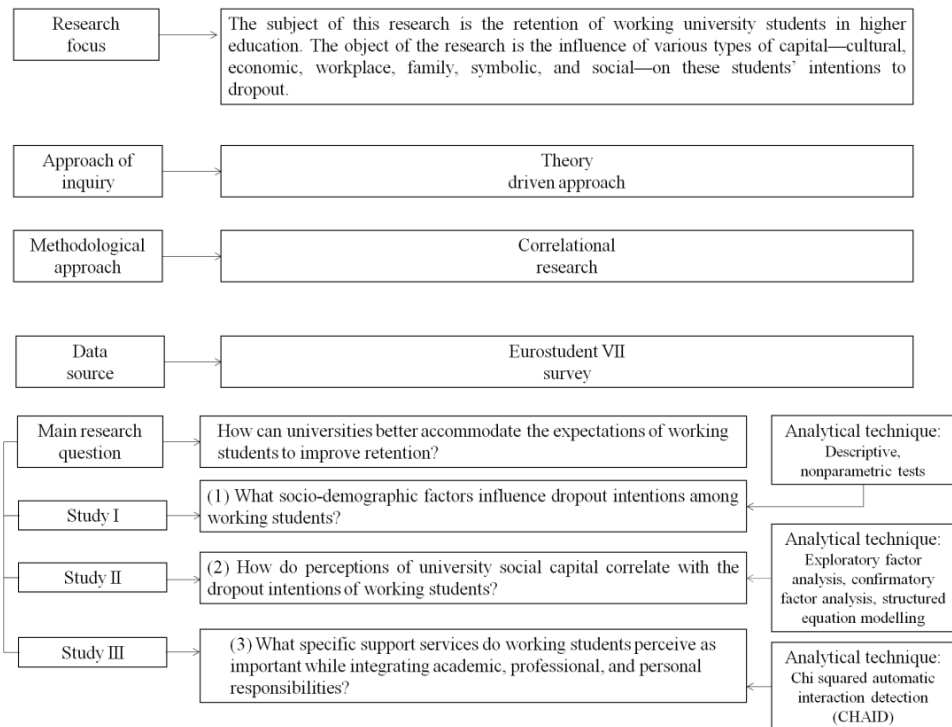


Figure 3-1. Research specifics

I adopted a theory-driven approach (Blaikie & Priest, 2018; Cohen et al., 2011; Crotty, 1998; Gray, 2014) to shape my research, drawing on existing theories (Tinto, 2012; Bourdieu, 1977, 1986) to explore the relationship between students' resources and their retention in higher education. Specifically, I examined how different forms of capital influenced their ability to continue their studies. Cultural capital, reflected in qualifications and specialisation; economic capital, encompassing financial resources; and workplace capital, which considers students' working conditions and employment status, all can play a role in shaping their academic journey. Additionally, I explored the influence of family support, categorised as family capital, in students' educational decisions. University social capital was also central to my analysis, particularly in relation to dropout intentions. Here, I considered the impact of teacher-student relationships, peer networks, and students' engagement with support services. Through this theoretical lens, I sought to uncover how these various forms of capital shape the retention of working students in higher education. The methodological approach I used was correlational research (e.g., Creswell, 2012; Saunders et al., 2007). Through statistical analysis, I explored the association to better understand how different types of capital and the students' intentions to continue their studies correlated.

The main research question driving the study is: **How can universities better accommodate the expectations of working students to improve retention?** This main question guides the inquiry across three specific studies (e.g., I, II, and III).

In Study I, to understand socio-demographic influences, they were categorised into cultural capital, family capital, workplace capital, and economic capital. In Study I, I analyse how cultural, economic, workplace, and family capital contribute to dropout intentions among working students. This phase of the research uses descriptive and nonparametric statistical tests to evaluate these relationships. By focussing on the diverse types of capital, this study (Study I) uncovers how each one influences students' decisions to continue or discontinue their education, highlighting critical areas for intervention and support.

Study II focusses on university social capital, examining how the resources within the university setting influence students' decisions to stay or drop out. In fact, this study (Study II) explores university social capital factors and their components, such as teacher-student relationships, peer networks, and satisfaction with support services. It also examines the concept of

employability trust and its impact on dropout intentions. Study II assesses the social dynamics within the university environment, evaluating how positive interactions and supportive networks contribute to student retention. It also investigates the factors that precede and influence the development of teacher-student relationships, peer networks, support service satisfaction, and employability trust among working students. For this part of the study (Study II), I employ exploratory factor analysis, confirmatory factor analysis, and structured equation modelling to investigate these complex dynamics.

Finally, Study III shifts the focus to the specific support service needs of working university students. The analysis here involves Chi-square automatic interaction detection (CHAID), a technique used to explore the various factors that may interact to affect students' needs for support services. In fact, the third empirical study (Study III) focusses on students' evaluations of the support services provided by universities, considering how satisfaction with these services varies based on cultural, family, economic, and workplace resources.

3.2. Source of data

The data utilised in this research comes from the Eurostudent VII survey (Cuppen et al., 2023). The Eurostudent project is a pan-European initiative aimed at collecting data to understand the social dynamics of higher education across different European countries. This project, managed by the German Centre for Higher Education Research and Science Studies (DZHW), gathers comprehensive data on students' socioeconomic backgrounds, living conditions, international mobility, and study conditions, among others. In Estonia, the Eurostudent VII survey was conducted from February to July 2019, resulting in a sample size of 1,902 working students from an overall response pool of 2,760 students. The survey achieved a gross response rate of 8%, indicating the proportion of responses relative to the total number of potential respondents. The Eurostudent VII survey used a full population survey approach, aiming to include as many participants as possible rather than selecting a representative subset (Cuppen et al., 2021).

Choosing the Eurostudent VII survey data was a crucial decision for this research, offering significant insights into the working conditions and experiences of students. The Eurostudent VII survey's broad scope, rigorous methodology, and comprehensive nature make it an excellent

source for understanding and improving the social aspects of higher education in Estonia. Using data from a cross-national project like Eurostudent provides several benefits, especially in situations where data on specific demographics, such as working students, is limited. Flick (2018) emphasises that cross-national projects ensure standardisation and comparability in data collection, which can be challenging for self-collected data on a broader scale. Additionally, Johnston (2017) notes that the analysis of data from such projects is increasingly recognised in the social sciences, offering access to large, professionally collected datasets that might be unfeasible for individual academic researchers due to resource constraints.

Additionally, the research objectives of this dissertation align well with the variables included in the Eurostudent VII survey, making the data directly relevant and useful for achieving the research goals. Thus, using data from the Eurostudent survey served as a strategic choice, allowing access to high-quality, relevant data and avoiding the costs and redundancy of collecting similar data independently.

Furthermore, focussing on a specific sample of Estonian working students reflects a targeted research strategy and a commitment to addressing a particular demographic, ensuring the results are highly relevant to this group. By focussing specifically on this cohort, the research can offer useful insights and more precise findings regarding the experiences and difficulties encountered by working students in Estonia. Such a targeted approach means that the conclusions drawn are directly applicable to the group being studied, increasing the practical value of the research. Researchers (Andrews & Nemoy, 2016; Palinkas et al., 2015) argue that narrowing the focus of a study enhances both the relevance and accuracy of the findings. By concentrating on a specific demographic, the research can explore the unique aspects of that group's experience, leading to more specific, detailed, and precise results. Therefore, utilising Eurostudent data and focussing on working university students in Estonia was a well-considered choice for this research.

3.3. Operationalisation and variable

Operationalisation is the process of defining and measuring a concept or variable so that it can be quantified and empirically assessed. Operationalisation involves converting abstract ideas into specific, observable, and measurable terms. By doing so, researchers can

systematically collect and analyse data, ensuring that their findings are valid and reliable (Bryman, 2016; Creswell, 2012). In the empirical studies (i.e., Study I, II, and III) included in this dissertation, I used several items (e.g., Table 3-1) from the Eurostudent VII survey for operationalisation.

In Study I, I used several items to understand the relationship between socio-demographic resources and dropout intentions. **Cultural capital** was operationalised through variables including sex (1 = female, 2 = male), age (1 = up to 21 years, 2 = 22 to <25 years, 3 = 25 to <30 years, 4 = 30 years or over), qualification studied for (Bachelor, Master, Long national degree), and field of study (1 = education, 2 = arts and humanities, 3 = social sciences, journalism & information, 4 = business, administration & law, 5 = natural sciences, mathematics & statistics, 6 = ICTs, 7 = engineering, manufacturing & construction, 8 = agriculture, forestry, fisheries & veterinary, 9 = health & welfare, 10 = services). Cultural capital was operationalised using educational and socio-demographic indicators, following Bourdieu's (1986) conceptualisation of capital as institutionalised and embodied forms of cultural competence. Specifically, qualification studied for and field of study represent institutionalised cultural capital, reflecting the legitimised cultural credentials valued within higher education (Bourdieu, 1986; Sullivan, 2001). Age and sex were also included, as these shape the acquisition and distribution of cultural capital through differing socialisation patterns and access to educational opportunities (e.g., Reay, 2004; De Graaf et al., 2000).

Family capital was operationalised through indicators reflecting the familial resources and educational environment available to students. Following Bourdieu's (1986) and Coleman's (1988) conceptualisations, family capital encompasses both the social and cultural resources transmitted through family relationships that facilitate educational success. Family capital was operationalised with the item 'living situation' categorised as 'students living with parents' and 'students not living with parents'. Familial capital also included the highest educational attainment of parents (1 = low education background (ISCED 0-2), 2 = medium education level of parents (ISCED 3-4), and 3 = high education level of parents (ISCED 5-8)).

Workplace capital was measured using indicators that reflect students' connection to and experience within the labour market. In this study, education-job alignment and number of working hours per week were used as key measures. Education-job alignment distinguished between students

whose employment was related to their field of study (matched) and those whose work was unrelated (unmatched). This variable captures the degree to which students are able to apply and develop field-specific knowledge and skills in their workplace, which represents a form of practical or contextualised capital that can support learning and professional identity formation (Bourdieu, 1986; Tholen, 2015). In addition, working hours per week were categorised into two groups: ‘1–20 hours’ and ‘more than 20 hours’. These indicators reflect the extent of students’ engagement in the labour market, which may influence both the accumulation of work-related competencies and the potential strain on academic engagement (Callender, 2008; Curtis & Shani, 2002). Together, these variables provide an operationalisation of workplace capital as the resources, skills, and experiences gained through employment that can interact with students’ academic trajectories.

Economic capital was measured through students’ self-reported financial situations, which reflect their access to economic resources that can support participation in higher education. Following Bourdieu’s (1986) framework, economic capital represents material assets and financial stability that can be directly converted into other forms of capital, such as educational opportunities or social advantages. Economic capital was assessed by considering students’ perceived financial situation (1 = students with financial difficulties, 2 = middle-class students, and 3 = students without financial difficulties).

As discussed in the literature review, this study adopts **dropout intention** as a proxy for student retention because it captures the ongoing decision-making process underlying persistence rather than a static outcome. In line with this conceptualisation, dropout intention was modelled as a latent construct. Dropout intentions were measured by items such as ‘considering changing the current main study programme’ and ‘considering completely abandoning higher education’, both measured on a 5-point Likert scale from ‘strongly agree’ to ‘strongly disagree’. While the first item directly reflects students’ intent to leave higher education altogether, the second captures potential disengagement from their current programme. Although changing a study programme does not necessarily mean leaving higher education entirely, it can indicate a mismatch between students’ expectations and their academic realities, which may weaken their commitment to their studies and increase the likelihood of eventual withdrawal. Programme changes, particularly when driven by a lack of support, may serve as an early warning sign of deeper challenges that, if

left unaddressed, could lead to students leaving higher education altogether. Considering both variables thus provides a broader perspective on the factors influencing student retention.

In Study II, I used several items to assess various constructs. For instance, **teacher-student relationships** were evaluated through items such as ‘getting along well with lecturers’, ‘lecturers’ interest in what students have to say’, ‘lecturers are extremely good at explaining things’, ‘giving helpful feedback’, and ‘motivating students to do their best work’, all measured on a 5-point Likert scale. These items reflect both the interpersonal and pedagogical dimensions of the student–faculty relationship, which previous research identifies as relevant to student success (Bennett et al., 2016; Hagenauer et al., 2023).

Employability trust was assessed with two items evaluating how well the study programme prepares students for the national and international labour markets, with both items rated from ‘very well’ to ‘very poorly’ on a 5-point Likert scale. From a Bourdieusian perspective, employability trust can be interpreted as a form of symbolic capital, that is, the recognition and perceived legitimacy of the qualifications and competencies acquired through education (Bourdieu, 1986). When students believe their degree carries recognised value in the labour market, they can perceive their educational investment as symbolically legitimate and socially convertible into economic and cultural advantages. A strong sense of employability and trust can therefore reflect confidence in the institutional prestige and credibility of one’s study programme, while a weaker sense can suggest doubts about its symbolic worth or its ability to generate returns in the labour field. In this sense, employability trust can capture how students position themselves within the broader system of symbolic exchanges between education and employment.

Peer network variables included contact with fellow students in the study programme and knowing many fellow students to discuss subject-related questions, both measured on a 5-point Likert scale. These items reflect students’ level of social embeddedness within the academic community. Peer interactions can create opportunities for knowledge sharing, emotional support, and collaborative learning, all of which can contribute to academic success and a sense of belonging. Previous research has consistently highlighted these dimensions as central to students’ social capital and engagement in higher education (Brouwer et al., 2022; Humlum & Thorsager, 2021; Podplota, 2022).

Table 3-1. Variables and relevant Study

Study	Research questions	Variables	Data analysis techniques
Study I	What socio-demographic factors influence dropout intentions among working students?	Dependent variables: <i>Dropout intentions:</i> changing study programme, abandoning higher education Independent variables: <i>Cultural capital:</i> gender, age, qualification studied, field of study; <i>Familial capital:</i> parents' educational attainment, living situation; <i>Economic capital:</i> financial situation; <i>Workplace capital:</i> education-job alignment, number of hours worked	Chi-square (χ^2), Somers'd.
Study II	How do perceptions of university social capital correlate with the dropout intentions of working students?	Latent variables: Teacher-student relationships: lecturer's engagement, helpful feedback, rapport, and motivation. Employability trust: preparation for the labour market. Peer networks: relationships and discussions with fellow students. Support service satisfaction: availability of study and learning facilities, support for balancing work, family, study, and work life. Dropout intentions: likelihood of changing or abandoning the study programme.	EFA, CFA, SEM
Study III	What specific support services do working students perceive as important while integrating academic, professional, and personal responsibilities?	Dependent variables: Satisfaction with study support services (e.g., organised tutoring, (academic) writing, bridging courses, mentoring), Satisfaction with the provision of learning facilities (e.g., library, computer centre, workplaces), Satisfaction with support to balance my studies and paid job, Satisfaction with support to balance my studies and family, Satisfaction with support in the preparation for my (future) work life Independent variables: <i>Cultural capital:</i> gender, age, qualification studied, field of study; <i>Familial capital:</i> parents' educational attainment, living situation; <i>Economic capital:</i> financial situation; <i>Workplace capital:</i> education-job alignment, number of hours worked	CHAID

Support service satisfaction covered the provision of learning facilities (like libraries and computer centres), study support services (like tutoring and mentoring), and support in balancing studies with paid jobs or family responsibilities, all measured on a 5-point Likert scale from ‘entirely sufficient’ to ‘not at all’. Previous studies have indicated that these aspects of institutional services play an important role in shaping students’ engagement, sense of belonging, and overall retention (Aprile & Knight, 2019; Carr & London, 2017; Engelland et al., 2000; Johnson et al., 2022).

In Study III, I also used several items to measure various concepts. Support service satisfaction included the provision of learning facilities (such as libraries and computer centres), study support services (like tutoring and mentoring), and support in balancing studies with paid jobs or family responsibilities. These aspects were all measured on a 5-point Likert scale, ranging from ‘entirely sufficient’ to ‘not at all’. Additionally, cultural capital, family capital, and workplace capital were operationalised in Study III similarly to their use in Study II. Table 3-1 provides an outline of the variables used in Studies I, II, and III, along with the corresponding analysis approaches and specific research tasks. It highlights how each study investigates different aspects of working students’ retention in higher education by focussing on various factors.

3.4. Data analysis technique

3.4.1. Non-parametric measure of association

In Study I, to measure the relationship, I used non-parametric measures of association. I used cross-tabulation to present the relevant results. Cross-tabulation, also known as contingency table analysis, is a statistical method used to examine the association between two or more categorical variables (Argyrous, 1997; Momeni et al., 2017). This technique involves constructing a table that shows the frequency or number of observations for each combination of variables. Cross-tabulation is especially useful for a number of reasons. Firstly, it is highly effective at identifying relationships and patterns among categorical variables (Momeni et al., 2017). The simple matrix structure of cross-tabulation provides an immediate visual representation of the correlations between various variables. Additionally, its straightforwardness and ease of understanding make it accessible; unlike more complex statistical techniques, interpreting cross-tabulation tables is relatively simple and concise (Momeni et al., 2017).

To quantify the relationships among the categorical variables investigated in Study I, I computed a variety of statistical metrics. Measures of association are statistical techniques designed to quantify the degree to which two variables are related. They are crucial in determining the strength and nature of associations or correlations between variables, thus supporting or refuting hypotheses about these relationships. The selection of an appropriate measure of association depends on the type of data. For instance, for categorical data, the Chi-square (χ^2) test for independence is commonly used (Argyrous, 1997). This test quantifies the relationship between categorical variables, indicating whether changes in one variable correspond with changes in another. For ordinal data, where variables are ranked or ordered but the intervals between rankings are not uniform, common measures of association include Kendall's tau-b and Spearman's rank correlation coefficient. These non-parametric measures are particularly useful when data do not follow a normal distribution or when there is a monotonic relationship between variables, meaning they either increase or decrease together. Somers's *d* is also frequently employed to ascertain the relationship between two ordinal variables, particularly when these variables exhibit varying numbers of categories and levels. The advantage of these non-parametric measures is their lack of assumptions about the data distribution, making them suitable for various scenarios.

3.4.2. Factor analysis and structural equation modelling technique

In Study II, I measured the construct of university social capital, identified the elements with the most significant impact on it, and examined how this university social capital influences the dropout intentions of working students. To achieve this, I employed exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modelling (SEM), adhering to the guidelines provided by Field (2009) and Verma and Verma (2024). EFA was employed as an initial step to identify the underlying factor structure of the constructs and to ensure that the items loaded appropriately on their respective factors. EFA allowed me to explore the data without imposing a predetermined structure, helping to uncover the latent variables that explained the patterns of correlations among the observed items. The results from EFA informed the development of a more refined measurement model for subsequent analyses.

For computations, I utilised SPSS-23, and for CFA and SEM, I used SPSS-23 AMOS software. To execute CFA and SEM, I specified models based

on theoretical expectations, which included constructs such as teacher-student relationships, peer networks, support service satisfaction, employability trust, and dropout intentions. Additionally, I conducted mediation analysis using SEM to understand and quantify the mechanism through which teacher-student relationships, peer networks, and support service satisfaction influence dropout intentions via employability trust. In Study II, the employability trust construct was treated as a mediator between teacher-student relationships, peer networks, support service satisfaction, and dropout intentions.

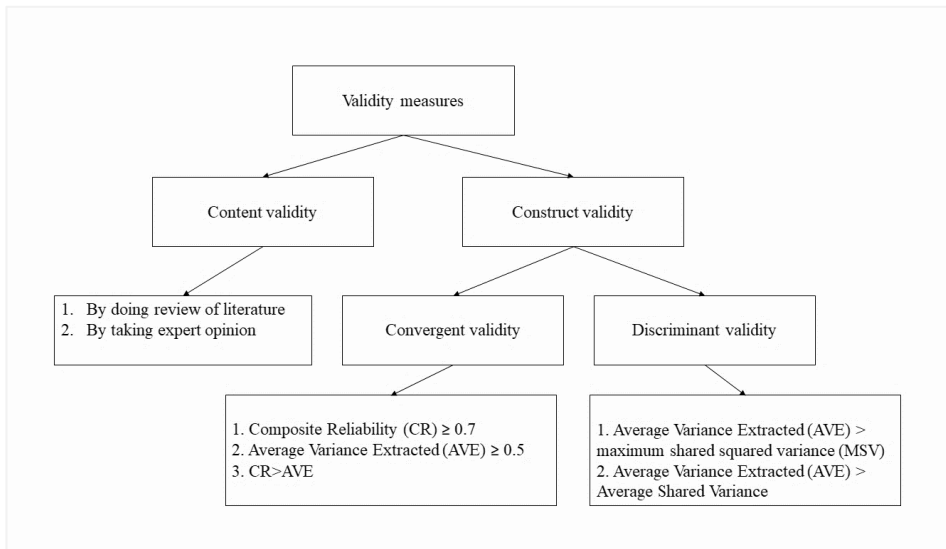


Figure 3-2. Validity measures used in the research.

Ensuring the validity of CFA and SEM results involved various measures, as depicted in Figure 3-2. The validation measures were divided into two main categories: content validity and construct validity. Content validity was achieved through a thorough literature review and expert opinions from senior professors and colleagues. Construct validity included both convergent and discriminant validity. Convergent validity was confirmed through composite reliability (CR) of 0.7 or above, average variance extracted (AVE) of 0.5 or above, and CR greater than AVE. Discriminant

validity was ensured by confirming that AVE exceeded the maximum shared squared variance (MSV) and average shared variance (ASV).

3.4.3. Chi-square automatic interaction detection

In Study III, to gain a deeper understanding of the effectiveness of support services and measure the association between satisfaction with these services and various forms of capital (cultural, familial, and workplace), I employed CHAID techniques following Milanović and Stamenković (2016). The CHAID is a decision tree algorithm commonly used in fields like marketing and medicine (Milanović & Stamenković, 2016). It excels at examining relationships between a categorical dependent variable and one or more categorical independent variables. CHAID uses Chi-square statistics to partition data, revealing interactions among independent variables. It is adaptable, managing both continuous and categorical variables (Díaz-Pérez & Bethencourt-Cejas, 2016). I found this technique particularly useful for detecting interaction effects and segmenting populations into distinct groups based on the values of the predictor variables. By doing so, CHAID helped to uncover complex patterns and interactions within the data. To perform the CHAID analysis, I utilised SPSS-23 software. During the analysis, I specified satisfaction with support services as the dependent variable and included various forms of capital (cultural, familial, and workplace) as predictor variables.

Before proceeding to the next chapter, it is important to discuss further the validity and robustness of the research. The validity and robustness of the research are demonstrated through its adherence to theoretical, methodological, analytical, and ethical standards, ensuring the credibility, reliability, and applicability of its findings (Onwuegbuzie & Johnson, 2006).

The theoretical validity of this research is rooted in its grounding in established frameworks, specifically Bourdieu's theories (Bourdieu, 1977, 1986) and Tinto's framework on student retention (Tinto, 2012). These seminal theories provide a robust structure that guided the research design and interpretation of the results. By employing such well-recognised academic theories, this research ensures a systematic understanding of how various forms of capital—cultural, economic, workplace, family, and social—affect working students' retention in higher education.

The methodological robustness of the research is evident in the thoughtful design and execution of the study. A correlational design was chosen as an appropriate approach to explore associations among variables (Creswell, 2012). The use of the Eurostudent VII survey, a standardised instrument (Cuppen et al., 2023), ensured the accuracy and relevance of the data. The survey, developed through rigorous research and expert input, provided multidimensional insights into students' experiences, ensuring that the data accurately captured the phenomena under investigation. Construct validity was achieved through the effective operationalisation of theoretical concepts into measurable variables (Bryman, 2016), which enhanced the precision and relevance of the analysis. The Eurostudent VII survey's uniform methodology and substantial sample size further strengthened the reliability of the findings, ensuring consistency and stability across different contexts.

The analytical validity of the research is demonstrated through the application of multiple advanced statistical methods (Field, 2009; Milanović & Stamenković, 2016; Verma & Verma, 2024). The use of techniques such as non-parametric testing, CHAID, EFA, CFA, and SEM ensured a thorough analysis of the data. These techniques helped to identify relationships among variables, supporting internal validity by illustrating associative influences. Additionally, measures such as composite reliability and average variance extracted were employed to validate latent constructs, ensuring internal consistency and strengthening the reliability of the results.

Furthermore, the research demonstrates external validity, as the findings have relevance beyond the specific context of Estonian working students. The use of Eurostudent VII data, collected through a standardised methodology across multiple European countries (Cuppen et al., 2021; Cuppen et al., 2023), supports the generalisability of the findings to similar higher education systems. However, the cultural specificity of the study may limit its direct applicability to non-European settings. Nonetheless, the robust theoretical and methodological framework provides a basis for adaptation in diverse contexts.

4. FINDINGS AND DISCUSSION

4.1. Research questions

The research question of this dissertation is: **How can universities better accommodate the expectations of working students to improve retention?**

To answer the research question, the following sub-questions were set out:

- (1) What socio-demographic factors influence dropout intentions among working students?
- (2) How do perceptions of university social capital correlate with the dropout intentions of working students?
- (3) What specific support services do working students perceive as important while integrating academic, professional, and personal responsibilities?

The subsequent sections discuss the findings that address these questions, drawing on the results of the empirical studies (Study I, Study II, and Study III) conducted as part of this dissertation.

4.2. General discussion

4.2.1. Characteristics of working university students

Results and discussion

Working university students in Estonia represent a diverse demographic, characterised by variations in age, gender, educational background, and socioeconomic status (as illustrated in Table 4-1 and Figure 4-1). Additionally, the appendix contains group comparisons with statistical significance. The results presented differences in demographic characteristics between three groups of university students: those not working alongside their studies (0 hours; non-working students), those working part-time alongside their studies (1–20 hours/week; part-time working students), and those working full-time alongside their studies (>20 hours/week; full-time working students). In fact, three sets of comparisons were considered: non-working versus part-time working students

(Appendix, Tables 4–5), non-working versus full-time working students (Appendix, Tables 6–7), and part-time versus full-time working students (Appendix, Tables 2–3).

Table 4-1 illustrates that, in terms of **age distribution**, non-working students are predominantly younger, with 43.7% being up to 21 years old and 28.8% between 22 and 25 years, while 14% are over 30. In contrast, the age distribution of working university students spans a broad spectrum. While 35.9% are 30 years or older, indicating a significant presence of mature students, 24.3% are between 22 and under 25 years, and 21.3% are aged 25 to under 30 years. Additionally, 18.5% of students are 21 and under, highlighting the presence of traditional-aged students juggling work and study. Demographic patterns observed in this result reinforce existing research. Full-time working students were significantly older than both non-working ($t(2038) = -22.98, p < .001$, Appendix, Table 7) and part-time working students ($t(1854) = -17.28, p < .001$, Appendix, Table 3), while part-time working students were also older than their non-working peers ($t(1532) = -3.72, p < .001$, Appendix, Table 5). These results are consistent with Bowl (2001), Gilardi and Guglielmetti (2011), and Kasworm (2003), who identify age as a defining characteristic of working students, often reflecting later entry into higher education and a stronger focus on lifelong learning. The Estonian data supports this, showing that a significant proportion of working students are over 30, possibly returning to higher education for career advancement at a later age. This is perhaps a positive sign, as it reflects a growing interest in lifelong learning. At the same time, it highlights the challenge for higher education institutions to accommodate those entering at a later stage in life.

Regarding **gender** (Table 4-1), non-working students comprise 71% females and 29% males, while the working group includes a higher proportion of females at 76.9%, with only 23.1% males. It indicates that females dominate both groups, with an even greater representation among working students, suggesting a gendered trend in integrating work and studies. Gender differences were also apparent, with non-working students more frequently female than both part-time ($t(1532) = 2.80, p = .005$, Appendix, Table 5) and full-time working students ($t(2038) = 3.01, p = .003$, Appendix, Table 7). The strong representation of women among working students resonates with Bowl (2001) and Bamber and Tett (2010), who highlight the gendered dimensions of balancing higher education with employment and other responsibilities. Nevertheless, in Estonia, this trend is even more pronounced among working students. More women than men

work alongside their studies, raising important questions about financial independence, social expectations, and the pressures of balancing multiple responsibilities. While the literature frequently discusses working students as a broad category, the Estonian data suggests that gendered experiences within this group require more attention. Women may be working out of greater financial necessity or may simply be more likely to pursue professional development while studying. Either way, their higher representation among working students suggests that integrating work and education is not a uniform experience across genders and requires a more targeted analysis.

Table 4-1. Overview of non-working and working students' survey responses (demographic attributes)

Variable	Non-working students (n=858)	Mean (SD)	Working students (n=1902)	Mean (SD)
Sex	Female: 71%, Male: 29%	1.29 (.45)	Female: 76.9%, Male: 23.1%	1.23 (.42)
Age	Up to 21: 43.7%, 22-25: 28.8%, 25-30: 13.5%, 30+: 14.0%	1.98 (1.06)	Up to 21: 18.5%, 22-25: 24.3%, 25-30: 21.3%, 30+: 35.9%	2.75 (1.13)
Parents' education	High (ISCED 5-8): 72%, Medium (ISCED 3-4): 23.4%, Low (ISCED 0-2): 4.5%	2.68 (.56)	High (ISCED 5-8): 67%, Medium (ISCED 3-4): 26.6%, Low (ISCED 0-2): 6.4%	2.61 (.606)
Qualification studied for	Bachelor: 69.9%, Master: 17.1%, Long national degree: 12.9%	-	Bachelor: 57.7%, Master: 36.6%, Long national degree: 5.6%	-
Field of study	Health & Welfare: 18.6%, Arts & Humanities: 17.9%, Social Sciences: 9.8%	-	Business: 19.3%, Arts & Humanities: 16.6%, Health & Welfare: 15.4%	-
Students (not) living with parents	With parents: 21.2%, Not with parents: 78.8%	.79 (.41)	With parents: 16.3%, Not with parents: 83.7%	.84 (.369)
Financial difficulties	Without: 43.5%, With: 26.8%, Middle: 29.7%	2.17 (.82)	Without: 51.5%, With: 20.1%, Middle: 28.4%	2.31 (.79)
Education-job alignment	-		Matching: 41.4% Not matching: 22.6%	1.35 (.47)
Working hours per week	-		1-20 hours: 35.5%, >20 hours: 62.1%	1.64 (.48)

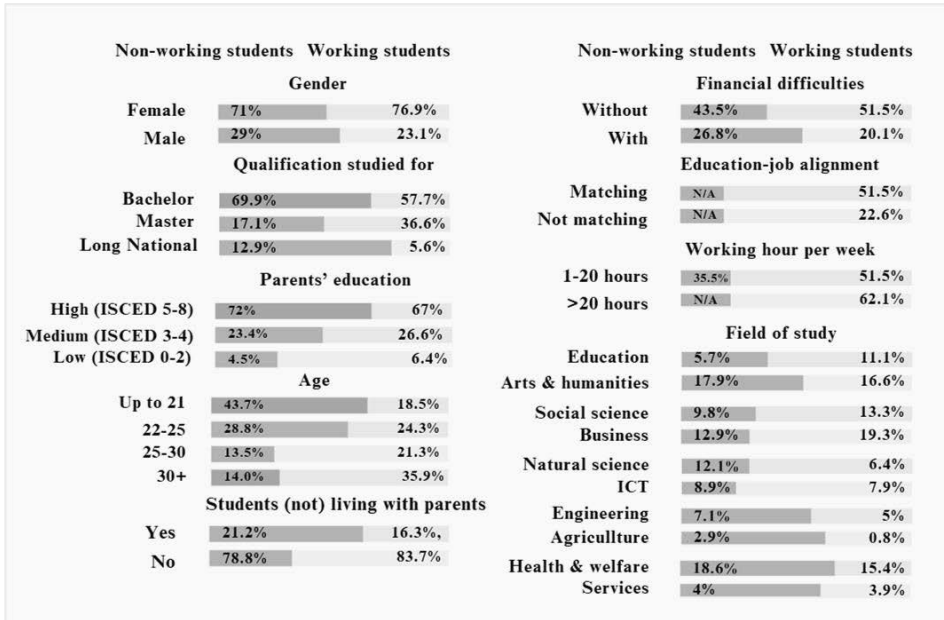


Figure 4-1. Demographic attributes of non-working and working university students

When examining the **qualifications** pursued (Table 4-1), 69.9% of non-working students are enrolled in bachelor's programmes, compared to 57.7% of working students. In contrast, 36.6% of working students are pursuing master's degrees, a significantly higher proportion than the 17.1% among non-working students. Similarly, differences emerge in the most common fields of study between the two groups. Working students are enrolled across a range of **disciplines**, with the highest concentrations in business, administration, and law (19.3%); arts and humanities (16.6%); health and welfare (15.4%); and social sciences, journalism, and information (13.3%). The qualification studied showed a small difference between part-time and full-time working students ($t(1854) = -2.04$, $p = .041$, Appendix, Table 3), but no differences across other comparisons. Field of study varied significantly, with non-working students showing higher values than both part-time ($t(1532) = 4.62$, $p < .001$, Appendix, Table 5) and full-time students ($t(2035) = 4.48$, $p < .001$, Appendix, Table 7). In line with research (Carreira & Lopes, 2019), the Estonian findings indicate that working students are more likely than non-working peers to pursue postgraduate degrees, particularly master's programmes. This is consistent with Carreira and Lopes (2019), who argue that student

employment is often tied to career-orientated study paths. Their study choices reinforce the trend, with a strong concentration in fields such as business, administration, law, and health and welfare, areas traditionally linked to career progression. Non-working students, by contrast, are spread across a broader range of disciplines.

The **educational attainment of parents** (Table 4-1) reveals that 72% of non-working students come from families with high education levels (ISCED 5-8), compared to 67% of working students. In contrast, a slightly higher proportion of working students have parents with medium education levels (ISCED 3-4) at 26.6% or low education levels (ISCED 0-2) at 6.4%, compared to their non-working peers. While comparing, parental education also differentiated groups, with full-time working students reporting lower levels of parental attainment than the other groups ($t(1939) = 3.71, p < .001$, Appendix, Table 7; $t(1798) = 3.17, p = .002$, Appendix, Table 3). The findings on parental educational attainment indicate that full-time working students are more likely to come from families with lower educational capital compared to both non-working and part-time working peers (Appendix, Tables 3 and 7). This aligns with researchers (Carreira & Lopes, 2019; Choi, 2018; Webber, 2014), who argue that working students often originate from less advantaged socioeconomic backgrounds, where parental education is lower and financial resources are more limited. In such contexts, employment during studies frequently becomes a necessity rather than a choice, as family support may be insufficient to cover living and study costs. The lack of differences between non-working and part-time working students suggests that occasional or moderate employment is not strongly stratified by family educational background. Instead, it is when students take on full-time work alongside studies that socioeconomic disparities become most visible. This finding reinforces the idea that intensive employment is a structural response to financial need, disproportionately affecting those from families with lower educational attainment. At the same time, the persistence of full-time working students in higher education, despite lower parental education levels, also reflects resilience and self-reliance. While Bamber and Tett (2010) and Banks (2019) caution that limited cultural and family capital may hinder academic integration, the Estonian data suggest that full-time working students remain committed to their studies, often motivated by professional aspirations. In this sense, employment can be seen both as a constraint and as a strategy for upward mobility, with students leveraging work experience and higher education as pathways to overcome structural disadvantages.

Financial situation emerges as another area of distinction between working and non-working students. Descriptive results suggest that employment may provide some financial buffer: 51.5% of working students reported no financial difficulties, compared to 43.5% of non-working students, while fewer working students (20.1%) reported difficulties compared to non-working peers (26.8%) (Table 4-1). However, the mean comparisons tell a different story. Both part-time and full-time working students reported significantly higher levels of financial difficulty than non-working students ($t(1518) = -2.84, p = .005$, Appendix, Table 5; $t(2014) = -4.93, p < .001$, Appendix, Table 7), while no differences were found between part-time and full-time groups (Appendix, Table 3). This mixed picture aligns with broader research. Financial necessity is widely acknowledged as a key driver of student employment, with working students often coming from less advantaged socioeconomic backgrounds (Carreira & Lopes, 2019; Choi, 2018; Webber, 2014). The Estonian data partially supports this: students working more intensively are more likely to have parents with lower levels of education and to report financial strain. At the same time, the descriptive results suggest that employment may provide some sense of stability, even if it does not fully alleviate financial pressures. This complexity indicates that while employment helps some students to cope, it does not eliminate the underlying economic vulnerabilities, particularly for those working more than 20 hours per week. This raises questions about whether existing financial aid structures sufficiently address the needs of students balancing heavy workloads alongside their studies.

Regarding **academic support from lecturers**, 64.9% of non-working students agree or strongly agree that lecturers provide helpful feedback, compared to 63.1% of working students (as illustrated in Table 4-2). Similarly, 51.8% of non-working students feel motivated by lecturers, slightly higher than the 49.9% reported by working students. Both groups rate lecturers' ability to explain things positively, with 57.8% agreement among both groups. Rapport with lecturers is slightly stronger among non-working students, with 82.9% agreeing they get along well compared to 81.9% of working students. However, a marginally higher proportion of working students (63.1%) feel lecturers are interested in what they have to say compared to 59.9% of non-working students. These results suggest that while both groups value their interactions with lecturers, non-working students may experience marginally better relationships overall. When statistical comparisons were made, across nearly all comparisons, there were no significant differences in students' evaluations of their lecturers:

helpful feedback, motivation, ability to explain, interest in students' views, and overall relationships were all rated similarly by non-working, part-time, and full-time students (Appendix, Tables 3, 5, 7). Only one small effect emerged, with full-time working students reporting slightly weaker relationships with lecturers than non-working peers ($t(1997) = -2.08, p = .038$, Appendix, Table 7). This insight suggests that student employment, whether part-time (1–20 hours) or full-time (>20 hours), does not negatively shape students' evaluations of teaching. This finding diverges from arguments that working students may feel marginalised in the academic environment (Darolia, 2014), instead supporting the view that teacher-student relationships are experienced consistently across different employment groups. However, the area of divergence relates to the relational aspect of teaching: full-time working students reported slightly weaker relationships with their lecturers compared to non-working peers ($t(1997) = -2.08, p = .038$, Appendix, Table 7). While this difference is small, it may reflect the reduced time and availability that full-time working students have for building rapport with faculty. Bamber and Tett (2010) emphasise that limited social capital can hinder academic integration, and in this case, the time pressures of full-time employment may restrict opportunities for informal interaction with staff. At the same time, the absence of broader differences suggests that perhaps lecturers themselves do not differentiate between working and non-working students in how they provide feedback, motivation, or explanations. This insight challenges deficit-based views of working students as disengaged or less valued by faculty (Banks, 2019). Instead, the Estonian data highlight that the academic environment remains inclusive in terms of perceived teaching quality, with only minor relational tensions emerging for those integrating full-time employment.

Peer networks also show interesting differences, as highlighted in Table 4-2. Among non-working students, 57.4% agree that they know fellow students to discuss subject-related questions, while 61.5% of working students express the same. Similarly, 57.4% of non-working students and 57.4% of working students agree they have contact with many students in their study programmes, indicating comparable levels of peer networking. Measures of peer relations also revealed minimal differences. Students across all groups reported similar levels of contact and discussion with fellow students, except for full-time workers, who were more likely than non-working peers to know fellow students for subject-related discussions ($t(1998) = 2.51, p = .012$, Appendix, Table 7). Scholars (Bamber & Tett, 2010; Meuleman et al., 2015) argue that working students often lack social

capital, making it harder for them to integrate into university life. In other contexts, this trait has been linked to lower retention rates and weaker engagement with academic institutions (Banks, 2019). However, the Estonian data complicates this postulation. While working students report weaker relationships with faculty, their peer networks appear relatively strong. This finding challenges the idea that employment isolates students academically. Instead, professional and social networks developed within learning environments may provide alternative sources of integration, potentially counterbalancing limited faculty engagement. Unlike research (Darolia, 2014), which positions working students on the margins of academic culture, findings from this research on the Estonian context suggest that they do not necessarily lack the social capital of their peers. The stronger peer networks among working students also complicate the notion that non-working students are more embedded in campus life. While non-working students may have more time for extracurricular or informal activities, working students appear to cultivate purposeful academic relationships that support their studies. This resonates with the idea that working students are not passive outsiders to university culture but active agents who use both work and study environments to build supportive networks (Bamber & Tett, 2010).

Perceived **satisfaction with support services** reveals distinct patterns across different student groups (e.g., Appendix 4). In terms of support service satisfaction, non-working students report higher satisfaction with learning facilities (Mean = 2.03, SD = 1.314) compared to those working 1–20 hours (Mean = 2.14, SD = 1.359; $t(1516) = -1.654, p = .098$) and those working more than 20 hours (Mean = 2.31, SD = 1.486; $t(2017) = -4.345, p < .001$). Conversely, students working more than 20 hours report less support for balancing studies and paid work (Mean = 3.71, SD = 1.518) compared to non-working students (Mean = 4.05, SD = 1.699; $t(2010) = 4.742, p < .001$). A similar pattern exists between non-working students and those working 1–20 hours ($t(1513) = 5.425, p < .001$). In fact, satisfaction with institutional support showed a mixed picture. Full-time workers expressed greater satisfaction than part-time and non-working students with study support services ($t(1846) = -2.04, p = .042$, Appendix, Table 3) and learning facilities ($t(2017) = -4.35, p < .001$, Appendix, Table 7; $t(1837) = -2.34, p = .019$, Appendix, Table 3). They also rated preparation for future work life more positively ($t(2017) = -3.91, p < .001$, Appendix, Table 7). However, both part-time and full-time working students were significantly less satisfied with support to balance study and

paid work than non-working peers ($t(1513) = 5.43, p < .001$, Appendix, Table 5; $t(2010) = 4.74, p < .001$, Appendix, Table 7).

These results on **support and satisfaction** reveal an interesting pattern. First, full-time working students consistently reported greater satisfaction with **study support services** and **learning facilities** than both part-time and non-working peers (Appendix, Tables 3 and 7). This contrasts with the narrative in the literature that working students often lack sufficient institutional support (Bamber & Tett, 2010; Bowl, 2001; Webber, 2014). In the Estonian context, those who work long hours appear to appreciate available services more, perhaps because these supports help them manage the double demands of employment and study. Their stronger satisfaction may also stem from a pragmatic, career-orientated mindset: for these students, support services may not simply be academic aids but practical tools that can help them sustain their dual role as workers and learners. It indicates that working students' engagement with institutional resources (study support services and learning facilities) may be more strategic than the literature often assumes.

In contrast, non-working students expressed greater **satisfaction with support to balance studies and paid work** than both part-time and full-time students (Appendix, Tables 5 and 7). This pattern is not unexpected, as students who do not work face fewer time pressures and may find it easier to manage academic requirements without competing job responsibilities. The lower satisfaction reported by working students in this area can point to a broader structural issue: the traditional organisation of higher education may still be primarily orientated toward the needs of full-time students who are not in paid employment. When institutions operate around this model, timetables and assessment deadlines can make it difficult for working students to coordinate their academic and professional responsibilities. Without more flexible arrangements as a legitimate pathway, these students may be left to manage conflicting demands independently. As Webber (2014) and Bowl (2001) note, unless universities design support systems that better reflect the realities of student employment, those who work alongside their studies may continue to experience disadvantages in balancing their dual commitments.

Interestingly, no significant differences were found in **support to balance studies and family**, suggesting that family-related responsibilities are experienced similarly across working and non-working students in Estonia (Appendix, Tables 3, 5, 7). This result suggests that, across all groups,

family-related responsibilities may be experienced in broadly similar ways or may not vary enough to influence students' satisfaction with institutional support in this area. It is also possible that, within this sample, family obligations are less salient than work commitments during the study period, or that existing family-support mechanisms meet students' needs reasonably well. Finally, full-time working students expressed greater **satisfaction with institutional preparation for future work life** than both part-time and non-working peers (Appendix, Tables 3 and 7). This finding may suggest that many working students view higher education through a professional lens. Consistent with Carreira and Lopes (2019), they can perceive university study not as separate from work but as part of a broader career strategy. For these students, work and education may not be in conflict but can function as complementary investments that reinforce one another. This perspective challenges deficit-based views of working students as overburdened or disengaged and instead portrays them as active participants who use higher education to strengthen their position in the labour market.

All in all, these results on **institutional support and satisfaction** illustrate a dual reality. On the one hand, full-time working students positively evaluate institutional supports that connect to their professional aspirations and academic progress. On the other hand, they remain dissatisfied with the limited assistance available to reconcile the practical challenge of balancing work and study. This reinforces earlier arguments (Bamber & Tett, 2010; Bowl, 2001) that institutional interventions should not only provide generic support services but also directly address the structural constraints faced by students engaged in significant employment.

The results on **employability trust** perceptions highlight important differences between student groups. Full-time working students expressed greater confidence in their programmes' preparation for the national labour market compared to non-working peers ($t(2024) = 4.37, p < .001$, Appendix, Table 7), while part-time students reported slightly lower ratings than non-working students ($t(1522) = 2.36, p = .018$, Appendix, Table 5). This suggests that the link between employment and perceived value (symbolic capital) is not linear. For students working intensively, study and work may be seen as complementary pathways, reinforcing their belief that higher education supports their career trajectory. For part-time workers, however, employment may not provide the same level of integration with future-orientated career goals, leading to less confidence in the degree's labour market relevance. No significant group differences

emerged in perceptions of preparation for the international labour market (Appendix, Tables 3, 5, 7). This insight suggests that employment intensity is more strongly associated with confidence in navigating the domestic labour market than in developing internationally transferable skills. These findings complicate previous literature that often portrays working students as uncertain about the long-term value of their studies (Bamber & Tett, 2010; Webber, 2014). In Estonia, working students, particularly those employed full-time, do not appear to question the employability value of their degrees. Instead, they report stronger trust in their programme's relevance to national career opportunities, echoing research (Carreira & Lopes, 2019), which argues that working students are often highly career-orientated. Rather than viewing work as competing with study, these students appear to interpret both as mutually reinforcing investments in their professional future.

Commitment to study programmes varies across student groups. Full-time working students were significantly more likely to consider changing their study programme than both non-working ($t(2024) = -5.02, p < .001$, Appendix, Table 7) and part-time peers ($t(1846) = -2.24, p = .025$, Appendix, Table 3), while part-time workers were also more likely than non-working peers to report the same ($t(1520) = -2.17, p = .030$, Appendix, Table 5). These results suggest that employment, particularly at higher intensities, may increase uncertainty about programme fit. At the same time, no significant differences appeared between groups in terms of **thinking about abandoning higher education altogether** (all $p > .05$, Appendix, Tables 3, 5, 7). This challenges the widely held view that working students are at higher risk of dropout due to work obligations (Carreira & Lopes, 2019; Roberts, 2011). Instead, the Estonian case suggests that while working students may question whether they are in the right programme, they remain committed to completing higher education more broadly. This perseverance likely reflects their strong career orientation, as identified by Wardley et al. (2013) and Kurantowicz and Nizinska (2013), who argue that working students are often highly motivated by long-term professional goals. All in all, these insights imply that employment is associated less with withdrawal from higher education and more with a process of reorientation. Full-time working students, in particular, appear to recalibrate their educational pathways in line with career trajectories, demonstrating agency in adapting their studies to their professional aspirations. These insights are in line with those of other studies that have shown working students to be an integral part of their

own educational experiences, rather than just a target population for special treatment (Bamber & Tett, 2010).

The above insight suggests several characteristics of working university students in Estonia. The comparisons between non-working, part-time (1–20 hours/week), and full-time (>20 hours/week) working students reveal that employment during higher education is associated with clear demographic and socioeconomic differences, some financial and institutional challenges, and academic and social experiences. Demographically, full-time working students tend to be older and come from families with lower parental educational attainment, pointing to a background of lower socioeconomic resources. Gender differences were also observed, with non-working students more likely to be female. Financially, both part-time and full-time working students reported more difficulties than non-working peers. In terms of the academic experience, quality of teacher-student relationship ratings did not differ substantially across groups. Students generally viewed their lecturers similarly in terms of helpfulness, motivation, and clarity, with the only difference being a slightly weaker sense of rapport with lecturers among full-time workers. Peer relations told a different story: working students, particularly those employed full-time, reported stronger networks with fellow students. Satisfaction with institutional support revealed a dual reality. Full-time working students valued study support services, learning facilities, and career preparation more highly. Yet they, along with part-time students, were less satisfied with support for balancing studies and paid work, highlighting structural barriers that universities have not fully addressed. Perceptions of employability trust also varied. Full-time working students expressed greater confidence in their programmes' preparation for the national labour market, while part-time workers reported the lowest levels of confidence. No differences emerged in international labour market preparation. Finally, differences in programme persistence indicate that working students, especially full-time workers, are more likely to consider changing their programme but are not more likely to abandon higher education altogether.

In fact, these findings portray working students as a diverse but resilient group. They face greater financial challenges and some difficulties in balancing commitments, yet they maintain strong peer connections, value certain institutional supports, and remain committed to higher education. In the Estonian context, rather than being at heightened risk of dropout, working students, particularly those employed full-time, emerge as active,

career-driven learners who strategically integrate work and study to achieve long-term professional goals.

Table 4-2. Overview of non-working and working students' survey responses (perceptions on institutional factors)

Variable	Non-working students (n=858)	Mean (SD)	Working students (n=1902)	Mean (SD)
Lecturers give helpful feedback	Strongly Agree: 26.3%, Agree: 38.6%, Neutral: 21.2%, Disagree: 13.8%	2.26 (1.07)	Strongly Agree: 24.2%, Agree: 38.9%, Neutral: 23.2%, Disagree: 13.8%	2.30 (1.05)
Lecturers motivate to do best work	Strongly Agree: 17.9%, Agree: 33.9%, Neutral: 29.8%, Disagree: 18.3%	2.53 (1.08)	Strongly Agree: 16.7%, Agree: 33.2%, Neutral: 31.9%, Disagree: 18.2%	2.55 (1.04)
Lecturers are extremely good at explaining things	Strongly Agree: 14.7%, Agree: 44.2%, Neutral: 32.3%, Disagree: 9.3%	2.38 (.89)	Strongly Agree: 14.4%, Agree: 43.4%, Neutral: 34.0%, Disagree: 8.2%	2.37 (.85)
Get along well with lecturers	Strongly Agree: 43.9%, Agree: 39.0%, Neutral: 14.5%, Disagree: 2.7%	1.76 (.81)	Strongly Agree: 39.8%, Agree: 42.1%, Neutral: 15.0%, Disagree: 3.1%	1.82 (.82)
Lecturers are interested in what students have to say	Strongly Agree: 25.7%, Agree: 34.2%, Neutral: 26.6%, Disagree: 13.5%	2.31 (1.06)	Strongly Agree: 23.7%, Agree: 39.4%, Neutral: 25.6%, Disagree: 11.3%	2.27 (1.01)
Knows fellow students to discuss questions	Strongly Agree: 32.2%, Agree: 24.9%, Neutral: 20.6%, Disagree: 22.2%	2.40 (1.27)	Strongly Agree: 32.2%, Agree: 29.3%, Neutral: 22.1%, Disagree: 16.5%	2.27 (1.15)
Contact with students in study programme	Strongly Agree: 29.2%, Agree: 24.2%, Neutral: 19.7%, Disagree: 26.9%	2.53 (1.32)	Strongly Agree: 29.0%, Agree: 28.4%, Neutral: 22.6%, Disagree: 20.0%	2.40 (1.21)
Thinking about changing the main study programme	Strongly Agree: 4.7%, Agree: 4.7%, Neutral: 8.4%, Disagree: 82.2%	4.31 (1.11)	Strongly Agree: 3.2%, Agree: 3.4%, Neutral: 6.8%, Disagree: 86.6%	4.49 (.98)
Thinking about abandoning studies	Strongly Agree: 2.1%, Agree: 2.9%, Neutral: 5.2%, Disagree: 89.8%	4.60 (.88)	Strongly Agree: 2.2%, Agree: 2.8%, Neutral: 4.8%, Disagree: 90.2%	4.62 (.88)
Satisfaction with study support services	Entirely Sufficient: 17.1%, Sufficient: 22.7%, Neutral: 19.1%, Not Sufficient: 22.5%	3.31 (1.73)	Entirely Sufficient: 15.8%, Sufficient: 19.7%, Neutral: 21.3%, Not Sufficient: 33.6%	3.40 (1.71)
Satisfaction with learning facilities	Entirely Sufficient: 45%, Sufficient: 30.7%, Neutral: 12.1%, Not Sufficient: 12.2%	2.03 (1.31)	Entirely Sufficient: 38.2%, Sufficient: 31.3%, Neutral: 15.2%, Not Sufficient: 15.3%	2.25 (1.45)
Balance studies & paid job	Entirely Sufficient: 9.5%, Sufficient: 12.4%, Neutral: 21.4%, Not Sufficient: 46.7%	4.05 (1.70)	Entirely Sufficient: 9.8%, Sufficient: 14.8%, Neutral: 21.4%, Not Sufficient: 53.3%	3.67 (1.52)
Balance studies & family	Entirely Sufficient: 10.1%, Sufficient: 11.0%, Neutral: 16.0%, Not Sufficient: 62.9%	4.18 (1.76)	Entirely Sufficient: 9.2%, Sufficient: 11.0%, Neutral: 19.6%, Not Sufficient: 60.2%	4.04 (1.67)
Preparation for the future work life	Entirely Sufficient: 11.8%, Sufficient: 21.0%, Neutral: 27.5%, Not Sufficient: 39.7%	3.21 (1.40)	Entirely Sufficient: 11.5%, Sufficient: 17.8%, Neutral: 27.5%, Not Sufficient: 43.2%	3.37 (1.49)
Preparation for the national labour market	Very Well: 21.7%, Well: 33.5%, Neutral: 20.7%, Poorly: 24.1%	2.72 (1.53)	Very Well: 26.1%, Well: 32.9%, Neutral: 22.7%, Poorly: 18.3%	2.49 (1.37)
Preparation for the international labour market	Very Well: 10.3%, Well: 24.5%, Neutral: 25.1%, Poorly: 40.2%	3.33 (1.55)	Very Well: 11.5%, Well: 21.8%, Neutral: 23.8%, Poorly: 42.9%	3.39 (1.58)

4.2.2. Study I: What socio-demographic factors influence dropout intentions among working students?

Results

The study (Study I) on socio-demographic attributes and dropout intentions among working university students in Estonia sheds light on the interplay between various factors influencing students' educational trajectories. Female students are less likely to consider changing their study programmes (72.3% do not agree) compared to male students (71.2% do not agree). Male students are more likely to consider abandoning their studies (3.4% strongly agree) than female students (1.9% strongly agree). Gender significantly influences the likelihood of abandoning higher education but not changing study programmes (χ^2 : 17.601, $p = .001$).

Younger students (up to 21 years) are more likely to consider changing their programmes (6.9% strongly agree) compared to older students (30 years or older, 1.6% strongly agree). They are also more likely to consider abandoning their studies (3.7% strongly agree) compared to older students (1.9% strongly agree). Age significantly influences changing study programmes (χ^2 : 53.179, $p < .001$) but not abandoning higher education.

Bachelor's students are more likely to contemplate changing their study programmes than master's and long-national degree (integrated study programmes that exceed three years, classified as ISCED 7) students (χ^2 : 28.886, $p < .001$). However, qualification level does not significantly influence the likelihood of abandoning higher education. Students in the arts and humanities (4.8% strongly agree) and ICT (3.3% strongly agree) are more likely to consider changing their programmes compared to those in education (2.4% strongly agree) or business, administration, and law (1.9% strongly agree). Similarly, students in ICT (4.7% strongly agree) and arts and humanities (3.5% strongly agree) are more likely to consider abandoning their studies (χ^2 : 72.970, $p < .001$).

The educational attainment of parents does not significantly affect students' thoughts about changing their study programmes or abandoning their studies (χ^2 : 7.373, $p = .497$), indicating that students' decisions in this regard are relatively independent of their parents' educational backgrounds. Students not living with parents are more inclined to consider changing their programmes (3.2% strongly agree) compared to those living with parents (2.9% strongly agree). However, living situation

has a smaller effect on the intention to abandon studies, with those living with parents being slightly more inclined (2.3% strongly agree). Students living independently are slightly more inclined to consider altering their academic paths, likely reflecting the financial and emotional pressures of self-reliance.

Students with financial difficulties are more likely to consider changing their programmes (5.3% strongly agree) and abandoning their studies (4.8% strongly agree) compared to those without financial difficulties (χ^2 : 50.496, $p < .001$). Financial stress significantly influences both decisions, highlighting the need for robust financial support mechanisms.

Students with jobs that do not match their education are more likely to consider changing their programmes (6.8% strongly agree) and abandoning their studies (4.0% strongly agree) compared to those with matched jobs (χ^2 : 62.056, $p < .001$). Education-job mismatch significantly affects both decisions, underscoring the importance of aligning academic pursuits with career goals. Students working 1-20 hours per week are more likely to consider changing their programmes (4.6% strongly agree) compared to those working more than 20 hours per week (2.3% strongly agree). They are also more likely to consider abandoning their studies (2.7% strongly agree) (χ^2 : 12.601, $p = .013$), indicating that work hours can significantly influence academic decisions.

Discussion

The findings indicate that multiple factors significantly influence working students' intentions to abandon higher education or change their study programmes. Gender has a statistically significant effect on the intention to abandon studies entirely, with male students more likely to consider leaving university than female students, though it does not influence decisions to change programmes. Age significantly affects the likelihood of changing study programmes, with younger students being more inclined to reconsider their academic path, but it does not have a statistically significant impact on intentions to abandon higher education. Qualification level also plays a role, as bachelor's students are more likely to consider changing their study programmes than master's students, but it does not significantly affect the likelihood of leaving university altogether. Field of study is highly significant for both outcomes, with students in arts and humanities and ICT more prone to reconsider their programmes and more likely to express intentions to abandon their studies. Parental educational

attainment, however, does not have a statistically significant effect on either programme changes or intentions to leave university. Financial difficulties significantly increase both the likelihood of changing programmes and the intention to abandon studies. Likewise, education-job mismatch has a statistically significant effect, with students working in jobs unrelated to their studies more likely to consider both changing their programme and abandoning university. Work hours also influence both outcomes, as students working 1-20 hours per week are significantly more likely to reconsider their studies compared to those working longer hours.

These findings make one thing clear: not all factors influencing students' academic decisions carry the same weight. Some create uncertainty, making students question whether they are on the right path, while others push them towards the more drastic decision of abandoning higher education altogether. That is why a closer discussion is necessary. In the following section, I will contextualise these findings within the Estonian higher education setting, exploring how local conditions and institutional structures might either alleviate these challenges or, conversely, deepen their impact on student retention and academic success.

Higher education has long been plagued by **gender disparities**, and Estonia is no exception. While female students continue to outnumber male students in many disciplines, the real issue lies in retention. This study (Study I) confirms a well-documented trend: male students are significantly more likely to abandon higher education. Gender significantly influences the likelihood of abandoning higher education but not changing study programmes (χ^2 : 17.601, $p = .001$).

But why is this happening? The easy answer is that male students are simply less engaged in academia (e.g., Lee et al., 2015; Kessels & Houtte, 2021). However, another possibility, the more uncomfortable and far more accurate one, is that higher education may still be structured around antiquated assumptions about what it means to be a student. Male students drop out since they struggle academically (less engaged); this may not always be relevant in all nations. Many are being pulled into the workforce by external pressures, not pushed out by failure. In Estonia, early entry into the workforce can be financially attractive, particularly in male-dominated fields such as ICT, engineering, and trades, where employers might prioritise practical experience over formal degrees. For some, leaving university before graduation may appear to be a rational economic choice.

Now, here is the problem: if universities continue to operate as if students have to choose between education and employment, they are reinforcing this dropout risk. Right now, in many systems, university and work are treated as separate, even conflicting, pathways: students either study full-time or work and struggle to keep up academically. In this context, at first glance, the part-time study option seems like the perfect solution. A part-time study option is available in Estonian universities, which, in theory, could provide an alternative for male students integrating work and education. However, the reality is more complicated. Part-time study extends the duration of a degree, and for students under financial pressure, a prolonged academic timeline may not be appealing. If a student can secure stable employment now, the idea of stretching a degree over several years may seem impractical. Moreover, a drawn-out academic journey can lead to disengagement over time, particularly for those who are already earning and advancing in their careers. If an ICT student, for example, takes six years to finish a degree but already has five years of work experience in tech, what value does the degree still hold? Does it add enough to their career to justify the long commitment?

For female students, the dynamics might differ. Why is the dropout gap so pronounced? The reality is that women in Estonia are over-represented in fields where formal qualifications are not just beneficial but essential, such as education, health sciences, and social work. Unlike technical fields, where work experience can be enough to secure a well-paid role, these careers require certification. Without a degree, job prospects are significantly more limited. Dropping out, for many women, is simply not an option. In fact, the labour market might play a huge role here. The gender pay gap in Estonia is one of the widest in Europe (EC, 2022). Women, on average, earn significantly less than men, even with comparable education levels. This means that higher education may be considered a necessity, a way to access jobs that offer financial stability in a labour market that already disadvantages them. If the alternative to finishing a degree is a lower-paying, less stable job, then staying in university, despite financial challenges, can become the more viable choice.

This creates a clear policy challenge. If universities continue to treat education and employment as separate, even conflicting, pursuits, male students will continue to see dropout as a rational economic decision rather than a failure of perseverance. It is true that, unlike many other countries, Estonian students can work without restrictions on their working hours.

This might seem like the clever solution, allowing students to earn money while continuing their education. But does this actually help retention, or does it just increase the likelihood of students leaving university entirely? Here is the problem: unlimited working hours do not mean that work and study are balanced; it just means students are left to navigate that balance alone. Many students end up working full-time, which inevitably competes with academic responsibilities. Simply working alongside studies is not the same as being in a system where universities actively coordinate with employers to ensure students' work aligns with their field of study. Right now, many Estonian students enter the workforce on their own terms, but without the structured pathways that connect their employment to their education in a meaningful way. Many work in low-paying, unrelated jobs, which may not contribute to their academic development or long-term career goals. In practical terms, what does this mean for higher education institutions? Simply encouraging men to 'engage more' is not a solution. Instead, universities may redefine how they integrate education and work. Countries like Germany and Switzerland have successfully implemented dual-learning models, where students alternate between academic coursework and paid professional placements (Baethge & Wolter, 2015). This system does not ask students to choose between education and work; it allows them to do both. Estonia may take a hard look at its own university structures and ask whether they are designed to support students who are already embedded in the labour market.

Turning to **age** and **level of qualification**, a key finding in this research is that both factors play a crucial role in shaping students' academic decisions, particularly in their likelihood of reconsidering their study programmes. Younger students, especially those aged 21 or under, are often assumed to be at a higher risk of dropping out due to a lack of direction, struggles with independence, or difficulty adjusting to university life (Gilardi & Guglielmetti, 2011). However, Estonia's case challenges this claim. While younger students are indeed more likely to reconsider their study programmes, they are no more likely than their older counterparts to abandon university. Similarly, undergraduate students show a higher tendency to rethink their academic choices compared to master's or long-cycle degree students, not because they are disengaged, but because they are still in the exploratory phase of their education. From a cultural capital perspective (Bourdieu, 1986), undergraduates and younger students are accumulating knowledge, skills, and confidence, shaping their long-term academic and career trajectories. Their reconsideration of study

choices is not a sign of instability; it is part of the learning process. They are not giving up; they are refining their path.

The real issue is how universities respond to this natural phase of academic exploration. Do they create an environment that allows students to make informed adjustments, or do they impose rigid structures that penalise change? In higher education systems like those in Norway, Sweden, and the UK, academic flexibility is embedded in the early years of study. These countries acknowledge that students may not always make the right choice initially, and they provide pathways that allow them to experiment with different subjects before committing to a specialisation (Hovdhaugen, 2012; Ydhag, 2019). Students can take interdisciplinary courses, shift focus without bureaucratic barriers, and engage in structured career planning. Such policies do not just accommodate uncertainty; they actively support students in finding the best academic fit, reducing long-term dropout rates. In contrast, in more rigid systems, changing academic paths can be an administrative and financial burden, discouraging students from adapting to their evolving aspirations. The question for Estonia, then, is whether its higher education framework enables working students to explore their academic potential or whether it forces them into inflexible choices that ultimately push them out of the system.

Field of study is another important factor. Working students enrolled in certain disciplines, notably the arts, humanities, and information and communication technologies (ICT), showed higher intentions to either change programmes or drop out of university.

Several plausible reasons could explain this trend. It is not just about difficulty; it is about opportunity. In ICT, the issue may not be that the coursework is too tough, but that the job market can draw students away before they graduate. Unlike fields where a formal degree may be the only gateway to employment, tech employers might prioritise skills over credentials. A self-taught coder or an ICT student with a few years of experience can often land a well-paying job without finishing a degree.

So, can anyone blame them for walking away? If an ICT student is receiving lucrative job offers midway through their studies, is it rational to stay in university for another two years just to get a ‘piece of paper’? The answer is not to force students to stay but to make completing a degree more valuable and practical. One possible solution is cooperative education models (Aprile & Knight, 2019; Santoro & Gopalakrishnan, 2000).

Countries like Canada and Germany have successfully implemented cooperative education and integrated paid industry placements into ICT degree programmes, allowing students to work, gain experience, and complete their degrees simultaneously (Santoro & Gopalakrishnan, 2000). Estonia may need to ask: are universities offering ICT students this kind of incentive to stay, or are they being left with an easy exit route into the workforce?

And then there are the arts and humanities: a field that suffers not from a lack of job prospects but from a lack of clear career alignment (Tomlinson, 2017). It is easy to say that humanities degrees are ‘less practical’, but that is lazy thinking. The real issue is possibly that universities often fail to connect the dots between humanities skills and career pathways (Eggins, 1992). The job market does value humanities graduates—but students do not always see how their skills translate into employment. Some universities in the UK and Canada have tackled this problem head-on, embedding career development and industry partnerships directly into humanities programmes. The result is that students graduate not just with academic knowledge but also with a clear sense of how to apply it in the workforce. Estonia’s universities may need to take a hard look at their own approach. Are they providing humanities students with these crucial career connections, or are they leaving them to navigate the job market alone?

Regarding **parental education**: in contrast to several studies on student success, this research (Study I) found that parental educational attainment, a proxy for family capital, does not have a significant influence on working students’ decisions to either change their study programme or abandon higher education. Typically, higher parental education is associated with greater academic support and higher educational aspirations for students, and prior literature has linked it to lower dropout rates. Indeed, earlier research (Aina et al., 2021; Gale & Parker, 2017) noted that students with well-educated parents tend to have better odds of university persistence. This study’s findings (Study I), therefore, contrast with the literature that suggests parental education correlates with student success.

In the Estonian context, this lack of a parental-education effect might indicate a relatively equitable higher education system, wherein students’ decisions are shaped more by other circumstances than by their family background. Estonia offers public university education largely tuition-free for full-time students, and the working student body has a high proportion of students with parents of modest educational level. It is possible that

systemic supports (e.g., need-based stipends or inclusive university cultures) and the country's socio-economic environment level the playing field for those from less educated families. In other words, the inherited family capital from one's parents appears less critical in this setting, and other forms of support or personal determination may be compensating for what might elsewhere be a disadvantage. This is an encouraging sign for educational equality, as it suggests that working students from families with no tradition of higher education are not inherently more inclined to drop out, so long as they can access the resources and support they need.

Financial difficulties emerged as one of the most decisive factors influencing dropout intentions. Working students facing serious financial difficulties were significantly more likely both to consider changing their study programme and to contemplate leaving higher education entirely. This finding is a clear validation of Bourdieu's theory of economic capital (1986), which posits that adequate financial resources are crucial for educational persistence.

In a practical sense, when students struggle to pay for living expenses or study costs, their focus and commitment to studies can waver. While tuition is waived for many students in the Estonian-language study track, the real financial struggle lies elsewhere. Rent, food, transportation, and daily expenses quickly add up, and for the majority of working students (83.7% of whom live independently without family support) this burden is not just inconvenient; it is overwhelming. A tuition-free education does not mean a cost-free university experience. Many students work primarily to cover these living costs, with two-thirds reporting that employment is completely or partly necessary to finance their day-to-day expenses. Under such pressure, it is unsurprising that financial hardship is closely tied to thoughts of dropping out. Students facing financial hardship may feel compelled to prioritise earning income over completing their degree. But what about the current financial aid programmes in Estonia for supporting working students? Traditional scholarships and need-based aid often target full-time students with no income; paradoxically, working students might be ineligible or overlooked because they earn some income, even if it is not enough to truly alleviate their financial stress. This gap means many working students 'continue to struggle under the weight of financial burdens' that threaten their ability to continue their studies. In sum, economic challenges are a critical trigger for dropout intentions, pointing to the need for more inclusive and flexible financial support mechanisms for those who juggle work and study.

The analysis also considered students' **living arrangements**—specifically, whether students live with parents or independently. The findings show a subtle but interesting pattern. Students living independently (not with their parents) were significantly more likely to consider changing their study programme, but this factor did not significantly influence the decision to abandon studies altogether.

Living independently often goes hand in hand with greater financial responsibility and autonomy. Indeed, as noted above, most working students in Estonia live away from home, which can impose additional pressure to manage finances and time. The increased propensity to consider switching programmes among these students might reflect the added stress and adjustment that come with independence; for example, a student living on their own might be quicker to rethink their field of study if they doubt its payoff, given that they are shouldering living expenses. However, the lack of a direct effect on full dropout decisions suggests that living situation by itself does not push students to quit; rather, its influence is likely indirect, operating through financial stress (independent students must support themselves) or through reduced parental oversight. In Estonia, moving out for university is common, and students seem adept at handling this transition such that merely being away from parents does not translate into higher abandonment rates. This finding reinforces the earlier point that immediate financial conditions weigh more heavily on dropout intentions than family background or support. Living situation is intertwined with those conditions: it is significant in shaping the student experience (especially financially), but once those economic factors are accounted for, simply living away from one's parents is not a decisive factor in dropout plans. Thus, while universities should be aware that students living on their own may need additional support (financial aid, counselling, etc.), the key drivers to address remain the underlying challenges (like money and workload) rather than living arrangements per se.

The relationship between employment and academic retention is rarely straightforward, and the findings on **education-job mismatch** raise critical questions about how working students navigate their studies in Estonia. At first glance, the numbers suggest a clear trend—students whose jobs do not align with their field of study are more likely to reconsider their academic path and even contemplate leaving higher education altogether. This highlights a fundamental issue: when students fail to see a meaningful connection between their coursework and their professional lives, their

motivation to persist in academia weakens. It is not difficult to see why. If their daily work experience provides them with practical skills, financial security, and a clearer career trajectory, while their degree feels abstract or irrelevant, the choice to prioritise work over study becomes rational rather than reactionary.

But is mismatch always the problem? Could it be that these students are not simply abandoning their studies out of frustration but are instead making a strategic decision? Perhaps some find their work more valuable, engaging, and rewarding than their academic programmes. In fields like ICT, business, and creative industries, hands-on experience can sometimes offer a faster and more direct route to success than a university degree. If students feel that their jobs offer better prospects, practical skills, or professional networks, then their departure from higher education might not be a failure of the system but an indication that universities are struggling to provide programmes that keep pace with evolving career landscapes. This brings us to the real question: do Estonia's higher education institutions truly give students a reason to stay, or does the job market offer them something better? If education-job mismatch is driving students away from their studies, then addressing it is not just an academic concern; it is an economic one. Alternatively, if students are leaving because their degrees are not offering enough real-world application, then the problem is not just about job mismatch; it is about whether universities are bridging the gap between education and employment effectively.

The same argument extends to **working hours**. The findings suggest that students working fewer hours (1-20 per week) are more likely to reconsider their programmes or leave university than those working longer hours. On the surface, this may seem counterintuitive; should not those juggling heavy workloads be more at risk? Yet, this pattern hints at a deeper truth. Students working fewer hours may still be evaluating their academic and professional goals, whereas those in full-time work may have already committed to their career trajectory, making university either a necessary step or a secondary concern. In essence, these findings reveal two contrasting realities in Estonia. For some, job mismatch is a disruptive force, making their studies feel disconnected from their future. For others, their employment may simply outshine the relevance of their academic programme, leading them to prioritise work over a degree. The challenge for Estonian universities is not just to retain students at all costs but to ensure that higher education remains a meaningful, flexible, and valuable investment in their futures. And this is not just about numbers; it is about

who teaches, how they teach, and whether students feel supported in their academic journey. Are lecturers engaging enough to make learning feel relevant? Do support services genuinely meet students' needs? If universities want students to stay, it is important to make higher education not just an obligation but an experience worth choosing.

The discussion so far is insightful, but it only presents one side of the retention issue for working students in Estonia. What about other crucial factors, such as the quality of teacher-student relationships, peer networks, and support services, which were identified as important in the previous section (e.g., 4.2.1)? So, how do these elements shape the experiences of working students? I will explore this in the next sections.

4.2.3. Study II: How do perceptions of university social capital correlate with the dropout intentions of working students?

Results

Study II reveals specific institutional challenges that working students encounter. Their unique concerns extend beyond individual factors and encompass the daily activities of their institution, including their interactions with faculty, peers, and support services. Working students generally agree that lecturers provide helpful feedback (mean score: 2.299) and clear instruction (mean score: 2.365), indicating that these aspects of the educational experience are accessible to them. The strong rapport between students and lecturers (mean score: 1.823) further underscores a supportive and approachable faculty, which is crucial for building trust and fostering a positive learning environment. However, the slightly higher mean score for motivational support (2.559) suggests that there is room for concern in how lecturers inspire and encourage these students.

Additionally, the results from Study II provide insight into how various factors, such as teacher-student relationships, support service satisfaction, peer networks, and employability trust, influence university social capital and, in turn, affect dropout intentions among working university students. The findings of Study II reveal that university social capital is positively shaped by teacher-student relationships, peer networks, satisfaction with support services, and employability trust, with each element having a distinct effect. In fact, teacher-student relationships have the most significant influence (.76) on university social capital, followed by employability trust (.59), support services (.51), and peer networks (.45).

Additionally, the findings show that university social capital reduces dropout intentions, with a statistically significant ($p < .001$) negative effect (-0.36) on dropout intentions.

Higher employability trust significantly reduces dropout intentions, as indicated by an estimate of -0.186 with a critical ratio of -4.556 and a statistically significant p -value ($p < .001$). It suggests that students are less likely to consider dropping out of higher education when they have confidence in their employment prospects, taking into consideration the programme that they are enrolled in. Similarly, better teacher-student relationships also significantly reduce dropout intentions. The estimate here is -0.191, with a critical ratio of -5.008 and a highly significant p -value ($p < .001$). Likewise, stronger peer networks significantly reduce dropout intentions, with an estimate of -0.125, a critical ratio of -3.875, and a highly significant p -value ($p < .001$). However, satisfaction with support services presents a different picture. The estimate is 0.091, with a critical ratio of 2.552 and a significant p -value ($p = .011$). This positive relationship indicates that higher satisfaction with support services slightly increases dropout intentions.

Looking at the combined effects from the mediation analysis, teacher-student relationships have a total negative effect on dropout intentions when mediated by employability trust (-0.262, $p \leq .01$), with direct effects at -0.203 ($p \leq .01$) and indirect effects at -0.059 ($p \leq .05$). It highlights that both direct interactions with teachers and a broader sense of employability trust are important in reducing dropout intentions. Peer networks also show a significant total negative effect on dropout intentions (-0.115, $p \leq .01$), with direct effects at -0.102 ($p \leq .01$) and indirect effects through employability trust at -0.013 ($p \leq .01$). It underlines the importance of peer support and its role in enhancing students' confidence in their employability, thereby reducing dropout intentions. For support service satisfaction, the total effect on dropout intentions is positive (0.044), with direct effects at 0.080 ($p \leq .01$) and indirect effects through employability trust at -0.036 ($p \leq .01$). It indicates a complex relationship where support services alone might not be sufficient to reduce dropout intentions without considering their association with employability trust.

In this context, the findings from Study II also provide insights into understanding the factors that influence key aspects of teacher-student relationships, peer networks, support service satisfaction, and employability trust—which is crucial for enhancing the educational

experience and addressing the retention challenges faced by working university students.

The quality of teacher-student relationships, as perceived by working students, is significantly influenced by several key factors. One of the relevant factors is the perceived motivation provided by lecturers, which inspires students to perform their best work. Working students, who often balance competing demands, highly value motivation that fosters deeper engagement with their studies, as reflected in a factor loading of .78. Another crucial aspect is the perception that lecturers show genuine interest in students' thoughts and opinions. For working students, this perceived interest helps build mutual respect and understanding, addressing their need for a supportive academic environment. This factor, with a loading of .72, highlights the relational aspect of teaching (e.g., Aina et al., 2021) as a cornerstone of positive perceptions.

Working students also place high importance on the perceived helpfulness of feedback provided by lecturers. This feedback, with a factor loading of .71, is seen as a vital mechanism for improvement and validation, particularly for students who may have limited time for independent academic exploration. Perceived clarity of instruction is another critical factor, as working students often prioritise efficient learning due to time constraints. Lecturers who explain concepts clearly and effectively are perceived as enabling these students to grasp challenging material without unnecessary frustration, reflected in a factor loading of .68. Finally, the overall rapport between students and lecturers, as perceived by working students, is foundational to building trust and a sense of community. Positive rapport, characterised by mutual respect and open communication, is particularly valued by this demographic, as it creates an inclusive and accommodating academic environment. This factor, with a loading of .67, supports arguments that strong interpersonal relationships are essential for fostering satisfaction and engagement, particularly among non-traditional learners.

The strength of peer networks, as perceived by working students, is heavily influenced by the level of interaction and support they receive from fellow students. A critical factor is having contact with many students within their study programme, which significantly enhances the peer network and provides a broad support system. This aspect of networking, with a factor loading of .91, allows students to engage in academic collaboration, share resources, and navigate academic challenges collectively. Additionally,

knowing and interacting with fellow students to discuss subject-related questions is a crucial element of peer network strength. This collegiality, with a factor loading of .78, fosters a collaborative academic environment.

Support service satisfaction among working students is influenced by the effectiveness of services that help them manage competing responsibilities, particularly balancing work, family, and academic demands. Satisfaction with support for balancing studies and paid work plays a pivotal role, with a factor loading of .84. Similarly, support services that assist students in balancing studies and family life are equally significant, with a high factor loading of .76. An additional driver of satisfaction with support services is their role in preparing students for future employment. Services perceived as effectively enhancing employability hold significant value, with a factor loading of .58.

Employability trust, in turn, is shaped by students' perceptions of how well their study programmes prepare them for the labour market. The belief that a programme equips students for national labour markets strongly influences employability trust, as indicated by a factor loading of .72. Similarly, the perception of preparation for international labour markets has a significant effect, with a factor loading of .68. Interestingly, teacher-student relationships, peer networks, and support services all contribute to employability trust, albeit to varying degrees. Teacher-student relationships have the strongest effect on employability trust (factor loading = .30), followed by support service satisfaction (.22) and, to a smaller extent, peer networks (.09).

The above results indicated that four dimensions (teacher-student relationship, support service satisfaction, peer networks, and employability trust) together formed the university social capital. Among these, the teacher-student relationship was the strongest contributor, followed by employability trust, support service satisfaction, and peer networks. These findings suggest that supportive, clear, and motivating interactions with teachers are central to how students perceive the value of their university experience. Employability trust also plays a significant role, indicating that students' belief in the labour market value of their degrees is an integral part of the social capital they derive from the university. While peer networks and support services contribute positively, their effects are smaller, pointing to the primary importance of relationships with teachers and confidence in employability outcomes in shaping students' sense of belonging and support within higher education. The results also showed

that teacher–student relationships, support service satisfaction, and peer networks influence dropout intentions both directly and indirectly through employability trust. All three factors positively predicted employability trust, which in turn was negatively associated with dropout intentions. At the same time, each factor also exerted a direct negative effect on dropout intentions, with teacher–student relationships showing more strength and peer networks having a weaker effect. This pattern indicates partial mediation: employability trust explains part of the mechanism, but the predictors also influence dropout intentions independently. Based on the effect sizes, teacher–student relationships emerge as the most influential factor overall, both by strengthening employability trust and by directly reducing dropout risk. Support service satisfaction ranks closely behind, while peer networks, though still beneficial, play a comparatively smaller role.

Discussion

The findings reveal a crucial reality for working students in Estonia: retention is not just about keeping them enrolled but about giving them a compelling reason to stay. A strong university social capital network, built on meaningful teacher-student relationships, peer support, and employability trust, significantly lowers dropout intentions.

In fact, the results make one thing clear: university social capital matters. Teacher-student relationships emerge as a cornerstone of academic persistence. When lecturers are accessible, supportive, and engaged, working students feel more connected to their studies and less inclined to drop out. This is not just about pedagogy; it is about fostering a sense of ‘investment’. A professor who takes an active interest in their students does more than just teach; they provide guidance, motivation, and even professional networking opportunities. In a system where many working students juggle lectures with long shifts and family responsibilities, knowing that faculty members care about their success can be a deciding factor in whether they continue or walk away. This aligns with Tinto’s model of academic integration (2012), which argues that when students feel recognised and supported, they are more likely to persist. Bourdieu’s theory of social capital (1986) also comes into play here. Professors do not just teach; they act as mentors, offering career advice, networking opportunities, and academic guidance. These connections translate into real benefits, reinforcing the idea that education is an investment with tangible rewards.

Peer networks also carry statistically significant weight in shaping working students' retention, yet a persistent claim, rooted in the work of Bean and Metzner (1985), suggests that social integration matters less for working students. The logic seems straightforward: many of these students commute and have limited time on campus. Nevertheless, this claim overlooks a crucial reality. Even a small but meaningful academic support network can make a decisive difference. The data from Study II is clear: working students who feel connected to their classmates and who have study partners or friends they can rely on are significantly less likely to drop out. This is particularly relevant in Estonia, where higher education institutions have traditionally prioritised academic performance ('merit'). While strong academic standards are essential, failing to foster student connections can come at a cost. If universities want to retain working students, rethinking what student engagement actually means is essential. It is not about organising campus events or encouraging participation in student societies; many working students simply may not have the luxury of time for these activities. Engagement, in their case, could be redefined as creating opportunities for real, practical academic collaboration that fits into the time-constrained reality of students juggling work and study. Wolf-Wendel et al. (2009) highlight an important hint: not all forms of involvement benefit students. Some activities, rather than fostering academic success, can actually be distractions that hinder achievement.

The traditional model of student engagement (Tinto, 1998) assumes that peer interactions will form naturally through campus events, student organisations, or informal study groups. However, such opportunities primarily cater to full-time students who have the flexibility to remain on campus beyond scheduled lectures. In contrast, working students, many of whom commute or have strict time constraints due to employment obligations, often leave immediately after class, making it significantly harder for them to engage in spontaneous academic collaboration. If universities rely solely on these conventional methods, they may risk creating an environment where only certain students benefit from peer support, despite the fact that working students may need it even more. Yet, the findings (Study II) indicate that when structured opportunities for peer support are available, such as facilitated study groups and academic networking, working students do participate. This suggests that the issue may not be a lack of willingness to engage but rather a lack of accessible avenues through which they can do so. Therefore, the challenge for universities is to transcend universal engagement strategies and establish

peer support systems that align with the realities of students juggling work and study.

Yet, the most revealing factor in student retention may not be support alone; it may be whether students believe their degree is actually leading them somewhere valuable. Employability trust, or the confidence that a university education will translate into career success, emerges as a powerful force shaping dropout intentions. For many working students, this is not a theoretical concern. They are already in the labour market, weighing their real-world job experience against the promises of higher education. If their coursework feels disconnected from the skills they need at work, or if they see graduates struggling to find meaningful employment, doubts creep in. The numbers make this clear: when employability trust is high, students persist despite challenges. When it is low, even strong academic and social support may not be enough to keep them enrolled. This raises a difficult but necessary question: are Estonia's higher education institutions keeping pace with the evolving labour market? The data show that full-time working students expressed greater confidence in their programmes' preparation for the national labour market, while part-time workers reported the lowest levels of confidence. No significant differences emerged in perceptions of preparation for the international labour market. These findings suggest that it may not be enough for universities to assume that a degree automatically improves job prospects. Students may need to see tangible connections between study and employment to reinforce the value of staying in school. Without clear evidence of such relevance, no amount of mentoring, peer support, or student services may be sufficient to prevent some students from choosing work over study.

At first glance, one might assume that students who use and appreciate university support services would be more likely to continue their studies. Yet, the data presents an unexpected twist: those who express greater satisfaction with support services also report higher dropout intentions. Does this mean support services are failing? Not necessarily. Instead, it suggests that the students most at risk, those actively considering dropping out, might be the ones most reliant on these services. In Estonia, where many universities still operate on traditional, full-time student models, working students may struggle to find support systems that are truly tailored to their needs. If academic advising, tutoring, and career services fail to accommodate non-traditional schedules, even students who value these resources may feel that they are fighting a losing battle.

But there is a critical hint here; support services alone do not reduce dropout risk, but they do when they reinforce employability trust. If a working student sees clear, practical pathways from their degree to career advancement, they are more likely to stay enrolled. As noted earlier, full-time working students placed greater value on study support services, learning facilities, and career preparation. However, both they and part-time students reported lower satisfaction with the support available for balancing studies and paid work, pointing to structural barriers that universities have yet to fully address. This means that universities cannot afford to treat student support and career guidance as separate concerns. Academic advising should not just help students navigate course selections; it should help them map out a career trajectory that makes sense within their work-life reality. Career services should not just focus on internships for students but should provide guidance for those already working, helping them advance within their industries or transition into higher-skilled roles. Without this link, support services risk becoming reactive rather than preventive, helping students cope with academic pressures without addressing the underlying career concerns that might be driving them toward dropout.

The bigger picture is clear. Retention is not just about preventing students from leaving; it is about giving them a reason to stay. From an institutional perspective, this means creating an academic environment where working students experience a degree not as an additional burden but as an opportunity for growth and future security. Strong faculty connections, supportive peer networks, and effective support services build university social capital that helps reduce dropout intentions. These factors matter most when they reinforce students' conviction that higher education is a worthwhile investment. If Estonian universities fail to adapt to the needs of working students, dropout prevention will remain an uphill battle. Working students do not stay enrolled simply because they can; they stay because they believe their studies are leading them somewhere valuable.

4.2.4. Study III: What specific support services do working students perceive as important while integrating academic, professional, and personal responsibilities?

Results

The findings from Study III offer insights into the variations in support service satisfaction among working students, shaped by the interplay of cultural, familial, economic, and workplace capital.

For **study support services** (e.g., organised tutoring, academic writing, bridging courses, mentoring), three statistically significant clusters emerged ($\chi^2 = 44.035$, $p = .001$). The first cluster, which includes fields such as ICT and social sciences, shows a balanced satisfaction level; however, 19.3% do not need support, and only 12.6% find it entirely sufficient. The second cluster, covering natural sciences and arts, reports higher satisfaction (22.2% entirely sufficient) and lower interest (14.8%). Within this cluster, the alignment between education and job has a statistically significant interaction ($\chi^2 = 19.445$, $p = .035$). Students whose jobs are aligned with their education are more satisfied (31.4% reporting their job as entirely sufficient) compared to those whose jobs do not match their education (16.9% reporting their job as entirely sufficient). The third cluster, including business and health, has higher disinterest (22.1%) and lower satisfaction (14.5%).

Satisfaction with **learning facilities** (e.g., library, computer centre, workplaces) is statistically significantly influenced by the field of study ($\chi^2 = 50.148$, $p = .003$). The field of study also has a statistically significant interaction effect with age. For instance, ICT students, especially younger ones (25 to <30 years), show higher satisfaction, with 48.2% finding the facilities entirely sufficient ($\chi^2 = 19.667$, $p = .009$). Similarly, natural sciences and engineering students report higher satisfaction (51.5% entirely sufficient), particularly among the younger cohort (22 to <25 years) ($\chi^2 = 24.205$, $p = .042$).

Support for **balancing studies and jobs** statistically differs ($\chi^2 = 33.788$, $p < .001$) by qualification type. Long-national degree (integrated study programmes that exceed three years, classified as ISCED 7) students are more dissatisfied with the support (39.6% not sufficient at all). For bachelor's and master's students, satisfaction with support for balancing studies and jobs interacts ($\chi^2 = 22.667$, $p = .012$) with their education-job alignment. Bachelor's or master's students with aligned education and job expectations show higher satisfaction (12.4% entirely sufficient) than those without alignment (8.6%). Interestingly, younger bachelor's and master's students (<25 years) with unmatched jobs show more dissatisfaction with support for balancing studies and jobs ($\chi^2 = 27.361$, $p = .026$).

Support for **balancing studies and family** life is statistically significantly influenced by the field of study and work hours ($\chi^2 = 73.890$, $p < .001$). Students in ICT and business show high disinterest (28.5%), while those in education and health disciplines show moderate satisfaction. However, students in ICT and business who work fewer hours (1-20 per week) report higher satisfaction (12.7%).

Support for **work-life preparation** is mainly influenced by age ($\chi^2 = 58.581$, $p < .001$). Students up to 21 years old in fields such as business, arts, and humanities are more dissatisfied (31.1% not sufficient at all) compared to those in ICT, service, health, and welfare fields. Younger students generally show higher satisfaction, especially when their field of study aligns with a job. For instance, students aged 25 to 30 report higher satisfaction (13.9% entirely sufficient) compared to those whose education and job do not align. However, for students aged 22 to 24 with jobs that do not match their education, the support for work-life preparation is highly insufficient, with 28% indicating it is not sufficient at all.

Furthermore, the findings from Study III, based on interviews, reveal the specific support needs of working students, which vary according to their weekly working hours and the extent to which their jobs align with their educational goals. For instance, for students working fewer than 20 hours per week with jobs matching their education, the identified needs include flexible class times, remote learning options, part-time job placements, and time management workshops. In contrast, those with jobs that do not match their education require cross-training opportunities and skill-bridging courses. Students working more than 20 hours per week with education-job alignment need evening or weekend classes, online courses and resources, and job retention and advancement services. Those with jobs not aligned with their education need evening or weekend certification programmes, career transition counselling, and transition planning support. Common needs across all groups include networking events, career counselling, skill development workshops, start-up support, and job placement and shadowing opportunities.

Additionally, the findings highlight that, for working students, the effectiveness of support services appears to be a significant concern. The mean score for study support services, such as organised tutoring, academic writing, bridging courses, and mentoring, is 3.4, suggesting neutral to moderate dissatisfaction, as lower scores reflect greater satisfaction here. Learning facilities, including the library, computer centre,

and workspaces, received a mean score of 2.25, indicating relatively high satisfaction compared to other services. Support in preparation for present and future work has a mean score of 3.37, indicating neutral to moderate dissatisfaction. However, support for balancing studies and paid jobs has a mean score of 3.67, suggesting notable dissatisfaction. Meanwhile, support for balancing studies and family responsibilities has the highest mean score of 4.04, indicating the greatest dissatisfaction among the areas evaluated.

To provide more insights in this regard, findings from Study I and Study III can be compared, which I present below.

Results alignment between Study I and Study III

The findings from Study I and Study III present a compelling narrative on the intersection between student dropout risk and satisfaction with institutional support services, revealing patterns that have significant implications for retention strategies. Study I identifies key socio-demographic groups that are more likely to consider leaving their studies, while Study III explores how these same groups perceive the effectiveness of university support mechanisms. The comparison between these studies (Study I and Study III) not only reinforces the factors contributing to dropout risk but also highlights potential shortcomings in the support systems intended to mitigate these risks.

A particularly striking finding from Study I is that male students exhibit a higher likelihood of considering withdrawal from university than female students (3.4% vs. 1.9% strongly agree; $\chi^2 = 17.601$, $p = .001$). Yet, Study III does not show statistical gender differences in support service satisfaction, leaving an open question as to whether male students' dropout risk is driven by dissatisfaction with available resources.

Age emerges as another significant factor in Study I, with younger students (up to 21 years old) more likely to consider both changing study programmes (6.9% strongly agree) and abandoning their studies (3.7% strongly agree), compared to older students (1.6% and 1.9%, respectively). This trend is particularly relevant when juxtaposed with Study III, which finds that younger students, especially those in business, arts, and humanities, report greater dissatisfaction with work-life preparation (31.1% not sufficient at all; χ^2 : 58.581, $p < .001$). The alignment between these results suggests that inadequate career preparation may be a contributing factor in younger students' dropout considerations.

The level of studies also plays a crucial role in dropout risk, as Study I shows that bachelor's students are more likely to consider switching study programmes than their counterparts in master's or long-national degree programmes (χ^2 : 28.886, $p < .001$). This aligns with findings from Study III, which reveal that bachelor's and master's students struggle significantly with balancing their studies and jobs (χ^2 : 22.667, $p = .012$), particularly when their job does not align with their education. It appears that for these students, academic and professional uncertainties go hand in hand—those feeling disconnected from their career path may also be struggling to manage their coursework alongside employment obligations.

Field of study further shapes both dropout risk and satisfaction with support services. Study I identifies ICT and arts & humanities students as particularly likely to consider abandoning their studies (ICT: 4.7% strongly agree; arts & humanities: 3.5%; χ^2 : 72.970, $p < .001$). This corresponds with Study III, where students in these disciplines show divided attitudes towards support services, with ICT students reporting higher satisfaction with learning facilities (48.2% entirely sufficient; χ^2 : 19.667, $p = .009$), yet arts & humanities students expressing dissatisfaction with work-life preparation. The disparities between these two groups illustrate the importance of discipline-specific support strategies: while ICT students may benefit from strong technical infrastructure, arts & humanities students appear to need more career-related guidance and practical application opportunities to reduce their uncertainty about post-graduation prospects.

Economic factors also emerge as a consistent theme across both studies. Study I makes it clear that financially struggling students are significantly more likely to consider both changing their study programme (5.3% strongly agree) and dropping out altogether (4.8% strongly agree; χ^2 : 50.496, $p < .001$). The implications of financial insecurity become even more pronounced in Study III, where students working long hours (over 20 per week) report dissatisfaction with the support available for balancing studies and work (χ^2 : 33.788, $p < .001$). These findings reinforce the idea that financial burden is not merely a background challenge but a direct determinant of students' ability to persist in higher education.

Perhaps the most revealing intersection between the two studies (Study I and Study III) emerges in the discussion of education-job alignment. Study I finds that students whose jobs do not match their education are significantly more likely to consider dropping out (4.0% strongly agree; χ^2 :

62.056, $p < .001$), while Study III confirms that these same students report notably lower satisfaction with work-life preparation support (only 16.9% entirely sufficient vs. 31.4% among those with aligned jobs; χ^2 : 19.445, $p = .035$). This clear connection suggests that many students who are at risk of dropping out do not necessarily lack motivation or capability but may feel disoriented by an academic trajectory that does not translate smoothly into professional opportunities.

Taken together, the comparative analysis of Study I and Study III offers a compelling insight: many of the students most vulnerable to dropout are also those who express dissatisfaction with institutional support services. Whether it is younger students navigating career uncertainty, financially burdened students struggling to balance work and study, or those in mismatched jobs questioning the relevance of their education, the findings emphasise the importance of refining and adapting support structures to better meet students' needs. Improving retention involves not only recognising who is at risk but also understanding why these students feel unsupported. Addressing these concerns in a meaningful way creates opportunities to enhance student engagement, strengthen academic persistence, and ensure that the challenges students face do not lead to premature withdrawal.

Discussion

Study support services, whether in the form of organised tutoring, academic writing assistance, bridging courses, or mentoring, serve as the vital link between students and their university. They are not mere administrative add-ons but the institutional lifeline that can determine whether a student thrives or struggles. A well-functioning support system does more than just provide resources; it actively shapes a student's academic and social integration. According to Tinto (2012), such services improve academic performance and study skills while simultaneously fostering a sense of belonging. Bourdieu (1986) would argue that these services generate institutionalised social capital, granting students access to networks and expertise they may otherwise lack. In Estonia, where a significant number of students juggle employment alongside their studies, these support services are not just useful; they are essential.

Beyond direct study support services, **learning facilities** (e.g., libraries, computer centres, workplaces) shape the very foundation of the student experience. A university's infrastructure can either foster engagement and

academic success or create barriers that leave students feeling disconnected. Libraries, study spaces, laboratories, and digital platforms are not just conveniences; they are essential components of a functioning academic environment. When these spaces are modern, well-maintained, and accessible, they facilitate learning. When they are inadequate, they become obstacles. Estonia has made significant strides in modernising university facilities over the past decade, but disparities remain. Larger institutions in Tallinn and Tartu often have more advanced resources, while smaller regional colleges may lag behind. The transition to hybrid learning after COVID-19 has further complicated the issue, as students now rely on digital platforms as much as physical spaces. This shift has raised new concerns; a well-equipped library or study hall means little if students struggle with poor online infrastructure, unreliable digital tools, or inadequate remote access to university resources.

While Study III found that learning facilities were not the primary concern for working students, their role cannot be overlooked. The findings indicate that satisfaction with learning facilities varies significantly by field of study, with ICT students reporting particularly strong views shaped by age differences. In fields such as natural sciences, engineering, and social sciences, younger students (25 to ≤ 30 years) expressed notably higher satisfaction levels, suggesting that newer infrastructure investments may have improved conditions for certain disciplines. Meanwhile, fields like education, business, and agriculture reported moderate satisfaction, pointing to a need for further evaluation. Yet, regardless of discipline, the broader question remains: do universities provide learning environments that actively support student retention, or do they expect students to adapt to whatever is available? Tinto (2012) places facilities at the core of academic integration—if the learning environment is subpar, students are less likely to feel invested in their studies. Even the best-designed support services can struggle to be effective if students lack comfortable, well-equipped spaces where they can fully engage with their education. Ultimately, the discussion on learning facilities is not just about physical spaces; it is about how universities signal to students that their academic success matters. If institutions fail to provide both modern physical spaces and reliable digital access, they risk creating an environment where students, especially those already balancing work and study, face hurdles that could push them towards dropping out.

Balancing studies with paid work is a constant struggle for Estonian working students, and the findings make that evident. In addition, the lack

of adequate support for balancing studies with family responsibilities recorded the highest dissatisfaction levels. The disparity in satisfaction between students whose jobs align with their studies and those working outside their field further exposes how unevenly support services are distributed. Those with job-aligned education report feeling better supported, while students working in unrelated fields face increasing frustration. This raises an uncomfortable question—are universities primarily catering to students with a clear academic-to-career trajectory, leaving others behind? The data suggests that unless institutions actively address this gap, they risk creating a two-tiered student experience, where some feel guided and secure while others struggle alone.

The experiences of ICT and business students offer a particularly striking example. These fields dominate Estonia's fast-moving digital economy, yet students in these programmes report the highest dissatisfaction with work-study-family balance support. The reason may lie in the disconnect between traditional university support structures and the realities of these industries. The standard approach assumes a linear academic path, yet in ICT and business, careers often begin long before graduation. Internships, part-time contracts, and freelancing are the norms, making rigid university norms and one-size-fits-all support services largely ineffective. If universities continue to apply outdated support strategies, they risk failing the very students who need them most. What makes Estonia's case unique is that paid work during studies is not just a necessity for disadvantaged students; it is an expected part of student life, even for those from more privileged backgrounds (e.g., Beerkens et al., 2010). Unlike in some countries (e.g., Poland, Lithuania), where working students are primarily those in financial hardship, Estonia has normalised student employment to the point where it is almost a given. This creates a dangerous precedent—when working during studies becomes the norm, universities may feel less pressure to provide structured support. But this mindset comes at a cost. When work takes priority over education, students risk burnout, disengagement, and, ultimately, dropping out (Beerkens et al., 2010). The belief that working students can simply 'manage on their own' is not just outdated; it is harmful. Without meaningful intervention, the long-term consequences, lower graduation rates, weaker learning outcomes, and rising mental health challenges, may only grow.

If higher education is to remain accessible and effective for working students, learning models need to reflect their reality. Evening classes, compressed schedules, and hybrid learning formats provide more flexible

academic structures, allowing students to balance work and studies rather than being forced to choose between them. Some Estonian universities have already taken steps in this direction, allowing students to take fewer credits per semester without falling behind academically. Expanding these initiatives could create a more inclusive learning environment. Beyond structural changes, support services tailored to working students are essential. Career counselling that helps students integrate their work experience into their academic journey, academic advising that considers work schedules, and peer mentorship programmes that connect students facing similar challenges could help bridge the current gaps. Faculty awareness is also critical; if instructors are not sensitised to the realities of working students, policies such as rigid deadlines and mandatory attendance at inconvenient hours may unintentionally penalise those juggling multiple commitments.

Finally, the question of whether universities are truly preparing students for the realities of work and life is one that cannot be ignored. For younger students, particularly those in business, arts, and humanities, the gap between academic knowledge and career readiness is a source of mounting frustration. Study III makes this point clear—working students under 21 in these fields report the highest dissatisfaction, with nearly a third finding the support for **work-life preparation** entirely insufficient. The challenge is clear: how can universities equip students not only with theoretical knowledge but also with the practical readiness to transition into careers? For many, the disconnect between their studies and their work experience raises doubts about the long-term value of their degree. Without clear guidance on how their education translates into job opportunities, students may feel adrift, questioning whether persisting in higher education is worth the effort.

At the heart of this issue is employability trust: do students genuinely believe that their degree will lead to meaningful career prospects? If confidence in this payoff wavers, so too does their motivation to complete their studies. Higher education is not just about intellectual enrichment; it is meant to be a gateway to a stable and fulfilling career. But when students see graduates struggling to secure jobs or find their curriculum disconnected from real-world industry needs, doubt creeps in, and dropping out in favour of immediate work may seem like the more rational choice. Tinto (2012) makes it clear: students enter university with a purpose, a goal. If they begin to question whether that goal is achievable, their commitment to seeing it through weakens. Bourdieu (1986) would

argue that a degree is a form of symbolic capital, something that only holds value if employers recognise and reward it. But what happens when students no longer see that value? When their perception of employability erodes, their incentive to persist diminishes. Study II reinforces this point, showing that students with high employability trust, those who believe their degree will secure them a strong career, are significantly less likely to drop out. This confidence acts as a buffer against academic struggles and external pressures. A student working long hours may be exhausted, but if they are convinced that their degree will pay off, they push through. Conversely, if they see little return on investment, why should they endure the hardship?

This is precisely why universities cannot afford to treat career services as an afterthought; they must embed career relevance into every stage of the academic journey. It is not enough to assume that students will naturally see the value of their degree. That value must be made explicit and reinforced at every stage of their education. Universities need to integrate real-world projects into coursework, bring industry professionals into classrooms, expand internship opportunities, and ensure that curricula evolve alongside market demands. Transparency matters too. When students can see clear data on graduate employment rates and career trajectories, they feel reassured that their efforts will lead somewhere meaningful.

In Estonia, this issue is particularly relevant. With a fast-evolving, technology-driven economy, students are acutely aware of job market realities. Many universities have recognised this and implemented career tracks, incubators, and mandatory internships in certain fields. But the response remains uneven. Study III highlights a key gap: while some fields, such as IT and business, have strong industry connections, others, particularly in the arts and humanities, leave students uncertain about their future. This ambiguity can push students towards employment over education.

The solution is not simply about having a career office on campus but about ensuring that education and labour market realities are in sync. Ensuring that curricula are developed in consultation with industry and that student job placements are widely available (possibly with government incentives for employers to host students) could enhance the employability confidence of students across all disciplines. Moreover, expanding career guidance services (helping students early on to plan how their studies link

to career steps) can reinforce their sense of purpose. Ultimately, retention strategies must go beyond simply discouraging dropout. The real goal is to have students persist, not just because dropping out is bad, but because staying in school tangibly advances them toward their life goals.

A paradoxical finding (Study II) suggests that higher satisfaction with support services correlates, at least initially, with a slightly increased intention to drop out. This counterintuitive result likely stems from the fact that students who actively seek out and appreciate support services are often those already struggling. This selection effect distorts the picture. However, when considering the broader impact, the narrative shifts: these services boost students' confidence in their future, particularly in their future career, which in turn reduces dropout intentions. This highlights a crucial point: offering support services is not enough. They must be targeted, practical, and responsive to the realities of working students balancing multiple responsibilities. If support remains generic or rigid, it may be well-liked but ultimately ineffective in retaining working students. The real question is not whether support services exist, but whether they actually alleviate the core concerns of at-risk students. Do they accommodate students with jobs and family obligations? Do they offer practical, tailored interventions like flexible study plans, career transition assistance, or financial advice? Evaluating and refining these services is not just an administrative task but a strategic necessity. At a broader level, a significant challenge may threaten these efforts: funding constraints. As Estonian universities gradually shift towards revenue-driven models, student support services can risk being regarded as optional add-ons rather than core investments. Public funding for higher education has not always kept pace with enrolment growth, which may leave institutions stretched thin. This creates a policy dilemma: while reducing support services can provide short-term financial relief, it may also increase dropout risks, ultimately lowering tuition revenue and harming institutional reputation. The implication is that investment in student support may need to be seen not as a luxury but as an essential condition for promoting retention. Prioritising funding for these functions can strengthen students' university social capital and, in turn, may contribute to meaningful institutional growth.

4.3. Contribution and implication

The discussion so far not only provides **empirical insights** within the Estonian context but also offers **theoretical contributions** to the

understanding of student retention. By examining Estonia's case through Tinto and Bourdieu's lenses, it becomes evident how existing retention theory can be enriched by sociological thoughts. Tinto's (2012) model is affirmed in that academic and social integration remains vital, as the importance of teacher-student relationships and peer networks emerges as a determinant of retention. However, this dissertation pushes the envelope by showing that for non-traditional student groups (working students in particular), integration must be facilitated in non-traditional ways. The typical claims of the integration model (e.g., that students have ample time on campus to socially integrate) may not hold, requiring institutions to create new forms of integration (providing resources that connect). This suggests a theoretical broadening of Tinto's framework (2012) to accommodate diversity in student circumstances, an evolution already hinted at in Tinto's (1993) works, such as his reflections on student engagement, and one that this dissertation provides empirical support for.

Meanwhile, applying Bourdieu's concept of capital (1977) sheds light on the mechanisms behind retention. I showed that students' struggles often stem not from a lack of ability but from a lack of capital (money, know-how, connections) to invest in their higher education. The dissertation explicitly identifies facets of capital: economic capital (needing to work for finances), social capital (peer, faculty, and support networks), and what can be termed symbolic capital (employability trust, or the value of the degree in the job market). It shows how these forms of capital interact to influence dropout intentions. The finding that employability trust acts as a form of symbolic capital that mediates retention decisions is a novel contribution. It connects Bourdieu's (1986) theory (which traditionally might argue that those with higher cultural capital are more likely to succeed in education) with a modern twist: even those (working students) with lower cultural capital can be retained if institutions help convert their effort into perceived future capital (a good career). This highlights the role of the university as a capital converter—a place that can amplify or compensate for students' resources. Theoretically, this underscores the importance of the institutional habitus (as Thomas (2002) calls it)—the values and support embedded in the university that can level the playing field for students from different backgrounds. Estonia's example, where many students share the burden of work irrespective of social class, shows that even when the usual class distinctions in capital are blurred (rich and poor alike working), the need for institutional support remains universal. In effect, the dissertation contributes to theory by demonstrating that improving student retention is not solely about changing students (making

them more adaptable or resilient) but about changing institutions to be more accommodating and capital-enhancing.

The existing literature acknowledges that **theoretical contribution** does not require strict hypothesis testing of an established theory but can instead arise from reconceptualisation, bridging, or contextual reframing of existing ideas (Gopal, 2024; Levine, 2024). According to Kibler et al. (2025), ‘theory-building’ can emerge from the iterative interaction between empirical data and conceptual frameworks, legitimising integrative approaches that connect complementary theoretical perspectives. Likewise, Venkatesh (2025) argues that when combining theories, researchers can anchor their integration in broader meta-theoretical concepts to ensure coherence and theoretical depth. These positions reflect the earlier conceptualisation by researchers (Corley & Gioia, 2011; Whetten, 1989), who define theoretical contribution as the introduction of new relationships or novel combinations of established frameworks that enhance explanatory power. Guided by this view, this research does more than utilise existing theories: it reframes dropout intentions as an emergent practice shaped by the interaction between students’ internalised cultural and symbolic capital and the social capital embedded within higher education settings. By bridging institutional theory (Tinto, 2012) and sociological theory (Bourdieu, 1977), the dissertation advances understanding of how individual background characteristics and institutional environments co-produce students’ educational trajectories. The integrated model demonstrates that university social capital, through networks, relationships, trust, and support structures, plays a pivotal role alongside socio-demographic inequalities, thereby extending both theories beyond their traditional explanatory boundaries.

In addition, the **empirical model** used in this dissertation presents an integrated picture of student retention in an Estonian context while resonating with broader higher education discourses. The dissertation has shown that issues like support services, learning facilities, work-study balance, and career preparation are deeply interlinked, and addressing them requires holistic thinking. Estonia’s higher education system, marked by high student employment and mounting socioeconomic pressures, encapsulates a broader challenge of the 21st century: meeting the needs of a diverse student body while grappling with financial constraints. Yet, it also offers opportunities for innovation. Estonia’s agility as a smaller system means it can implement reforms (like new support models or curriculum tweaks) relatively swiftly, and its close-knit academic

community can collaboratively pilot solutions. The lessons drawn here, backed by evidence and theory, suggest that meaningful improvements in retention are achievable when policies reinforce what research consistently shows: students succeed when they feel supported, when their learning environment is enabling, when they can balance life and study, and when they trust that their education matters for their future. By marrying the human elements of Tinto's model (2012) with the structural insights of Bourdieu's theory (1977), this dissertation provides an integrated understanding that retention is both an individual journey and a systemic outcome.

Tinto (2012) underscores the importance of continuous feedback and faculty-student engagement in fostering academic integration. The findings of Study II strongly support this, showing that strong faculty relationships significantly reduce dropout intentions. However, this research takes the discussion further, identifying the specific qualities that matter most to working students. It is not just about faculty engagement in general but about how faculty engage. Clarity in instruction, motivational support, and constructive feedback emerge as particularly impactful factors. In addition, the notion of academic expectations also requires reconsideration. Tinto (2012) argues that setting high expectations helps students align their efforts and understand academic demands. While the argument remains valid, Study I reveals that for working students, rigid expectations often clash with external responsibilities. Those facing financial strain or working in jobs unrelated to their field are more likely to consider dropping out or switching programmes. Such behaviour does not suggest that universities should lower their standards, but rather that they need to offer realistic pathways for these working students to meet those expectations.

Bourdieu (1986) sheds light on the structural forces shaping student retention, particularly the role of inherited cultural capital, such as parental education. But does this hold true for all students, in all contexts? My findings suggest a different reality, one where immediate financial pressures and access to academic support structures carry far more weight than inherited family background, especially for working students. In Estonia, full-time working students are more likely to come from families with lower educational capital compared to both non-working and part-time working peers. In this context, where employment during university is the norm rather than the exception, integrating work and study turns financial stability into a prerequisite for academic survival. For many

students, the ability to pay rent, cover daily expenses, and manage work schedules is not just a background factor but the deciding factor in whether they continue their studies. This challenges Bourdieu's idea that long-term cultural capital, such as parental education, sets the course for academic success. In my research, economic realities often override these inherited advantages. A student with highly educated parents but financial instability may struggle more than one with less familial academic support but steady income. This suggests that economic capital, whether through stable income, financial aid, or institutional support, is not just an influencing factor; it is a determining one. In a system where work is embedded into student life, traditional theories of cultural capital may need to be re-examined. The Estonian case shows that student retention is not just about what one inherits from family but about whether institutional conditions create circumstances that allow students to stay the course.

Workplace capital plays a crucial role in shaping student experiences, yet its impact on retention is anything but uniform. Many working students secure jobs aligned with their field of study, gaining professional skills, industry exposure, and networks that reinforce their academic journey. For them, employment is not a competing force but an asset that strengthens both their motivation to persist in higher education and their transition into the labour market. However, for others, the reality is far more challenging. Financial constraints push many students into jobs that have little or no connection to their studies, forcing them to dedicate significant time and energy to work that does not align with their academic or professional goals. Instead of reinforcing their education, work becomes a source of exhaustion, distraction, and, for some, the tipping point that leads to dropping out.

This finding expands Bourdieu's concept of capital (1986) by showing that it is not just about having economic resources but about whether work strengthens or disrupts a student's academic journey. While Bourdieu emphasised how economic and cultural capital shape educational success, my research reveals a more complex reality: what truly matters is the kind of work students do and how it aligns with their studies. For those in jobs connected to their field, employment becomes a reinforcing cycle that deepens their academic engagement, sharpens their professional identity, and increases their likelihood of staying in university. Their work experience does not compete with their studies; it enhances them. But for students working in unrelated jobs, the story is quite different. Instead of complementing their education, work pulls them away from it, draining

time and energy, weakening their connection to their field, and making academic persistence an uphill battle. In such cases, financial stability alone is not enough to guarantee a student will stay the course. Even those earning enough to cover their expenses may begin to question the value of continuing their studies if their daily work life offers no link to their long-term academic or career aspirations. This challenges the claim that student employment is either purely beneficial or purely detrimental (Befly et al., 2010). The real issue is not whether students work, but how their work fits or clashes with their education. If universities fail to account for this, they risk overlooking one of the key factors influencing student retention.

Social capital, particularly in the form of faculty and peer networks, is another key determinant of retention. According to Bourdieu (1986), social capital consists of relationships and networks that provide access to resources and support. This study highlights gaps in institutional support that prevent working students from fully leveraging social capital. Dissatisfaction with support services and weak faculty-student relationships indicate a pressing need for universities to strengthen these areas. Institutions that fail to foster meaningful connections risk creating environments where students feel isolated, making them more likely to consider dropping out. Bourdieu's (1986) broader argument about social structures shaping educational success is particularly relevant here. A positive faculty-student relationship may reduce dropout intentions, but what makes that relationship meaningful? My findings reveal that motivation, involvement, and instructional clarity are key factors. If faculty are not adequately trained to support working students, the potential benefits of these interactions may be diminished. The university's ability to foster trust and engagement, what Bourdieu (1986) refers to as symbolic capital, plays a crucial role in student retention. Employability trust stands out as a particularly powerful form of symbolic capital. This research finds that students who believe in the value of their degree are more motivated to persist, even in the face of financial challenges. Positive faculty-student interactions and effective support services reinforce this trust, making it a crucial mechanism for retention.

Above all, this research reinforces the idea that retention is not simply about students overcoming obstacles; it is about universities creating environments that enable success. When institutions act as capital converters, turning effort into opportunity, knowledge into employability, and engagement into retention, they move beyond merely preventing

dropout. They actively shape students' academic and professional futures in ways that make persistence not just possible, but worthwhile.

Nevertheless, from a **managerial perspective**, the question is: what do all these findings mean in practical terms?

This research complicates the conventional association between working students and the label of 'non-traditional'. Earlier literature (e.g., Kocsis & Pusztai, 2020; Pusztai et al., 2022; Schatzel et al., 2011) has often linked student employment with marginalisation, weaker academic integration, and higher dropout risk. Demographically and socioeconomically, working students in Estonia, especially full-time employees, share many features traditionally linked to non-traditional status, including older age, greater financial strain, and lower parental education. Yet the findings also show that they are not disadvantaged in all respects: their teacher–student relationships are comparable to those of non-working peers, their peer networks are in some cases stronger, and they demonstrate resilience in programme persistence and employability trust. In the Estonian context, where student employment is widespread and normalised, working students cannot be understood simply as a marginalised group; rather, they represent a diverse but integrated segment of the student body. This reframing challenges earlier research that equated working status with dropout risk and positions employment during studies as a strategic choice as much as a potential barrier.

In addition, this research sharpens empirical understanding by disentangling the differential pathways that lead working students either to reconsider their programme choice or to contemplate leaving higher education altogether. Whereas existing literature (e.g., see chapter 2) often conflates these outcomes under the broad category of retention risk, this research demonstrates that the antecedents of programme switching and complete withdrawal are not identical. The research identifies at least five key working student groups at higher risk of dropout and explains the underlying reasons. Younger students, particularly those under 21, are more likely to consider dropping out (Study I), and at the same time, this same age group, particularly in business, arts, and humanities, is the most dissatisfied with work-life preparation (Study III). This suggests that career uncertainty and a lack of structured guidance can leave them feeling unprepared for the transition from education to employment. Bachelor's students are significantly more likely to consider changing their study programme, as seen in Study I, and struggle to balance their studies and

work, especially when their job is unrelated to their field (Study III). A misalignment between academic expectations and career realities increases their risk of disengagement. Field of study also plays a role, with ICT and arts & humanities students showing different patterns. ICT students report high satisfaction with learning facilities (Study III) but still show high dropout intentions (Study I), possibly due to strong job market opportunities that make leaving university more appealing. In contrast, arts & humanities students report greater dissatisfaction with work-life preparation (Study III), which may contribute to feelings of uncertainty about career prospects. Financially struggling students face significant challenges (Study I) considering dropout, while Study III highlights dissatisfaction with support for balancing work and studies. The financial burden often forces them into long working hours, increasing their likelihood of withdrawal. Similarly, students whose jobs do not align with their studies experience a strong sense of disconnection. Study I finds that students whose jobs do not match their education are significantly more likely to consider dropping out, while Study III confirms that these students also report lower satisfaction with work-life preparation support. Without a clear link between their education and career path, these students are more likely to question the value of their degree. From a managerial perspective, these findings indicate whether at-risk students are also those who report dissatisfaction with support services. Understanding this connection is crucial for developing more effective retention strategies.

So, what does this mean for universities? How do they support working students without creating a system that treats them as a separate group? The answer is not about introducing special treatment; the goal is not to create a separate system for them but to build flexibility into the structures that already exist so that all students can benefit. Research shows that when flexibility is embedded across programmes through hybrid or online options, varied assessment timelines, and adaptable study modes, students are better able to balance their responsibilities without compromising their academic engagement (Aprile & Knight, 2019; Remenick & Bergman, 2020). This approach supports inclusion by recognising that today's student population are increasingly diverse in how they combine education, work, and family life. Integrating flexibility into mainstream provision also aligns with research on inclusive learning environments, which emphasises that support should be part of the day-to-day academic experience, not an add-on for 'non-traditional' groups (Thomas, 2002; Trowler, 2010). When flexibility becomes part of institutional culture, it can reduce the need for special interventions and avoid treating working students as exceptions. As

researchers (Bamber & Tett, 2010) argue, genuine widening participation is shaped by normalising flexible learning practices rather than isolating certain groups for special treatment. That brings up another important question: Should all working students receive this support? While any student juggling work and study faces challenges, the reality is that some have no choice but to work to support themselves. These students, who take on jobs out of financial necessity, experience far more pressure than those who work for career experience or extra income. This is why universities can prioritise support for students whose financial situation forces them into long working hours. Expanding financial aid, offering more accessible career transition planning support, and creating better career-orientated resources for these students would go a long way in easing the burden. The key here is not to segregate but to integrate.

A key takeaway from this research is the importance of actively fostering social and academic support structures that help students persist in their studies. Mentorship programmes, academic advising, student societies, and mental health services are not just optional extras but essential components of a thriving academic environment (Remenick & Bergman, 2020). In Estonia, where student employment is the norm rather than the exception, this research shows that strong university social capital, understood as the relationships and networks built within institutions, plays a crucial role in reducing dropout risks. However, such a supportive environment does not develop on its own; it requires dedicated investment in both funding and training. University leadership has a vital role in shaping this environment. For instance, targeted teacher training can help faculty develop stronger mentoring and interpersonal skills, making them more effective at supporting students (Abdulrahman et al., 2012). Many professors are experts in their fields but may have had little formal training in student support. Offering workshops or incentives, such as recognising mentorship efforts in promotion criteria, can encourage faculty to take a more active role in student success. Another step could be the introduction of dedicated working-student coordinators, professionals who focus specifically on supporting students who work (Bamber & Tett, 2000; Carr & London, 2017). These coordinators could organise tailored orientation sessions, provide time-management coaching, or collaborate with employers to develop more student-friendly work arrangements. Instead of expecting support systems to emerge naturally, universities can take proactive steps to build a sense of community and connection for their students.

Financial challenges remain one of the biggest obstacles to working student retention, showing that university initiatives alone may not be enough and that policy-level action is equally critical. In Estonia, policymakers have a real opportunity to lighten this burden, whether by expanding scholarships, increasing the reach of need-based grants, or introducing subsidies for essentials like transport and housing. The issue is not new, as researchers (Aina et al., 2021) have long highlighted financial strain as a major factor influencing students' ability to remain in higher education. Nevertheless, the solution does not always require sweeping reforms. Even small, well-targeted improvements in financial support could make a measurable difference, helping more students stay on track and complete their degrees.

The relationship between higher education and the labour market also requires greater attention. This research highlights a strong link between perceived employability trust and student retention, making curriculum relevance a key policy focus. Universities, with encouragement from national quality agencies, could regularly update programmes in collaboration with industry stakeholders. While preserving academic independence and fundamental research goals remains important, there is also value in incorporating practical elements that prepare graduates for the workforce. Embedding job placements or external projects within degree programmes would be one way to achieve this, with government-supported grants helping to make such experiences accessible to all students (Aprile & Knight, 2019; Bamber & Tett, 2000). Strengthening career services within universities can further support this goal. Careers centres that go beyond basic CV workshops to actively build connections with employers can create clearer pathways from education to employment. Establishing hiring pipelines for both graduates and current students in relevant roles may not only boost employability but also reinforce the connection between studies and career outcomes. Policy measures requiring universities to publish annual reports on graduate employment rates may also introduce a layer of accountability and drive continuous improvements in how academic programmes align with labour market demands.

4.4. Limitation and suggestion for future research

This dissertation employed a quantitative design with a correlational approach, which brings limitations. The first and most significant limitation arises from the reliance on a single dataset, the Eurostudent VII survey, to measure both dependent and independent variables. Because all

variables are self-reported, there is a risk of common method bias. For example, students who are generally pessimistic may rate their financial situation, university services, and dropout intentions more negatively across the board, even if these domains are not directly linked. Similarly, more optimistic students may provide consistently higher ratings. This means that correlations between constructs such as employability trust and dropout intentions might partly reflect shared response tendencies rather than genuine causal relationships. In perception-based research, this is a well-known challenge, and it is especially relevant here given that nearly all measures in this study rely on subjective evaluations. Although the Eurostudent VII is a comprehensive cross-national student survey in Europe, future research could strengthen causal interpretation by employing cross-country quasi-experimental designs that enable the construction of counterfactual comparisons between working and non-working students. Such approaches would help mitigate self-selection bias and produce more reliable estimates of the causal effects of employment on dropout intentions.

In this regard, another limitation concerns the research design's inability to establish causality in relationships. The research employs a cross-sectional and correlational approach, which is suitable for identifying associations but does not allow for causal inference because of potential self-selection bias. In this context, students are not randomly assigned to conditions such as employment status, financial situation, or levels of social capital; instead, these factors are shaped by individual circumstances. As a result, any observed relationships—such as the association between lower social capital and higher dropout intentions—may be influenced by unobserved characteristics that simultaneously affect both variables. For instance, students who are already considering withdrawal might reduce their engagement with peers and university activities, which in turn lowers their reported social capital. This issue also extends to variables such as financial stress, employability trust, and service satisfaction. To address this limitation, future studies could employ longitudinal or quasi-experimental designs that allow for counterfactual comparisons and better control for self-selection. Such approaches would make it possible to examine whether factors like financial stress or social capital precede dropout intentions or arise as consequences of students' disengagement, thereby strengthening the causal validity of future findings.

Another limitation lies in the measurement of the outcome variable. This study relies on students' perceived dropout intentions rather than verified

records of actual dropout. Intentions are valuable because they capture students' awareness of risk and can act as an early-warning indicator. However, they do not perfectly map onto behaviour. Some students who report intentions to withdraw may still complete their studies due to family encouragement, financial necessity, or improved circumstances. Conversely, others may leave without ever having expressed prior intention. This creates uncertainty about how far dropout intentions translate into real attrition. Nonetheless, there are justifications for using this measure. Previous research (e.g., Findeisen et al., 2024) has shown that dropout intentions are among the strongest predictors of actual withdrawal, and they are often the most accessible measure for policymakers and institutions seeking to design early interventions. Still, the limitation remains: the dissertation cannot claim to measure actual dropout. Future work could strengthen the findings by comparing survey-based dropout intentions with official administrative records, perhaps across different degree levels or disciplines, to test whether patterns in intentions align with real attrition in Estonia.

In addition, the correlational design of the research limits the investigation to observable and empirical phenomena. It may overlook the subjective experiences and personal narratives of working students, which can provide deeper insights into their struggles and successes. Future research could include interviews with working students who have dropped out of various programmes to understand their reasons for leaving. These narratives could reveal the micro-level challenges related to retention and offer valuable insights. Furthermore, retention and dropout are time-specific constructs. Observing students from their first year through the completion of their studies could provide more comprehensive insights, helping to design more pragmatic strategies. Future studies could employ longitudinal experiments to track students over time, allowing researchers to develop more effective measures for retention and persistence.

This dissertation also comes with another limitation, largely shaped by its reliance on pre-existing questions from the Eurostudent VII survey. While this dataset provides valuable insights into student experiences, its predefined scope constrains the study's ability to fully capture the complex dimensions of different forms of capital. The survey, though useful, does not encompass the full range of variables necessary to operationalise how various types of capital interact to shape student retention. For instance, factors such as the frequency of interactions with professors, actual dropout rates, or students' academic performance (measured through GPA)

could provide a more concrete link between social, economic, and symbolic capital and their influence on persistence. Future research could refine this approach by incorporating these quantifiable metrics, allowing for a more precise analysis of the academic trajectories of working students.

Another limitation arises from the study's reliance on student perspectives alone. While this perspective is essential in understanding the expectations and challenges faced by working students, it does not account for the views of university personnel or an objective assessment of service quality. Without insights from the administrators, faculty, and support staff responsible for designing and implementing these services, the study is unable to fully evaluate whether the perceived shortcomings are due to institutional constraints, resource limitations, or inefficiencies in service delivery. This gap presents an opportunity for future research to adopt a multidimensional approach, integrating both student and institutional perspectives. Conducting interviews or surveys with university staff and administrators could offer a richer understanding of the operational and structural challenges that influence service provision. Additionally, objective evaluations, such as service utilisation rates, student outcomes, or quality assessments, could provide a clearer picture of how well universities support working students. By broadening the scope of analysis in these ways, future research could provide a more holistic understanding of student retention, moving beyond perception-based insights to a deeper exploration of how institutional structures, academic performance, and employment realities intersect to shape the experiences of working students.

Beyond these methodological considerations, the generalisability of this research also presents limitations. While the findings apply to Estonia's higher education market, assuming they extend seamlessly to other markets requires caution. Cultural differences can shape students' work-study experiences, even in seemingly comparable systems. For instance, while Estonia normalises student employment, other countries may view work as a financial necessity rather than an integrated part of education. Economic conditions also vary, with factors like cost of living, job availability, and wage levels influencing students' ability to balance work and study. Likewise, differences in educational structures, curriculum design, and institutional support systems create additional complexities. Future research could compare Estonia's findings with those from other countries,

offering a cross-cultural perspective on how different economic, cultural, and institutional environments affect working students' retention.

Although this research has certain limitations, it has illuminated how various factors, including personal circumstances, economic conditions, familial support, workplace environments, and university social capital, affect the retention of students who are working while studying. Nonetheless, there are still a great deal of questions that remain unresolved.

One of the critical factors identified is financial difficulty, which significantly influences students' decisions to switch study programmes or even abandon higher education altogether. However, the research did not examine the financial benefits provided by the government to support working students in pursuing their higher education. These benefits could include tax breaks or one-time scholarships that might ease the financial burden on these students. Furthermore, the research did not investigate the accessibility of need-based support for working students and how this support accommodates their diverse backgrounds and varying levels of capital. Additionally, the research did not explore whether the government offers incentives to employers who support working students in completing their education. Such incentives could play a crucial role in encouraging employers to be more accommodating and supportive of their employees' academic pursuits. Future research could build on this by analysing how specific policy instruments such as childcare subsidies, housing grants, or employer tax incentives alter the balance between work and study, and by testing whether such measures reduce dropout intentions among at-risk groups.

This dissertation demonstrates that employability trust reduces dropout intentions among working students. However, it is crucial for universities to ensure that this trust is equitably distributed, providing equal access to career services, support networks, and opportunities across all programmes. In reality, many universities face challenges related to unequal resources, with prestigious programmes often receiving more funding, better facilities, and stronger industry connections, which enhance employability trust. Conversely, less prestigious programmes may struggle with limited resources, affecting their ability to offer the same level of support and opportunities. This disparity can lead to students in underfunded programmes feeling undervalued and unsupported, weakening the sense of community and causing disruptive competition

among universities. Future research can explore strategies to address these disparities, examining variables such as funding allocation, industry connections, and faculty expertise to measure and improve the effectiveness of interventions.

A further limitation lies in the theoretical approach. The study combines Tinto's theory of institutional conditions with Bourdieu's theory of practice to create an integrated framework for understanding the persistence of working students. This integration has been valuable in highlighting the social and institutional dynamics that shape dropout intentions. However, both theories are extensive and offer rich insights in their own right, and bringing them together risks leaving some elements underexplored. In particular, while the study drew on Bourdieu's theory of practice to explain differences in students' resources, it did not fully operationalise his concept of field. Structural dynamics such as timetable rigidity, assessment culture, employer flexibility, or the predictability of work schedules were not measured, even though these field-specific factors play a central role in shaping how capitals are deployed and converted. For example, a student working irregular evening shifts may struggle to attend morning lectures, not because of low motivation or weak support networks, but because the rules and demands of the workplace and university fields conflict. By leaving these dynamics outside the analysis, the study captures only part of the interaction between capitals and fields. Future research could address this gap by incorporating field-sensitive variables more directly, thereby providing a fuller account of how the structural conditions of universities and workplaces intersect with students' resources to influence persistence.

5. CONCLUSION

Student retention is one of the relevant indicators of how effectively universities support learning and promote institutional reputation. In Estonia, where one in three students identifies primarily as a worker (Hauschildt et al., 2021), understanding retention requires recognising students' dual roles as both learners and employees and exploring how this duality shapes their commitment to continue in higher education. While employment can provide financial security and valuable professional experience, it can also make it more difficult for students to stay academically engaged or to balance personal and academic responsibilities. In fact, the retention of working university students can be shaped by a complex web of factors, including personal circumstances and the institutional environment that either supports or hinders their participation. Yet the experiences of students who work while studying remain insufficiently understood (Summer et al., 2023). This lack of understanding can hinder meaningful institutional growth, preventing universities from fully supporting these students' needs and promoting their academic retention. Building on these insights, this research aims to provide empirical evidence on how socio-demographic factors and institutional conditions shape the dropout intentions of working students in higher education. The central research question guiding this study was: **How can universities better accommodate the expectations of working students to improve retention?** To address this overarching question, the following sub-questions were posed: (1) What socio-demographic factors influence dropout intentions among working students? (2) How do perceptions of university social capital correlate with the dropout intentions of working students? (3) What specific support services do working students perceive as important for integrating academic, professional, and personal responsibilities?

The dissertation employed quantitative methodology, utilising statistical techniques such as non-parametric tests, exploratory and confirmatory factor analyses, structural equation modelling, and Chi-square automatic interaction detection. Data for this study come from the Eurostudent VII survey (2018–2021), a cross-national project collecting harmonised information on higher education students across Europe. In Estonia, the Eurostudent VII survey was conducted from February to July 2019, resulting in a sample size of 1,902 working students. The survey covers

nationally representative samples of students enrolled in tertiary education and provides detailed information on their socio-economic background, living and study conditions, employment during studies, use of support services, and perceptions of higher education.

This dissertation's theoretical framework provided a structured lens which helped to examine the interplay between individual challenges and institutional dynamics, revealing how various forms of capital—cultural, financial, familial, workplace, social, and symbolic—shape the retention of working students. The first sub-question examines which students are most at risk of dropping out by looking at key factors that influence retention, including gender, age, parental education, qualification studied, field of study, financial situation, living arrangements, education-job alignment, and working hours. The second sub-question explores the role of social connections within the university, asking whether relationships with teachers and peers, as well as satisfaction with support services, make a difference in keeping working students enrolled. The third sub-question assesses how these students perceive existing support services and whether their satisfaction varies based on their socio-demographic background.

The findings highlighted that working students in Estonia, a group marked by diverse demographics and significant financial independence, face complex pressures. Predominantly from middle-class or lower-income backgrounds, they must navigate the competing demands of employment and academia. Financial strain emerged as a particularly significant issue, with many students working to cover living expenses or education costs. However, not all employment aligns with their academic fields, posing potential risks to long-term career prospects. The dual pressures of work and study are further exacerbated by institutional barriers, including rigid academic structures, scheduling conflicts, and mandatory attendance requirements.

The research provided convincing evidence of the association between various socio-demographic factors and dropout intentions among working students. For instance, gender has a statistically significant effect on the intention to abandon studies entirely, with male students more likely to consider leaving university than female students, though it does not influence decisions to change programmes. Age significantly affects the likelihood of changing study programmes, with younger students being more inclined to reconsider their academic path, but it does not have a statistically significant impact on intentions to abandon higher education.

Qualification level also plays a role, as bachelor's students are more likely to consider changing their study programmes than master's students, but it does not significantly affect the likelihood of leaving university altogether. Field of study is highly significant for both outcomes, with students in arts and humanities and ICT more prone to reconsider their programmes and more likely to express intentions to abandon their studies. Parental educational attainment, however, does not have a statistically significant effect on either programme changes or intentions to leave university. Financial difficulties significantly increase both the likelihood of changing programmes and the intention to abandon studies. Likewise, education-job mismatch has a statistically significant effect, with students working in jobs unrelated to their studies more likely to consider both changing their programme and abandoning university. Work hours also influence both outcomes, as students working 1-20 hours per week are significantly more likely to reconsider their studies compared to those working longer hours.

Moreover, the findings highlight that university social capital has a statistically significant influence in reducing the dropout intentions of working students. In fact, the findings revealed that university social capital consists of four key dimensions: teacher-student relationships, support service satisfaction, peer networks, and employability trust. Among these, teacher-student relationships emerged as the strongest factor, followed by employability trust, support service satisfaction, and peer networks. What makes the teacher-student relationship so influential is the sense of motivation, support, and engagement it creates. Students felt encouraged when lecturers motivated them to do their best work, provided helpful feedback, and showed genuine interest in their ideas and experiences. Employability trust also played an important role, reflecting students' confidence that their degree would be valued in the labour market and relevant to their future careers. While peer networks and support services contributed positively to university social capital, their effects were smaller, suggesting that meaningful academic relationships and a clear sense of career relevance are especially important for working students.

The findings also showed that teacher-student relationships, support service satisfaction, and peer networks influence dropout intentions both directly and indirectly through employability trust. Each of these factors positively predicted employability trust, which was, in turn, negatively related to dropout intentions. In other words, students who experience supportive relationships, reliable services, and a strong sense of connection

at university are more likely to believe in the symbolic value of their degree, which reduces their likelihood of considering dropout. At the same time, these factors also had a direct effect on dropout intentions, with teacher-student relationships showing the strongest influence and peer networks the weakest. This pattern suggested partial mediation: employability trust explains part of the effect, but each factor also shapes dropout intentions in its own way. That means teacher-student relationships stand out as the most influential, both by strengthening employability trust and by directly reducing dropout intentions, followed by support service satisfaction and peer networks, which play smaller yet meaningful roles. In this context, support service satisfaction presented a more complex relationship with dropout intentions. While working students generally appreciated available services, these did not always address the core challenges working students face in integrating academic, professional, and personal responsibilities. However, when mediated by employability trust, support services demonstrated a meaningful potential to reduce dropout intentions, suggesting that aligning support more closely with working students' career aspirations and long-term educational goals can enhance their persistence.

Furthermore, the findings show what types of support services working students consider important when combining academic, professional, and personal responsibilities. The results show that satisfaction with university support services varies depending on field of study, age, working hours, and how closely students' jobs align with their studies. For study support services such as tutoring, mentoring, and academic writing, three groups were identified. Students in ICT and social sciences reported moderate satisfaction but also a significant number who felt they did not need support. Those in natural sciences and arts were more satisfied overall, especially when their work matched their field of study. In contrast, students in business and health were less satisfied and showed higher disinterest. Satisfaction with learning facilities, including libraries and computer centres, was generally higher. ICT and natural sciences students, particularly younger ones, expressed the greatest satisfaction, while others were more neutral. Support for balancing studies and jobs was rated much lower. Students in long-degree programmes were especially dissatisfied, and younger bachelor's and master's students whose jobs did not match their studies also expressed strong dissatisfaction. Similar patterns appeared in support for balancing studies and family life: ICT and business students were least interested, while education and health students reported moderate satisfaction. Students working fewer hours tended to rate these

supports more positively. Support for work-life preparation also showed clear age differences. Younger students, particularly those up to 21 years old in business, arts, and humanities, were least satisfied, whereas those aged 25 to under 30 years and students whose employment matched their studies were more positive. In general, the level of satisfaction was higher when education and employment were aligned.

Further, this research underscores the importance of tailored support services for working students, addressing their unique needs in balancing study, work, and family responsibilities. The findings reveal the specific support needs of working students based on their weekly working hours and the alignment of their jobs with their educational goals. For students working fewer than 20 hours per week with jobs aligned to their education, key needs include flexible class times, remote learning options, part-time job placements, and time management workshops. In contrast, students whose jobs do not align with their education require cross-training opportunities and skill-bridging courses. Students working more than 20 hours per week in aligned jobs benefit most from evening or weekend classes, online courses and resources, and job retention and advancement services. Those in non-aligned jobs at this workload express a need for evening or weekend certification programmes, career transition counselling, and transition planning support. Common needs across all groups include networking events, career counselling, skill development workshops, start-up support, and job placement and shadowing opportunities. These findings underscore the importance of providing differentiated and tailored services to address the varied circumstances of working students.

By presenting these findings, this research expands the discussion on working student retention, bringing the Estonian context into the broader discourse on student persistence. In doing so, it offers valuable insights for educators, higher education institutions, and policymakers. The study highlights the need for universities to tackle financial barriers, introduce flexible learning options, strengthen social capital, and tailor support services to better reflect the realities of working students. Equally important is the need to reinforce the perceived value of higher education by fostering stronger connections between academic study, the job market, and long-term career prospects. By addressing these challenges, universities can create an environment that not only accommodates working students but actively supports their success, improving retention and contributing to both their academic and professional development.

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APPENDICES

Appendix 1. Study I

Toyon, M. A. S. (2024), Sociodemographic attributes and dropout intentions of working university students: Evidence from Estonia. *Societies*, 14(7), 116. <https://doi.org/10.3390/soc14070116>

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Article

Sociodemographic Attributes and Dropout Intentions of Working University Students: Evidence from Estonia

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Abstract: This study examines the relationship between various demographic and situational factors and working students' decisions to change their study programmes and abandon higher education. It utilises a sample of 1902 working students derived from the Eurostudent VII survey and employs cross-tabulation and chi-square tests. The findings reveal statistically significant associations between several factors and students' educational decisions. Males are more likely to consider abandoning higher education than females. Younger students, particularly those up to 21 years old, are more inclined to consider changing their study programmes. Financial difficulties significantly influence students' considerations of both changing study programmes and abandoning higher education. Students in the arts, humanities, and ICT are more likely to consider abandoning their studies. Conversely, age does not significantly affect the likelihood of abandoning higher education. Parental educational attainment does not significantly influence decisions to change or abandon study programmes, whereas living situations, such as living independently and not living with parents, significantly affect changing the study programme. Qualification level affects the likelihood of changing study programmes, with bachelor's students more likely to consider changes than masters and long-term national degree students, but it does not significantly affect the likelihood of abandoning higher education. Education-job mismatch significantly affects both changing study programmes and abandoning higher education, while the duration of working hours only influences the decision to alter study programmes. By revealing these findings, this research extends the student retention discourse as well as highlights how cultural, economic, familial, and workplace capital influence working students' educational decisions.

Keywords: academic persistence; dropout; higher education; student retention; working student



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1. Introduction

1.1. Background

Higher education is a critical phase in shaping individuals' careers and personal development. In recent years, there has been an expanding concern among researchers regarding the growing number of university students in Estonia who have considered dropping out [1]. Recently, the data from Statistics Estonia [2] reveal persistent practices of students discontinuing their studies across various levels of higher education. The total number of university dropouts was 5704 in 2021 and 4522 in 2023, indicating that a noteworthy proportion of students continue to struggle with completing their education. Professional higher schools mirror this trend, with slightly different dropout figures from 1127 in 2021 to 1170 in 2023, indicating a pervasive issue across various higher education institutions.

Additionally, the data highlights gender-specific patterns in dropout numbers: males went from 2828 in 2021 to 2196 in 2023, and females went from 2876 in 2021 to 2326 in 2023. These figures show that the practice of discontinuing education exists for both genders. Notably, males are more likely to drop out of bachelor's programmes, with numbers falling from 1432 in 2021 to 1127 in 2023, whereas females show higher dropout numbers in master's programmes, fluctuating from 937 in 2021 to 859 in 2023. Bachelor's programmes

exhibit the highest dropout numbers, decreasing from 2772 in 2021 to 2218 in 2023. While the dropout numbers for professional and doctoral studies are lower, the persistence of these figures—1123 professional higher education dropouts in 2022 and 214 doctoral dropouts in 2023—highlights ongoing issues. For professional studies, stable dropout numbers around 540–548 for males and an increase from 521 to 556 for females indicate that even specialised, career-focused programmes are not immune to dropout challenges. The persistent dropout numbers across different levels of study, genders, and types of institutions underscore the complexity of the issue. However, the specific factors contributing to these dropouts have not been thoroughly investigated in the Estonian context, specifically for university students who concurrently juggle their education and jobs.

1.2. Relevance of the Research

Understanding the factors that influence dropout decisions can help Estonian institutions design better support systems, ultimately improving student retention and success rates. Working students face unique challenges that may affect their academic persistence, making this an important area of study. While studies have examined aspects such as financial difficulties, academic performance, and the impact of socio-economic background on student persistence [3–6], there is still a lack of clarity regarding why working university students intend to drop out.

Broad retention studies often overlook the specific difficulties that arise from juggling work and school [7]. Although working students constitute a significant portion of the university population, their specific needs and challenges are often neglected [8]. The experiences of working students vary widely, making the impact of their employment on educational outcomes complex [9,10]. Understanding sociodemographic factors is crucial, as it helps identify the specific profiles of working students who are at risk of dropping out. This understanding provides valuable insights into the retention discourse and aids in creating more customised retention interventions. While support mechanisms are available in universities, they often focus on traditional students [11,12]. Knowing the specific sociodemographic effects on dropout intentions can significantly enhance the knowledge base and include working students in broader retention strategies. Including working students in broader retention strategies requires understanding their unique context. In Estonia, research focusing specifically on the dropout intentions of working university students is particularly underexplored. The socio-economic conditions in Estonia create a unique environment for working students, yet detailed studies on their dropout intentions are scarce [1,13]. Addressing this research gap is crucial to developing targeted interventions that can support working students in Estonia more effectively. This research aims to fill this gap by providing insights into the demographic characteristics (e.g., age, gender, qualification, field of study, parental education) and situational factors (e.g., financial difficulties, living situation, working hours, education–job matching) that influence dropout intentions among working students in Estonia.

1.3. Research Question

In particular, this research intends to answer the question: What are the significant demographic and situational factors influencing working university students' decisions to change their study programmes or abandon their higher education in Estonia?

1.4. Conceptual Clarification

The term 'working student' refers to individuals who combine both employment and academic study. This dual role involves managing work commitments and educational responsibilities, driven by financial needs, career goals, or personal development. However, the definition varies widely due to different interpretations of full-time and part-time work and study [7,14,15]. Working students are often considered non-traditional students, typically older than the average university student, employed, and from lower socioeconomic backgrounds [7,11]. They may also have family responsibilities and enter higher

education through non-traditional routes. They are a specific group of students who often lack the cultural and social capital associated with academic success, which complicates their educational journey [16–18].

Studies show that working students' experiences vary greatly due to differences in work hours, employment types, and academic disciplines [5,10,18]. Their classifications in the literature are overly simplistic and do not capture the complexities of working students' lives [12,16]. Despite their diverse backgrounds, working students share common challenges such as balancing work and study, financial independence, family responsibilities, and a lack of cultural and social capital. For this research, working students are defined as those who combine study and employment. This straightforward definition helps keep the research objectives focused and relevant. Given the constraints of time, resources, and data availability, this definition allows for an examination of a broader group of working students. As such, using a simplified definition is practical and effective.

No matter how they are defined, the literature [16–19] has shown that working students bring a myriad of life experiences that compel them to discontinue their education. These include personal, financial, cultural, familial, and other institutional challenges. Their discontinuation often results in changing study programmes, taking breaks from studies and returning later, or abandoning higher education altogether [19]. Both the intention to change programmes and the intention to abandon study programmes completely have been considered as dropout intentions in this research. Both actions indicate a significant disruption in a student's educational trajectory and reflect underlying challenges in maintaining their current academic path. Changing a programme often signifies a mismatch between the student's expectations or needs and what their current programme offers. In fact, it can stem from various factors, such as dissatisfaction with the curriculum, perceived lack of relevance to career goals, or difficulties in managing workloads, in addition to sociodemographic factors. While changing a programme does not equate to leaving education entirely, it involves a significant shift that can delay progress, increase costs, and potentially lead to further disengagement if the new programme does not meet the student's expectations either. On the other hand, the intention to abandon the study programme completely is a more definitive dropout action. It indicates a student's decision to leave the higher education system altogether, which can be due to overwhelming personal, financial, or academic challenges. Such action has immediate and long-term consequences for the student's career prospects and personal development. By considering both actions as dropout intentions, the research acknowledges the spectrum of detrimental practices that can disrupt a student's educational journey. By including such a comprehensive view, this research would allow for a better understanding of the factors leading to educational discontinuity and aid in developing targeted interventions to support student retention and success.

1.5. Theoretical Framework

The theoretical foundation of this research is based on retention and dropout theories [3,20–24], with particular emphasis on Bourdieu's theory of capital [25]. Pierre Bourdieu's theory of capital provides a valuable framework for understanding the factors influencing working students' educational decisions. Bourdieu identifies three primary forms of capital—economic, cultural, and social—that play crucial roles in shaping individuals' educational trajectories [25]. Economic capital refers to the financial resources that students and their families possess. These resources are essential for affording tuition fees, living expenses, and other educational costs. For working students, economic capital is particularly critical, as they often juggle employment and academic responsibilities. The need to work while studying can exacerbate financial stress, making it an important factor in their decisions to change study programmes or abandon higher education altogether. Financial difficulties can lead to increased stress and dissatisfaction, prompting students to seek alternative educational paths [26,27]. Other scholars [28,29] have also highlighted the

impact of economic constraints on student attrition, emphasising that financial difficulties are a major reason why students leave higher education.

Cultural capital encompasses the educational qualifications, knowledge, skills, and competencies that individuals acquire through family and educational institutions. Parents' educational attainment is a critical component of cultural capital. Higher levels of parental education often correlate with greater academic support and higher educational aspirations for their children [30]. For working students, the ability of balancing job responsibilities with academic expectations may also affect their cultural capital. The dual burden of work and study can limit the time and energy they can devote to their academic pursuits, potentially affecting their educational outcomes [9]. As highlighted by researchers [31], cultural capital plays a significant role in academic achievement, where students from higher socio-economic backgrounds often have more access to educational resources and support.

On the other hand, social capital refers to the networks and relationships that provide individuals with support and resources [25,32]. It also includes family, friends, mentors, and institutional connections. Living situations, such as living independently or with parents, can be considered aspects of social capital in this context. For instance, working students who do not live with parents may lack immediate familial support, potentially influencing their educational decisions. Similarly, a mismatch between education and job expectations can erode students' workplace capital, leading to dissatisfaction and the consideration of abandoning studies. Working students often rely on workplace networks and institutional support systems to manage their dual roles, which can either enhance or hinder their educational persistence, depending on the quality and extent of these networks. Researchers [33–35] also emphasise the importance of social capital, arguing that strong social networks can provide emotional support and practical assistance, which are crucial for student retention. Through the application of these theoretical views, this research seeks to understand the factors influencing working students' decisions and to highlight the interplay between economic, cultural, and social dimensions in shaping educational decisions.

2. Materials and Methods

This exploratory study employs a descriptive approach to examine the socio-demographic attributes of working students in Estonia. Unlike diverse forms of research, which seek to describe or explain aspects of a phenomenon, exploratory research focuses on gaining an initial understanding and uncovering new insights [36]. While there may be existing studies on student retention and dropout rates, this research seeks to explore these issues specifically within the context of working students in Estonia, a topic that may not be well documented or thoroughly investigated. This research utilises data from the Eurostudent VII survey [37]. The Eurostudent Survey VII, conducted in Estonia from February to July 2019, provides comprehensive data on the social and economic conditions of higher education students across Europe. By using standardised questionnaires, the survey collects detailed information on students' socio-economic backgrounds, financial situations, living conditions, study environments, and employment status. The survey received 2760 responses from Estonian university students, and out of these, 1902 were working students; this study focused on the sample of working students.

The variables used in this study (see Table 1) include demographic factors such as age, gender, financial status, living situation, parental educational attainment, work status, education levels, fields of study, and education–job matching. Additionally, variables related to students' intentions to change their study programme and abandon higher education completely were included. By incorporating these theoretically informed variables, which align with positivist epistemology [38], this research aims to provide comprehensive answers to the research question.

Table 1. Characteristics of the sample.

Variables	Frequency	Percent	Mean (Standard Deviation)
Gender:			
Female	1463	76.9	1.23
Male	439	23.1	(0.421)
Age:			
Up to 21 years	351	18.5	
22 to <25 years	463	24.3	2.75
25 to <30 years	405	21.3	(1.130)
30 years or over	683	35.9	
Parents education:			
Low education background (ISCED 0-2)	118	6.2	
Medium education level of parents (ISCED 3-4)	488	25.7	2.61
High education level of parents (ISCED 5-8)	1232	64.8	(0.606)
No answer	38	2.0	
Don't know	26	1.4	
Qualification:			
Bachelor	1098	57.7	
Master	697	36.6	2.54
Long national degree	107	5.6	(0.766)
Field of study:			
Education	212	11.1	
Arts and humanities	316	16.6	
Social sciences, journalism, and information	253	13.3	
Business, administration, and law	367	19.3	
Natural sciences, mathematics, and statistics	122	6.4	
ICTs	151	7.9	4.61
Engineering, manufacturing, and construction	95	5.0	(2.770)
Agriculture, forestry, fisheries, and veterinary	15	0.8	
Health and welfare	293	15.4	
Services	75	3.9	
No answer	3	0.2	
Financial situation:			
Students with financial difficulties	379	19.9	
Middle category	536	28.2	2.31
Students without financial difficulties	971	51.1	(0.786)
No answer	16	0.8	
Living situation:			
Students living with parents	310	16.3	0.84
Students not living with parents	1592	83.7	(0.369)
Working hours:			
1–20 h	675	35.5	1.64
>20 h	1181	62.1	(0.481)
Education–job matching:			
Matched	788	41.4	1.35
Unmatched	429	22.6	(0.478)
Changing study programme:			
Strongly agree	60	3.2	
Agree	64	3.4	
Neutral	129	6.8	4.49
Do not agree	276	14.5	(0.985)
Do not agree at all	1362	71.6	
No answer	11	0.6	

Table 1. Cont.

Variables	Frequency	Percent	Mean (Standard Deviation)
Completely abandoning education:			
Strongly agree	42	2.2	
Agree	53	2.8	
Neutral	90	4.7	4.62
Do not agree	212	11.1	(0.876)
Do not agree at all	1492	78.4	
No answer	13	0.7	
N	1902	100	

The analytical techniques involved cross-tabulation and nonparametric tests [39,40] to identify associations between these variables and SPSS-23 was used for the computational analysis. Table 2 has the measure of association, while Tables 3 and 4 contain cross-tabulations.

Table 2. Measure of association.

Variable	Changing Study Programme	Abandoning Higher Education
Gender	Chi-square: 3.382, $p = 0.496$; Somers'd: -0.004 , $p = 0.868$	Chi-square: 17.601, $p = 0.001$; Somers'd: -0.090 , $p = 0.000$
Age	Chi-square: 53.179, $p < 0.001$; Somers'd: 0.113, $p = 0.000$	Chi-square: 19.715, $p = 0.073$; Somers'd: -0.038 , $p = 0.051$
Parents' educational attainment	Chi-square: 6.198, $p = 0.625$; Somers'd: $v0.044$, $p = 0.038$	Chi-square: 7.373, $p = 0.497$; Somers'd: -0.005 , $p = 0.832$
Qualification studied	Chi-square: 28.886, $p < 0.001$; Somers'd: 0.079, $p = 0.000$	Chi-square: 13.891, $p = 0.085$; Somers'd: 0.007, $p = 0.737$
Field of study	Chi-square: 46.621, $p = 0.111$; Somers'd: 0.008, $p = 0.648$	Chi-square: 72.970, $p < 0.001$; Somers'd: 0.015, $p = 0.387$
Financial situation	Chi-square: 50.496, $p < 0.001$; Somers'd: 0.135, $p = 0.000$	Chi-square: 40.677, $p < 0.001$; Somers'd: 0.101, $p = 0.000$
Living situation	Chi-square: 17.251, $p = 0.002$; Somers'd: 0.051, $p = 0.024$	Chi-square: 0.482, $p = 0.975$; Somers'd: -0.009 , $p = 0.696$
Education-job alignment	Chi-square: 62.056, $p < 0.001$; Somers'd: -0.201 , $p = 0.000$	Chi-square: 16.870, $p = 0.002$; Somers'd: -0.085 , $p = 0.003$
Number of hours worked	Chi-square: 12.601, $p = 0.013$; Somers'd: 0.046, $p = 0.043$	Chi-square: 5.729, $p = 0.220$; Somers'd: -0.030 , $p = 0.168$

Table 3. Cross-tabulation of the changing study programme.

		I Am Seriously Thinking about Changing My Current Main Study Programme					Total
		Strongly Agree	Agree	Neutral	Do Not Agree	Do Not Agree at All	
Gender	Female	48	53	99	203	1051	1454
		3.3%	3.6%	6.8%	14.0%	72.3%	100.0%
	Male	12	11	30	73	311	437
		2.7%	2.5%	6.9%	16.7%	71.2%	100.0%

Table 3. Cont.

		I Am Seriously Thinking about Changing My Current Main Study Programme					Total
		Strongly Agree	Agree	Neutral	Do Not Agree	Do Not Agree at All	
Age	Up to 21 years	24 6.9%	20 5.8%	23 6.6%	67 19.3%	213 61.4%	347 100.0%
	22 to <25 years	15 3.3%	17 3.7%	35 7.6%	72 15.6%	322 69.8%	461 100.0%
	25 to <30 years	10 2.5%	16 4.0%	31 7.7%	47 11.6%	301 74.3%	405 100.0%
	30 years or over	11 1.6%	11 1.6%	40 5.9%	90 13.3%	526 77.6%	678 100.0%
Parents' educational attainment	Low education background (ISCED 0-2)	3 2.5%	4 3.4%	5 4.2%	15 12.7%	91 77.1%	118 100.0%
	Medium education level of parents (ISCED 3-4)	15 3.1%	16 3.3%	28 5.8%	61 12.6%	363 75.2%	483 100.0%
	High education level of parents (ISCED 5-8)	39 3.2%	38 3.1%	91 7.4%	190 15.5%	871 70.9%	1229 100.0%
Qualification studied	Bachelor	47 4.3%	51 4.7%	73 6.7%	168 15.4%	753 69.0%	1092 100.0%
	Master	11 1.6%	11 1.6%	46 6.6%	95 13.7%	530 76.5%	693 100.0%
	Long national degree	2 1.9%	2 1.9%	10 9.4%	13 12.3%	79 74.5%	106 100.0%
Field of study	Education	5 2.4%	8 3.8%	10 4.8%	25 12.0%	161 77.0%	209 100.0%
	Arts and humanities	15 4.8%	13 4.1%	31 9.8%	48 15.2%	208 66.0%	315 100.0%
	Social sciences, journalism, and information	5 2.0%	8 3.2%	20 7.9%	39 15.4%	181 71.5%	253 100.0%
	Business, administration, and law	7 1.9%	6 1.6%	21 5.8%	51 14.0%	279 76.6%	364 100.0%
	Natural sciences, mathematics, and statistics	8 6.6%	4 3.3%	7 5.8%	18 14.9%	84 69.4%	121 100.0%
	ICTs	5 3.3%	10 6.6%	9 6.0%	29 19.2%	98 64.9%	151 100.0%
	Engineering, manufacturing, and construction	4 4.2%	4 4.2%	9 9.5%	17 17.9%	61 64.2%	95 100.0%
	Agriculture, forestry, fisheries, and veterinary	0 0.0%	0 0.0%	0 0.0%	2 13.3%	13 86.7%	15 100.0%
	Health and welfare	7 2.4%	11 3.8%	18 6.2%	34 11.6%	222 76.0%	292 100.0%
	Services	4 5.5%	0 0.0%	4 5.5%	12 16.4%	53 72.6%	73 100.0%
Financial situation	Students with financial difficulties	20 5.3%	15 4.0%	42 11.2%	61 16.2%	238 63.3%	376 100.0%
	Middle category	15 2.8%	21 3.9%	43 8.1%	97 18.2%	357 67.0%	533 100.0%
	Students without financial difficulties	24 2.5%	25 2.6%	43 4.4%	117 12.1%	759 78.4%	968 100.0%
Living situation	Students living with parents	9 2.9%	22 7.1%	23 7.5%	48 15.6%	206 66.9%	308 100.0%
	Students not living with parents	51 3.2%	42 2.7%	106 6.7%	228 14.4%	1156 73.0%	1583 100.0%

Table 3. Cont.

		I Am Seriously Thinking about Changing My Current Main Study Programme					Total
		Strongly Agree	Agree	Neutral	Do Not Agree	Do Not Agree at All	
Education–job alignment	Matched	11	24	25	90	631	781
		1.4%	3.1%	3.2%	11.5%	80.8%	100.0%
	Unmatched	29	20	38	73	267	427
		6.8%	4.7%	8.9%	17.1%	62.5%	100.0%
Number of hours worked	1–20 h	31	23	39	112	467	672
		4.6%	3.4%	5.8%	16.7%	69.5%	100.0%
	>20 h	27	37	84	159	869	1176
		2.3%	3.1%	7.1%	13.5%	73.9%	100.0%

Table 4. Cross-tabulation of the abandonment of study programme.

		I Am Seriously Thinking of Completely Abandoning My Higher Education Studies					Total
		Strongly Agree	Agree	Neutral	Do Not Agree	Do Not Agree at All	
Gender	Female	27	39	61	148	1177	1452
		1.9%	2.7%	4.2%	10.2%	81.1%	100.0%
	Male	15	14	29	64	315	437
		3.4%	3.2%	6.6%	14.6%	72.1%	100.0%
Age	up to 21 years	13	10	14	32	278	347
		3.7%	2.9%	4.0%	9.2%	80.1%	100.0%
	22 to <25 years	8	9	16	41	386	460
		1.7%	2.0%	3.5%	8.9%	83.9%	100.0%
	25 to <30 years	8	15	20	56	304	403
		2.0%	3.7%	5.0%	13.9%	75.4%	100.0%
Parents’ educational attainment	Low education background (ISCED 0-2)	13	19	40	83	524	679
		1.9%	2.8%	5.9%	12.2%	77.2%	100.0%
	Medium education level of parents (ISCED 3-4)	3	3	6	12	94	118
		2.5%	2.5%	5.1%	10.2%	79.7%	100.0%
	High education level of parents (ISCED 5-8)	14	16	17	51	385	483
		2.9%	3.3%	3.5%	10.6%	79.7%	100.0%
Qualification studied	Bachelor	19	30	65	145	968	1227
		1.5%	2.4%	5.3%	11.8%	78.9%	100.0%
	Master	31	31	45	120	863	1090
		2.8%	2.8%	4.1%	11.0%	79.2%	100.0%
	Long national degree	10	19	42	86	536	693
		1.4%	2.7%	6.1%	12.4%	77.3%	100.0%
Field of study	Education	1	3	3	6	93	106
		0.9%	2.8%	2.8%	5.7%	87.7%	100.0%
	Arts and humanities	5	5	10	17	173	210
		2.4%	2.4%	4.8%	8.1%	82.4%	100.0%
	Social sciences, journalism, and information	11	9	17	41	237	315
		3.5%	2.9%	5.4%	13.0%	75.2%	100.0%
	Business, administration, and law	4	10	6	38	194	252
		1.6%	4.0%	2.4%	15.1%	77.0%	100.0%
	Natural sciences, mathematics, and statistics	6	6	13	36	302	363
		1.7%	1.7%	3.6%	9.9%	83.2%	100.0%
		4	2	7	9	99	121
		3.3%	1.7%	5.8%	7.4%	81.8%	100.0%

Table 4. Cont.

		I Am Seriously Thinking of Completely Abandoning My Higher Education Studies					Total
		Strongly Agree	Agree	Neutral	Do Not Agree	Do Not Agree at All	
Field of study	ICTs	7 4.7%	10 6.7%	12 8.0%	27 18.0%	94 62.7%	150 100.0%
	Engineering, manufacturing, and construction	0 0.0%	4 4.2%	9 9.5%	16 16.8%	66 69.5%	95 100.0%
	Agriculture, forestry, fisheries and veterinary	0 0.0%	0 0.0%	0 0.0%	2 13.3%	13 86.7%	15 100.0%
	Health and welfare	3 1.0%	5 1.7%	14 4.8%	21 7.2%	249 85.3%	292 100.0%
	Services	1 1.4%	2 2.7%	2 2.7%	5 6.8%	63 86.3%	73 100.0%
Financial situation	Students with financial difficulties	18 4.8%	18 4.8%	24 6.4%	50 13.4%	264 70.6%	374 100.0%
	Middle category	12 2.2%	14 2.6%	33 6.2%	53 9.9%	422 79.0%	534 100.0%
	Students without financial difficulties	11 1.1%	19 2.0%	32 3.3%	107 11.1%	798 82.5%	967 100.0%
Living situation	Students living with parents	7 2.3%	7 2.3%	15 4.9%	33 10.7%	245 79.8%	307 100.0%
	Students not living with parents	35 2.2%	46 2.9%	75 4.7%	179 11.3%	1247 78.8%	1582 100.0%
Education-job alignment	Matched	9 1.2%	19 2.4%	34 4.4%	70 9.0%	648 83.1%	780 100.0%
	Unmatched	17 4.0%	8 1.9%	26 6.1%	52 12.2%	324 75.9%	427 100.0%
Number of hours worked	1–20 h	18 2.7%	13 1.9%	30 4.5%	69 10.3%	542 80.7%	672 100.0%
	>20 h	22 1.9%	38 3.2%	60 5.1%	140 11.9%	914 77.9%	1174 100.0%

3. Results

3.1. Demographic Profile of Working Students

The age range (See Table 1) of the pupils spans a wide spectrum, encompassing both young adults (mean age category: 22 to <25 years) and individuals over the age of 30. In particular, 35.9% of the students fall into the age category of 30 years or older. The age group of individuals between 22 and under 25 years accounts for 24.3%, and students aged 25 to under 30 years make up 21.3%. Students aged 21 and under make up 18.5% of the total. The age distribution indicates that the working student population include not just young university students but also a substantial portion of mature adults who may be pursuing higher education at a later stage in life or undertaking further study. Regarding gender distribution, males account for 23.1% of the student population, while females represent 76.9%. The tendency towards female students could point to a greater female student population generally or reflect more general patterns in higher education enrolment by gender in Estonia.

Additionally, a significant majority of the students, 57.7%, are enrolled in bachelor's degree programmes (ISCED 6), indicating a strong focus on undergraduate education. Meanwhile, 36.6% are pursuing master's degree programmes (ISCED 7), and 5.6% are in long national degree programmes exceeding three years. Regarding fields of study, the most common areas include business, administration, and law (19.3%); followed by arts and humanities (16.6%); health and welfare (15.4%); and social sciences, journalism, and information (13.3%). Less represented fields include agriculture, forestry, fisheries and

veterinary science and engineering, manufacturing, and construction, indicating a trend towards business, arts, and health-related studies.

The educational attainment of the students' parents tends to be higher, with 67% having parents with a high education level (ISCED 5-8). Students with parents who have a medium education level (ISCED 3-4) account for 26.6%, while only 6.4% have parents with a low education background (ISCED 0-2). This means that, despite some students coming from lower economic backgrounds, the majority hail from families with higher educational attainment.

The financial situation of working students varies widely. According to the data (Table 1), 379 students (19.9%) face financial difficulties, with a mean score of 2.31, indicating moderate financial strain. Meanwhile, 971 students (51.1%) do not experience financial difficulties and have sufficient financial support. These figures highlight the diverse economic backgrounds of working students, as well as the significant issue of financial difficulties for nearly a fifth of the sample.

The living situation of working students shows a clear distinction between those living with parents and those living independently. According to the data, 310 students (16.3%) live with their parents, while 1592 students (83.7%) do not. The mean score is 0.84 with a standard deviation of 0.369, indicating that the majority of students live independently, reflecting a higher level of financial responsibility and autonomy. This financial burden may lead them to alter their course of study or perhaps drop out of university entirely.

The working status of students reveals differences in the number of hours worked. According to the data, 675 students (35.5%) work between 1 and 20 h per week, while 1181 students (62.1%) work more than 20 h per week. The mean score is 1.64 with a standard deviation of 0.481, indicating a considerable portion of students are working substantial hours alongside their studies. Table 1 also indicates that 41.4% of these students have employment that corresponds to their field of study, while 22.6% have jobs that do not.

3.2. Reasons for Working

The result (see Figure 1) reveals various reasons why students choose to work while studying, reflecting their diverse motivations and needs. A significant majority of students work to cover their living costs, with 65.3% indicating that this applies totally to their situation. Additionally, 13.6% somewhat agree, while 8.7% are neutral. Only 12.4% of students somewhat or totally disagree with this statement. It underscores the financial pressures many students face, compelling them to work to sustain their basic living expenses. Furthermore, nearly half of the students, 48.9%, work to gain experience in the labour market. It is complemented by 18.3% who somewhat agree, and 13.2% who are neutral. A smaller portion, 19.5%, somewhat or totally disagree. In terms of financial necessity, 36.8% of students totally agree that without their paid job, they could not afford to be students. An additional 9.7% somewhat agree, while 12.5% are neutral. However, 41.0% of students disagree to varying extents. It indicates that for many students, employment is crucial for continuing their education, although a notable portion can manage without it.

Some students work to support others financially, with 22.5% totally agreeing and another 8.7% somewhat agreeing. Meanwhile, 9.5% are neutral, and a substantial 47.6% do not agree at all. It suggests that while a significant number of students have financial dependents, the majority do not face this additional responsibility. Similarly, 48.6% of students work to afford things they otherwise could not buy, with 22.4% somewhat agreeing and 14.4% being neutral. Only 14.7% somewhat or totally disagree. These insights emphasise the significant role that employment plays in the lives of students and the diverse motivations behind their decision to work.

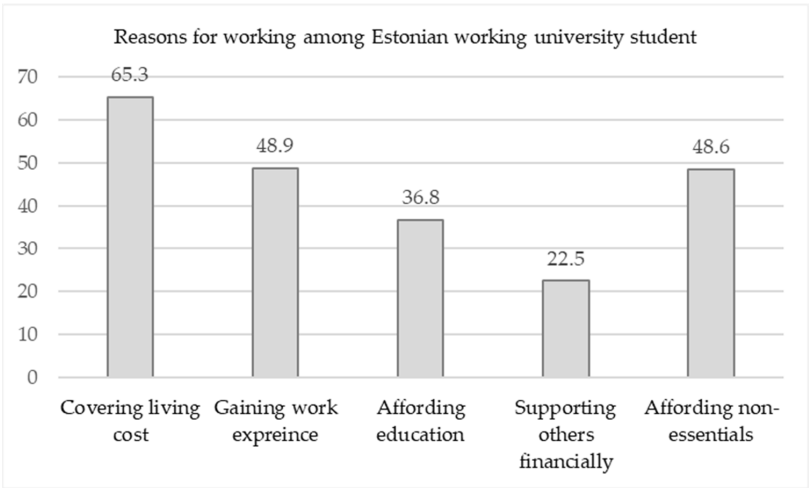


Figure 1. Reasons for working among Estonian working university student.

3.3. Association between Socio-Demographic Factors and Dropout Intentions

Table 2 highlights the relationship between various demographic and situational factors of students and their consideration of changing their study programme or abandoning higher education completely. In the analysis, the values of Somers’*d* and chi-square tests reveal several important relationships. Tables 3 and 4 also provide relevant results.

Regarding gender, female students are less likely to consider changing their study programme (72.3% do not agree at all) compared to male students (71.2% do not agree at all). Similarly, male students are more likely to consider abandoning their studies (3.4% strongly agree) compared to female students (1.9% strongly agree). Gender shows a statistically significant association with abandoning higher education (chi-square: 17.601, *p* = 0.001; Somers’*d*: −0.090, *p* = 0.000) but not with changing the study programme (chi-square: 3.382, *p* = 0.496; Somers’*d*: −0.004, *p* = 0.868).

In contrast, younger students (up to 21 years) are more likely to think about changing their programme (6.9% strongly agree) compared to older students (30 years or over, 1.6% strongly agree). They are also more inclined to consider abandoning their studies (3.7% strongly agree) compared to older students (1.9% strongly agree). Age significantly influences changing the study programme (chi-square: 53.179, *p* < 0.001; Somers’*d*: 0.113, *p* = 0.000) but not abandoning higher education (chi-square: 19.715, *p* = 0.073; Somers’*d*: −0.038, *p* = 0.051). It suggests that younger students may be more uncertain or dissatisfied with their initial academic choices.

The educational attainment of parents did not show a significant effect on students’ thoughts about changing their study programme. This implies that students’ considerations of changing their programme are relatively independent of their parents’ educational backgrounds. Similarly, there is no significant relationship between the educational attainment of parents and students’ thoughts about abandoning their studies. The Pearson chi-square value is 7.373 with a *p*-value of 0.497, indicating that this factor does not significantly influence students’ considerations of abandoning their studies.

The findings show that bachelor’s students are more likely to contemplate changing their study programme than master’s and long national degree students, highlighting potential dissatisfaction or a higher level of indecision among undergraduate students. Additionally, the qualification studied significantly impacts changing the study programme (chi-square: 28.886, *p* < 0.001; Somers’*d*: 0.079, *p* = 0.000) but not abandoning higher education (chi-square: 13.891, *p* = 0.085; Somers’*d*: 0.007, *p* = 0.737).

Additionally, the findings show that students in arts and humanities (4.8% strongly agree) and ICTs (3.3% strongly agree) are more likely to consider changing their programme than those in education (2.4% strongly agree) or business, administration, and law (1.9% strongly agree). Similarly, students in ICTs (4.7% strongly agree) and arts and humanities (3.5% strongly agree) are more likely to consider abandoning their studies than those in education (2.4% strongly agree) or business, administration, and law (1.7% strongly agree). The field of study significantly affects abandoning higher education (chi-square: 72.970, $p < 0.001$) but not changing the study programme (chi-square: 46.621, $p = 0.111$).

The findings show that students with financial difficulties are more likely to consider changing their programme (5.3% strongly agree) compared to those without financial difficulties (2.5% strongly agree). They are also more likely to consider abandoning their studies (4.8% strongly agree) compared to those without financial difficulties (1.1% strongly agree). Financial situation significantly influences both changing the study programme (chi-square: 50.496, $p < 0.001$; Somers' d : 0.135, $p = 0.000$) and abandoning higher education (chi-square: 40.677, $p < 0.001$; Somers' d : 0.101, $p = 0.000$).

Furthermore, students not living with parents are more inclined to consider changing their programme (3.2% strongly agree) than those living with parents (2.9% strongly agree). However, living situation has a smaller effect on the intention to abandon studies, with students living with parents (2.3% strongly agree) being slightly more inclined compared to those not living with parents (2.2% strongly agree). Living situation significantly affects changing the study programme (chi-square: 17.251, $p = 0.002$; Somers' d : 0.051, $p = 0.024$) but not abandoning higher education (chi-square: 0.482, $p = 0.975$; Somers' d : -0.009 , $p = 0.696$).

Regarding education job alignment, the findings show that students with unmatched jobs are more likely to consider changing their programme (6.8% strongly agree) compared to those with matched jobs (1.4% strongly agree). They are also more inclined to abandon their studies (4.0% strongly agree) compared to those with matched jobs (1.2% strongly agree). Education-job alignment significantly influences both changing the study programme (chi-square: 62.056, $p < 0.001$; Somers' d : -0.201 , $p = 0.000$) and abandoning higher education (chi-square: 16.870, $p = 0.002$; Somers' d : -0.085 , $p = 0.003$).

The number of hours students work per week significantly affects their likelihood of considering a change in their study programme. Students working 1–20 h per week show a higher tendency to change their programme (4.6% strongly agree) compared to those working more than 20 h per week (2.3% strongly agree). Similarly, students working 1–20 h per week are more likely to consider abandoning their studies (2.7% strongly agree) compared to those working more than 20 h per week (1.9% strongly agree). The number of hours worked significantly affects changing the study programme (chi-square: 12.601, $p = 0.013$; Somers' d : 0.046, $p = 0.043$) but not abandoning higher education (chi-square: 5.729, $p = 0.220$; Somers' d : -0.030 , $p = 0.168$).

4. Discussion

The goal of this study was to answer the question: What are the significant demographic and situational factors influencing working university students' decisions to change their study programmes or abandon their higher education in Estonia? To achieve this, the study employed quantitative techniques to analyse the data and generate the findings. In particular, the study identified the association between changing study programme and abandoning higher education completely with demographic characteristics (e.g., age, gender, qualification, field of study, parental education) and situational factors (e.g., financial difficulties, living situation, working hour, education-job alignment).

The findings provide important insights into the factors influencing educational decisions among working university students in Estonia, aligning with a broader discussion while highlighting specific contextual settings. The study reveals a gender disparity in the likelihood of abandoning higher education, with males being more likely to drop out than

females. It aligns with global trends where male students often show higher dropout rates, possibly due to societal expectations and pressures to join the workforce early, as noted by researchers [41]. In the Estonian context, it might reflect cultural attitudes towards gender roles and education, emphasising the need for targeted interventions to support specific students. Younger students, particularly those up to 21 years old, are more inclined to consider changing their study programmes. The finding suggests a phase of exploration and uncertainty common among younger students who are still developing their academic and career identities, contradictory with researchers' [42] findings on student retention. However, age does not significantly affect the likelihood of abandoning higher education, indicating that the decision to drop out may be influenced more by situational factors than by age alone.

Financial difficulties are a critical factor influencing both the consideration of changing study programmes and abandoning higher education. This finding supports Bourdieu's theory of economic capital, which posits that financial resources are crucial to educational persistence [25]. In Estonia, where the cost of living and tuition can be burdensome, financial support mechanisms are crucial for reducing dropout rates. Addressing this issue requires a comprehensive evaluation of existing financial aid programmes. The current financial aid options, such as need-based aid, may be insufficient and not always accessible to the working students who need them most. Similarly, while student loans, scholarships, and grants are beneficial, they might not be adequately effective for working university students. These financial aid measures often focus broadly on traditional students, potentially overlooking the specific realities and challenges faced by those who juggle work and study. As a result, many working students continue to struggle under the weight of financial burdens, making it difficult for them to sustain their educational pursuits. This oversight can contribute to higher dropout rates and hinder students' ability to achieve their academic and professional goals. Nonetheless, exploring how universities and the government can enhance their support for working students could involve investigating best practices from other countries or institutions. For instance, some universities offer tailored financial literacy programmes to help students manage their finances better or emergency funds for students facing unexpected financial crises. Additionally, government policies that provide tax benefits or subsidies for working students could be considered to ease their financial burdens.

Moreover, the findings highlight the necessity of providing tailored support for specific fields of study. Students in certain fields, such as the arts, humanities, and ICTs, are more likely to consider changing their programmes or abandoning their studies. This could be due to perceived or real challenges in these fields, such as job market uncertainties, the demanding nature of these fields, and the potential for lucrative employment opportunities even without a completed degree. Interestingly, it raises an important point of discussion: whether there are sufficient opportunities to combine study and work in these fields, to what extent students are taking advantage of these opportunities, and whether these opportunities effectively meet the diverse needs of working students.

Furthermore, the study finds that parental educational attainment and living situation do not significantly influence decisions to abandon study programmes. It contrasts with literature [30] suggesting that parental education often correlates with student success. In Estonia, this may suggest a higher education system in which students' decisions are more influenced by their immediate financial and academic experiences than by their familial background. However, the cultural capital provided by a parent's higher educational background does not appear to significantly influence students' decisions in this context, suggesting that other forms of support may be compensating. Bachelor's students are more likely to consider changing their study programmes than master's and long-term national degree students, suggesting higher levels of uncertainty or dissatisfaction among undergraduates. It also fits the notion of cultural capital, whereby undergraduate students might still be developing the required skills and knowledge to make confident academic and professional decisions.

Additionally, an education–job mismatch significantly affects both changing study programmes and abandoning higher education, which emphasises the need to match educational programmes with labour market demands, since misalignment may lead to frustration as stated by researchers [43]. The duration of working hours only influences the decision to alter study programmes, not to discontinue higher education. Students working fewer hours are more likely to contemplate changing their study programmes, possibly because they have more time to reassess their academic choices or to reflect on their academic dissatisfaction. In contrast, students working more hours might feel more entrenched in their current situation due to financial necessities. Those with heavier work commitments do not have the luxury to consider changes that might benefit their education in the long run. It, indeed, highlights the complexity of balancing work and study and suggests that institutional roles are crucial for student retention, consistent with the assertions of other researchers [34].

5. Conclusions

This study examines the relationship between various demographic and situational factors and working students' decisions to change their study programmes or abandon higher education, utilising data from the Eurostudent VII survey. It contributes to the discourse on student retention and capital theories by providing fresh insights from the Estonian context. By analysing a range of factors, including age, gender, financial difficulties, and educational background, this research highlights how cultural, economic, familial, and workplace capital influence students' educational trajectories. For instance, the finding that financial difficulties significantly influence students' decisions aligns with Bourdieu's theory of economic capital, underscoring the importance of financial resources in educational persistence. Similarly, the lack of significant influence from parental education suggests a more complex interplay of factors than previously understood, indicating that in Estonia, immediate financial and academic experiences may outweigh inherited cultural capital. These empirical insights enhance the understanding of the specific challenges faced by working students in Estonia and provide a basis for more targeted policy interventions and support mechanisms.

However, this research also has some limitations. Firstly, the data used in this study is cross-sectional, which means it captures a single point in time and cannot establish causality. Longitudinal data would be needed to track changes and trends over time to better understand the dynamics of students' decisions. Secondly, the study focuses on working students in Estonia, which may limit the generalizability of the findings to other contexts or countries with different educational systems and socio-economic conditions. Third, this research has used dropout intentions, not actual dropout rates. Retention, attrition, persistence, dropout intentions, and dropout rate are distinct yet interconnected terms used to measure continuity in educational and organisational contexts. Retention refers to the institution's ability to keep its students or employees over time, indicating overall stability. Attrition, on the other hand, measures the reduction in numbers caused by individuals leaving, indicating institutional turnover. Persistence focuses on individual commitment, highlighting a person's continued effort to remain in a programme or job despite challenges. Dropout intentions indicate an individual's likelihood or plans to leave, providing insight into potential future attrition. Although these differences exist, this research uses dropout intentions with a focus on working students' perceptions. Fourth, it is important to note that the study is correlational, not causative. Finally, while the study incorporates various demographic and situational factors, there may be other relevant variables not included in the analysis, such as mental health or personal well-being, which could also significantly affect students' decisions.

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Appendix 2. Study II

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Article

Effect of University Social Capital on Working Students' Dropout Intentions: Insights from Estonia

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Abstract: This study investigates the role of social capital within the university context in retaining working students. It specifically examines the effects of university social capital factors—such as teacher–student relationships, peer networks, and support services—on the dropout intentions of working students, emphasizing the mediating role of employability trust. Using a sample of 1902 working students from the Eurostudent VII survey, this study employed factor analysis techniques and structural equation modeling to derive its findings. The results indicated that university social capital significantly reduces dropout intentions among working students. Strong teacher–student relationships, satisfaction with support services, robust peer networks, and high employability trust positively influence this social capital. There is a statistically significant negative association between teacher–student relationships, peer networks, employability trust, and dropout intentions. Furthermore, the findings reveal that without enhancing students' employability trust, the effectiveness of support services might be limited. These findings not only contribute to the discourse on student retention and the development of university social capital but also provide practical insights for higher education strategies aimed at supporting working students.

Keywords: dropout; higher education; retention; social capital; trust; working student



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1. Introduction

Estonia's higher education sector faces significant challenges related to dropout rates and graduation timelines, affecting both the labor market and universities' financial sustainability [1,2]. Recent data reveal an 18.2% increase in university dropouts from 2020 to 2021, followed by a slight decrease in 2022, though numbers remain higher than in 2020, indicating persistent retention issues [3]. Bachelor's programs saw an 18.7% rise in dropouts from 2020 to 2021, decreasing slightly by 2022 but still 7.4% above 2020 levels. Master's programs experienced an 18.9% increase in dropouts from 2020 to 2021, with a subsequent decrease in 2022, yet still 2.8% higher than in 2020. Professional higher schools also faced a 4.1% rise in dropouts over two years, highlighting a distinct area of concern [3].

A significant aspect of this issue is the integration of work and study commitments among students [4,5]. Over half of the student population is regularly employed during their education, a figure notably higher than the OECD average [1,6,7]. The number of employed students fluctuated, rising from 22,392 in 2017 to 22,923 in 2018, dropping in 2020, and rebounding to 21,998 in 2021. The employment figures increased from 40,835 in 2020 to 42,614 in 2021, implying that the job market is accommodating student workers or that students are prioritizing jobs over education [8–10]. Many students work out of necessity due to financial constraints and high living costs, which, while providing practical experience, often serve as a survival strategy rather than a choice [11–13]. Research indicates that working during studies is linked to lower student retention and higher dropout risks, suggesting that working students require targeted support [5,14–16]. This trend underscores the necessity for higher education institutions to address the needs

of working students, ensuring that their academic and employment responsibilities are balanced effectively.

However, universities face resource constraints and a shift towards revenue-focused models, which jeopardizes investments in building human, social, and cultural capital crucial for student support and success [17]. In this context, social capital [18] becomes especially important, as these students rely heavily on institutional support to balance their academic and work commitments. The prioritization of immediate financial goals over long-term educational objectives, driven by reduced public funding and rising operating costs [18–20], often sidelines investment in crucial components of social capital. These components include mentorship programs, access to specialists, student support services, and activities fostering interpersonal relationships among faculty, peers, and staff—all essential for student success and retention. For working students, who already juggle significant responsibilities, the erosion of these support systems can profoundly affect their ability to stay enrolled and succeed academically [14]. In this context, the relationship between social capital within the university and the academic success of working students becomes problematic and is worth investigating.

Indeed, the relationship between social capital and student retention is a compelling area of educational research. For example, research indicates that social capital has a significant influence on college graduation rates, levels of debt, and instances of student loan defaults [21]. Strong relationships between faculty and staff, along with institutional knowledge and trust in the university's credibility in preparing students for future career opportunities, are crucial for creating a positive academic atmosphere and promoting student achievement. It is especially evident in the first year of college, where the quality of interactions between faculty and students greatly influences their experiences in school [22]. Researchers [23] have also examined the value of friendships among students and concluded that first-year university students who are socially connected are more likely to be retained into their second year. Researchers [24] also showed that the social capital fostered through mentoring relationships positively influences student retention by providing support and guidance. These contributions have significantly advanced the state of knowledge in this field, highlighting the importance of social capital in promoting student persistence. However, much of the existing research focuses on traditional students, leaving a gap in understanding the experiences of working students who combine their studies with jobs. There is a need to explore how social capital affects the success of these students, particularly within the university context. Specifically, it is important to understand how and why components such as teacher–student relationships, peer networks, and support services impact students' academic survival. Additionally, little is known about the role of employability trust in influencing these students' success. Investigating how this trust interacts with teacher–student relationships, peer networks, and support services is crucial for understanding its effect on the academic experiences and retention of these students. Therefore, the aim of this current study is to provide insights into the role of social capital within the university context in retaining working students by investigating how teacher–student relationships, peer networks, support service satisfaction, and employability trust influence dropout intentions. This study draws from the theory of social capital [18,25–27] and incorporates the framework of university social capital from a prior study [28]. The rest of the paper is structured into several parts, including a literature review, methods, results, discussion, and conclusion.

2. Literature Review

Prior studies have highlighted the significance of integrating students socially and academically in order to retain them, and have recommended that institutional policies be developed to fully immerse students in both academic and social aspects of university life [29,30]. Several seminal works [31,32] posited that retention hinges on the integration of students into both the academic and social structures of university life. Academic integration, as scholars [20] argued, involves not only students' performance and grades but

also their interactions with faculty and engagement with the academic aspects of college life, while social integration encompasses students' involvement in campus life, including relationships with peers and participation in extracurricular activities. These models consider pre-entry attributes such as family background, individual skills, prior educational experiences, and personal motivations, which influence students' initial commitment to the institution and their educational goals. The strength of a student's commitment to these goals and the institution shapes their likelihood of persisting in college. Positive experiences within the institution reinforce this commitment, while negative experiences can lead to disengagement and eventual dropout. These theories have been instrumental in understanding the gradual process of student departure, where disengagement can be either academic, due to poor performance or lack of integration, or social, due to a lack of connection to the campus community. Complementing these traditional models, the contemporary model of student retention [33–35] emphasizes the importance of students' psychological processes. These models outline how a student's background characteristics, interactions with the college environment, psychological processes, and outcomes influence their decision to stay in college. They highlight a feedback loop where institutional experiences can alter a student's initial characteristics and perceptions, affecting their retention.

While these models have been highly influential, they have faced critiques, particularly regarding their applicability to nontraditional students who might experience college differently [36]. Moreover, these models have been critiqued for focusing too narrowly on campus life and not adequately considering important factors like employability, which are crucial to students' commitment to higher education. Additionally, they do not fully account for the diverse cultural and social capital that students bring to their educational experiences. Graduate capital, built through the interplay of university social capital, encompasses not just academic achievement but also the development of skills, networks, and attributes that enhance employability and career success, but it is not explicitly addressed in these models. Additionally, research has begun to pivot towards several external factors [36,37]. These expanded views do not ignore what the traditional models have posited, but complement them, as central to this expanded understanding of retention are university social capital factors. Recent research suggests that integration alone may not fully predict retention, highlighting the importance of institutional capital as a critical factor influencing their commitment to higher education [38–41]. This shift in focus has revealed a gap in understanding how university social capital factors, such as teacher–student relationship, peer network, support service satisfaction, and employability trust, affect dropout intentions, especially among working students. By incorporating the university social capital model into the retention discourse, this study aims to offer actionable insights.

By highlighting the significance of social networks and interactions in acquiring resources, Bourdieu's theory [25] offers a comprehensive understanding of social capital. He posits that social capital consists of actual or potential resources that individuals or groups gain by having stable networks of institutionalized relationships marked by mutual acquaintance and recognition [28]. Coleman's approach [18] is especially enlightening in this context, as it emphasizes how social capital promotes cooperation, trust, and shared standards in educational settings [28]. Other scholars [25–27,42,43] further expand on the discussion by focusing on the networks, norms, and trust that facilitate coordination and cooperation for mutual benefit. These theories collectively underscore how social capital's structural, relational, and cognitive dimensions extend beyond individual interactions to include broader community and institutional settings, providing a more comprehensive understanding of how social capital operates within different contexts.

University social capital is a multidimensional construct, encompassing teacher–student relationships, support service satisfaction, peer networks, and employability trust [28]. Within the academic domain, the teacher–student relationship (TSR) is seen as a cornerstone of the educational experience and academic integration [44–46]. Recently, the literature has reinforced this view, highlighting the role of TSR in fostering academic

engagement and motivation [47]. Peer networks play a vital role in fostering the social integration aspect of student retention. Researchers [38] revealed that social integration, which is enhanced through contacts with peers, has a major influence on a student’s academic experience. The importance of peer interactions in fostering a sense of belonging and receiving support is vital for students’ perseverance, particularly during the transition into the university setting [48–50]. The role of support services in student retention cannot be underestimated. Support services act as a bridge between the student and the institution, playing a pivotal role in fostering institutional commitment [51,52].

Recent studies have shifted attention to how students view their university as a source of capital, particularly in terms of employability [40,53,54]. The emphasis on employability in higher education has led to significant changes in how programs are structured and evaluated [55]. Universities are now tasked with ensuring that their curricula align with industry needs and provide opportunities for students to build the social and cultural capital necessary for workforce success. In an economy where the nature of work is always changing and the abilities needed now might not be the same as those needed tomorrow, this alignment is essential [55]. Moreover, the integration of employability into higher education reflects a broader societal expectation of universities to function not only as educational institutions but also as gateways to career opportunities and economic prosperity. Employability trust has, thus, become highly relevant in the university context. When students place their trust in a higher education institution, they are ultimately relying on the school’s capacity to fulfil its obligations. The students expect that the university will operate to their utmost advantage and conform to expectations that are in line with their educational and vocational ambitions. Making such an investment in trust is not a simple act of belief; it is based on the institution’s proven strengths, its compatibility with student goals, and its ethical behavior. Employability trust in this way extends beyond the academic rigor and reputation of an institution and focuses on the practicality and usefulness of the education obtained in real-world employment situations [28]. It is therefore possible for employability trust to serve as a buffer against dropout intentions, demonstrating that by enhancing students’ belief in their future job prospects, universities can effectively reduce dropout rates and improve overall retention. Given the discussion thus far, it is possible to hypothesize a theoretical model (Figure 1) that illustrates the relationships among various factors influencing working student retention.

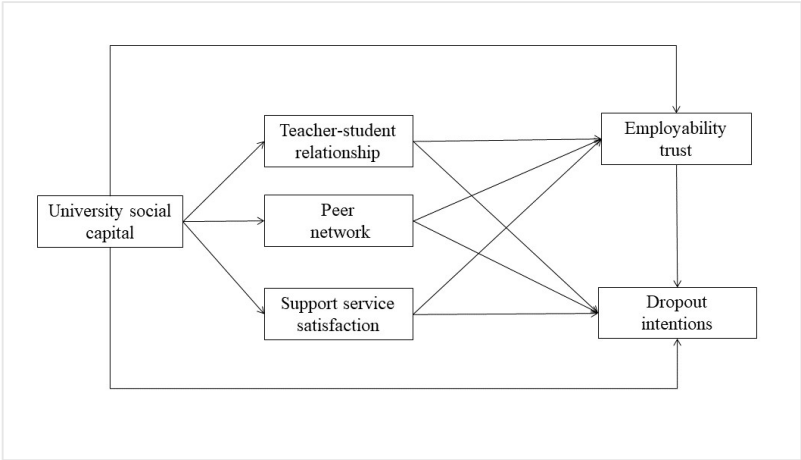


Figure 1. Theoretical model.

The theoretical model shows how university social capital influences students' dropout intentions through its impact on teacher–student relationships, peer networks, and support service satisfaction. Additionally, these elements directly affect employability trust, which in turn influences dropout intentions. The model emphasizes the relevance of these factors in shaping students' decisions to remain enrolled. Considering these, the following hypotheses are proposed:

Hypothesis 1: *Teacher–student relationships are positively associated with university social capital.*

Hypothesis 2: *The peer network is positively associated with university social capital.*

Hypothesis 3: *Satisfaction with support services is positively associated with university social capital.*

Hypothesis 4: *Employability trust is positively associated with university social capital.*

Hypothesis 5: *Higher university social capital reduces dropout intentions.*

Hypothesis 6: *Teacher–student relationships positively influence employability trust.*

Hypothesis 7: *Peer networks positively influence employability trust.*

Hypothesis 8: *Satisfaction with support services positively influences employability trust.*

Hypothesis 9: *Employability trust negatively influences dropout intentions.*

Hypothesis 10: *Teacher–student relationships negatively influence dropout intentions.*

Hypothesis 11: *Peer networks negatively influence dropout intentions.*

Hypothesis 12: *Satisfaction with support services negatively influences dropout intentions.*

Hypothesis 13: *Employability trust mediates the relationship between the teacher–student relationship and dropout intentions.*

Hypothesis 14: *Employability trust mediates the relationship between peer networks and dropout intentions.*

Hypothesis 15: *Employability trust mediates the relationship between support service satisfaction and dropout intentions.*

3. Materials and Methods

3.1. Method

To assess the hypotheses outlined, a quantitative analytical approach was adopted, consisting of the following tasks.

The first task involved conducting factor analysis [56,57], particularly exploratory factor analysis (EFA), to identify and validate the factor structure, showing how items relate to teacher–student relationship (TSR), peer network (PN), support service satisfaction (SS), employability trust (ET), and dropout intentions (DI). In this study, SPSS 23 was utilized for data analysis, applying principal component analysis and varimax rotation. The determination of the number of factors was guided by eigenvalues. The second task used confirmatory factor analysis (CFA) to build on EFA insights by forming and confirming latent constructs, testing hypothesized relationships between observed variables and their corresponding latent constructs, and assessing model fit. This study used AMOS-23 for confirmatory factor analysis (CFA), providing a visual representation and detailed output

for evaluating model fit. The fit was assessed using indices such as the comparative fit index (CFI) and Tucker–Lewis index (TLI), with acceptable values being 0.90 or higher. Additionally, the root mean square error of approximation (RMSEA) was used, with values of 0.05 or lower indicating a good fit and values between 0.05 and 0.08 considered reasonable.

The third task involved performing structural equation modeling (SEM) with mediation analysis to uncover the influences of the latent constructs, including TSR, PN, SS, and ET, on dropout intentions. Construct validity, divided into convergent and discriminant validity, was assessed using specific criteria; convergent validity was indicated by a composite reliability (CR) score of 0.7 or higher, while discriminant validity was demonstrated by the average variance extracted (AVE) being higher than the maximum shared squared variance (MSV) and the average shared variance, confirming the test’s distinctiveness and specificity (e.g., [28]).

3.2. Data

The data for this study come from the Eurostudent VII survey [58]. This survey was conducted using a comprehensive population survey methodology, and data collection in Estonia took place from February to July 2019 [59]. A total of 1902 working students participated in the survey, offering a vital dataset for analyzing their socioeconomic status in Estonian higher education. In the context of this study, working students refer to individuals enrolled in university who simultaneously engage in employment.

For operationalization in this study, several items from the Eurostudent VII survey were utilized, similar to previous studies (e.g., [28]). For the teacher–student relationship, items included lecturers giving helpful feedback, motivating students to do their best work, being extremely good at explaining things, getting along well with lecturers, and showing interest in what students have to say. For the peer network, the items were knowing many fellow students to discuss subject-related questions and having contact with many students in the study program. Support service satisfaction was measured by satisfaction with support to balance studies and paid job, support to balance studies and family, and support in preparation for future work life. Employability trust was gauged by how well the study program prepares students for the national labor market and the international labor market. Lastly, dropout intentions were assessed by considering whether students were seriously thinking about changing their current main study program and whether they were seriously considering completely abandoning their higher education studies, both measured on a 5-point Likert scale ranging from “Strongly agree” to “Strongly disagree”. Although previous studies have used a similar sample (e.g., [28,60,61]), it is worth describing the sample characteristics used in this study as well.

3.3. Characteristics of the Sample

The sample (see Table 1) includes a diverse group of working students, ranging from young adults to those over 30 years old. A significant portion of the sample, approximately 35.9%, consists of mature students aged 30 or older. Additionally, 24.3% are in the 22–25 age bracket, 21.3% are between 25 and 30 years old, and 18.5% are under the age of 21.

The gender distribution reveals that females comprise 76.9% of the respondents, while males make up 23.1%. The predominance of female students might reflect broader trends in gender-based enrollment in higher education in Estonia. The educational levels within the sample are varied. The majority, 57.7% (1098 participants), are enrolled in bachelor’s degree programs (ISCED 6). Master’s degree students represent 36.6% (697 individuals), and a smaller group, 5.6% (107 participants), are pursuing long national degree programs (longer than three years, ISCED 7).

The sample also spans a wide range of academic disciplines. Education accounts for 11.1% (212 individuals), arts and humanities for 16.6% (316 participants), and social sciences, journalism, and information for 13.3% (253 students). The largest group, 19.3% (367 participants), is in business, administration, and law. Natural sciences, mathematics, and statistics are chosen by 6.4% (122 students), ICT by 7.9% (151 students), and engineering, manufac-

turing, and construction by 5.0% (95 students). The least popular fields are agriculture, forestry, fishery, and veterinary, making up only 0.8% (15 participants). Health and welfare attract 15.4% (293 participants), while 3.9% (75 students) are in service disciplines.

Table 1. Sample characteristics.

Variables	Frequency	Percent
Gender:		
Female	1463	76.9
Male	439	23.1
Age:		
Up to 21 years	351	18.5
22 to <25 years	463	24.3
25 to <30 years	405	21.3
30 years or over	683	35.9
Parents education:		
Low education background (ISCED 0–2)	118	6.2
Medium education level of parents (ISCED 3–4)	488	25.7
High education level of parents (ISCED 5–8)	1232	64.8
No answer	38	2.0
Don't know	26	1.4
Qualification:		
Bachelor	1098	57.7
Master	697	36.6
Long national degree	107	5.6
Field of study:		
Education	212	11.1
Arts and humanities	316	16.6
Social sciences, journalism and information	253	13.3
Business, administration and law	367	19.3
Natural sciences, mathematics and statistics	122	6.4
ICTs	151	7.9
Engineering, manufacturing and construction	95	5.0
Agriculture, forestry, fisheries, and veterinary	15	0.8
Health and welfare	293	15.4
Services	75	3.9
No answer	3	0.2
N	1902	100

4. Results

4.1. Results of Exploratory Factor Analysis

The exploratory factor analysis results (see Table 2) from this study reveal several key insights into the constructs being examined. Firstly, the variance explained stands at 70.367%, indicating that the factors effectively capture a significant portion of the underlying patterns in the dataset. Regarding the suitability of the data for factor analysis, the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy is 0.793, which is well above the recommended threshold of 0.6, suggesting the appropriateness of the sample for this analysis. Additionally, Bartlett’s test of sphericity returns a statistically significant result, confirming the interrelatedness of the variables and the suitability of the data for structure detection.

Table 2. Results of exploratory factor analysis.

Item Coding	Items Used for Operationalization	Mean	Standard Deviation	Factor Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted	Maximum Shared Squared
Teacher–student relationship					0.837	0.840	0.510	0.180
Feedback_Teacher	Lecturers give helpful feedback	2.299	1.0502	0.769				
Motivating_Teacher	Lecturers motivate to do best work	2.559	1.0372	0.782				
Clarity_Instruction	Lecturers extremely good at explaining things	2.365	0.8505	0.744				
Rapport_Teacher	Get along well with lecturers	1.823	0.8094	0.733				
Engagement_Teacher	Lecturers interested in what students has to say	2.267	0.9955	.763				
Peer network					0.827	0.830	0.720	0.120
Collegiality_Peer	Know a lot of fellow students to discuss subject-related questions	2.262	1.1398	0.894				
Networking_Peer	Contact with many students in study program	2.391	1.2030	0.908				
Support service satisfaction					0.762	0.780	0.540	0.160
Work_Study_Bal	Satisfaction with support to balance my studies and paid job	3.679	1.5139	0.865				
Family_Study_Bal	Satisfaction with support to balance my studies and family	4.044	1.6595	0.868				
Career_Prep	Satisfaction with support in the preparation for my (future) work life	3.368	1.4783	0.650				
Employability trust					0.656	0.660	0.490	0.180
Employability_Nat	How well the study program prepares for the national labor market	2.485	1.3683	0.835				
Employability_Intl	How well the study program prepares for the international labor market	3.379	1.5663	0.824				
Dropout intentions					0.630	0.650	0.480	0.080
Dropping_Risk1	I am seriously thinking about changing my current main study program	4.492	0.9831	0.834				
Dropping_Risk2	I am seriously thinking of completely abandoning my higher education studies	4.622	0.8731	0.852				

The factor loadings yield informative results. The teacher–student relationship construct shows high factor loadings for all its items, with a range from 0.733 to 0.782, and Cronbach’s alpha of 0.84, indicating strong internal consistency. The satisfaction with support services construct also demonstrates high factor loadings, ranging from 0.650 to

0.868, coupled with a good Cronbach’s alpha of 0.762. For the peer network construct, the factor loadings are very high, between 0.894 and 0.908, with a Cronbach’s alpha of 0.83, underscoring its reliability. The employability trust construct, with factor loadings between 0.824 and 0.835 and a Cronbach’s alpha of 0.66, confirms a strong association with the items measuring it, although the alpha value is slightly lower than the others. Lastly, the dropout intention construct, indicated by items relating to dropping out or changing programs, has high loadings between 0.834 and 0.852, and a Cronbach’s alpha of 0.65 suggests acceptable reliability.

4.2. Results of Confirmatory Factor Analysis and Structured Equation Modeling

After conducting EFA, confirmatory factor analysis was performed to assess the measurement models’ suitability for creating the structural model. Figure 2 demonstrates that the constructs—teacher–student relationship, peer network, support service satisfaction, employability trust, and dropout intentions—exhibit good model fit, with the following values: chi-square = 450.77, $df = 67$, $p = 0.000$, CMIN/DF = 6.728, RMSEA = 0.055, CFI = 0.954, and TLI = 0.938. The discriminant validity (see Table 3) shows the correlations between the constructs. The diagonally bolded values represent the square root of the average variance extracted, while the other values show the intervariable correlations. The bold diagonal values (square root of AVE) are greater than the other values in their respective rows and columns, indicating that discriminant validity is satisfied.

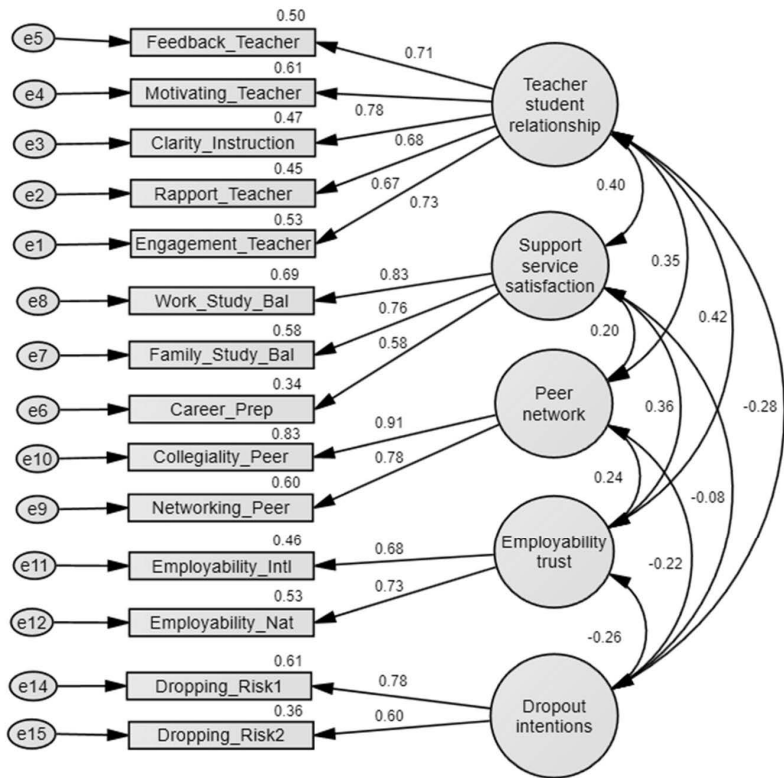


Figure 2. Results of measurement models. Note: Model fitness measures include chi-square = 450.77, $df = 67$, $p = 0.000$, CMIN/DF = 6.728, RMSEA = 0.055, CFI = 0.954, and TLI = 0.938.

Table 3. Measures of discriminate validity.

	TSR	SS	PN	ET	DI
TSR	0.716				
SS	0.400	0.735			
PN	0.352	0.201	0.846		
ET	0.418	0.357	0.235	0.703	
DI	−0.277	−0.078	−0.218	−0.263	0.695

Note: TSR = Teacher–student relationship, PN = Peer network, SS = Support service satisfaction, ET = Employability trust, DI = Dropout intentions.

Based on this CFA, two structural models were developed. Figure 3 shows the first structural model. In this structural model, university social capital is associated with the teacher–student relationship, peer network, support service satisfaction, and employability trust, with regression weights of 0.76, 0.45, 0.51, and 0.59, respectively. This model also indicates that university social capital negatively affects the dropout intentions of working students, with a regression weight of -0.36 . Specifically, the teacher–student relationship is influenced by the teacher’s motivating skills (regression weight: 0.78), interest and engagement with students (0.72), and feedback (0.71). Support service satisfaction impacts work–study balance service satisfaction (0.84). The peer network construct influences collegiality or connections with students for academic discussion (0.92). Employability trust is significantly influenced by trust in the university’s ability to prepare students for the national labor market (0.72). The model fitness measures indicate a good fit: chi-square = 487.002, $df = 72$, $p = 0.000$, CMIN/DF = 6.764, RMSEA = 0.055, CFI = 0.951, and TLI = 0.938.

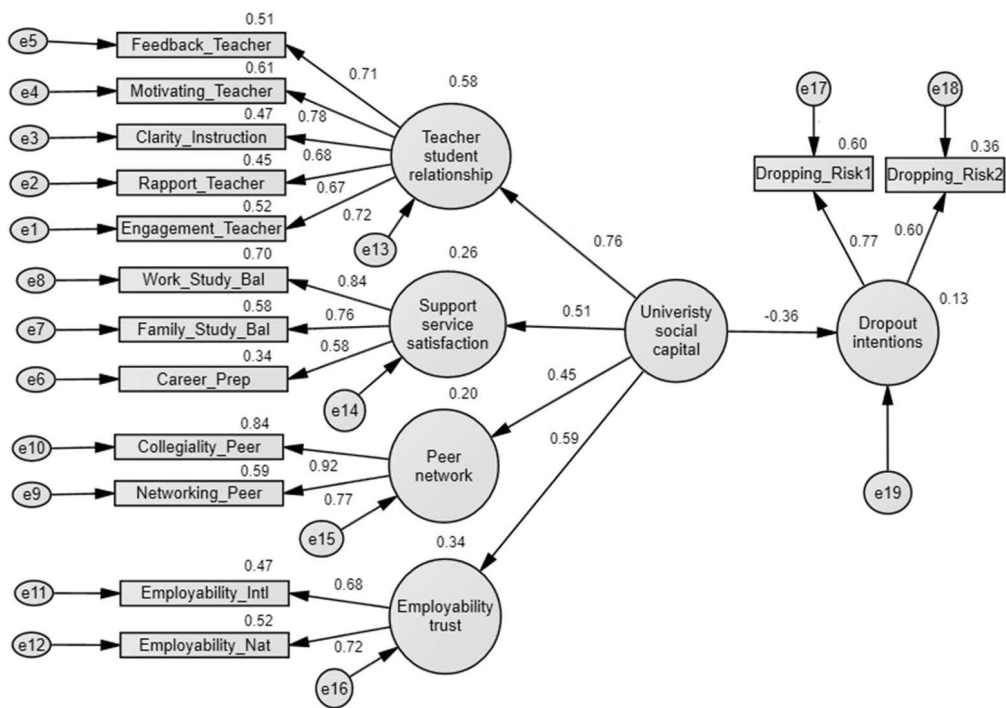


Figure 3. Structural model of university social capital’s impact on dropout intentions. Note: Model fitness measures include chi-square = 487.002, $df = 72$, $p = 0.000$, CMIN/DF = 6.764, RMSEA = 0.055, CFI = 0.951, and TLI = 0.938.

To assess the direct effect of the teacher–student relationship, peer network, and support service satisfaction on dropout intention, as well as the role of employability trust in these relationships, another structural model was created, as depicted in Figure 4. In this model, employability trust is influenced by the teacher–student relationship, peer network, and support service satisfaction. Additionally, employability trust also influences dropout intentions. This model shows that employability trust is positively influenced by the teacher–student relationship (regression weight: 0.30), support service satisfaction (0.22), and peer network (0.09). The relevant results of this model are presented in Table 4. The mediation results are also presented in Table 5.

The regression weight (Table 4) indicates several key paths between constructs. Teacher–student relationships (−0.19) negatively predict dropout intentions, indicating that better teacher–student relationships are associated with lower dropout intentions. Similarly, peer network (−0.12) also negatively predicts dropout intentions, meaning that a stronger peer network is associated with lower dropout intentions. On the other hand, support service satisfaction (0.09) positively predicts dropout intentions, which is counterintuitive. Employability trust (−0.19) negatively predicts dropout intentions, showing that higher employability trust is associated with lower dropout intentions. These paths suggest that positive relationships with teachers and peers, as well as confidence in the employability outcomes of education, are crucial for retaining working university students.

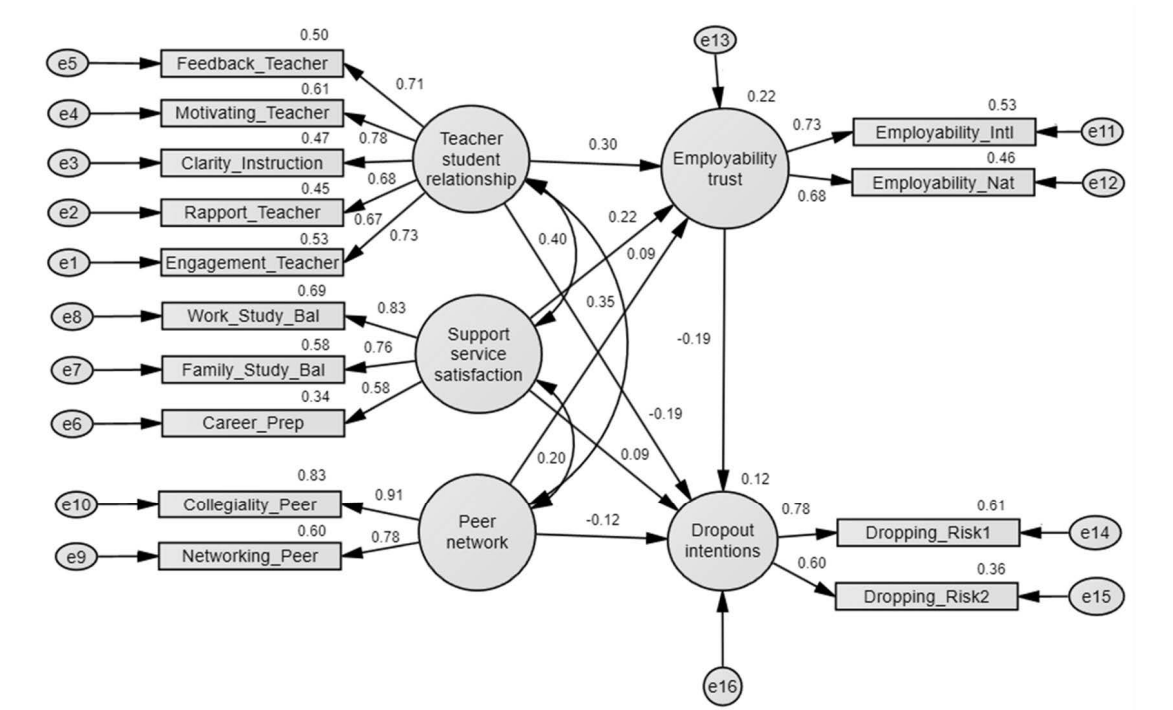


Figure 4. Structural model of the mediation effect of employability trust. Note: Model fitness measures include chi-square = 450.777, *df* = 67, *p* = 0.000, CMIN/DF = 6.728, RMSEA = 0.055, CFI = 0.954, and TLI = 0.938.

Table 4. Regression weights from structural models.

	Path		Estimate	Standard Error	Critical Ratio	p	Remarks
Teacher student relationship	<---	University social capital	0.758	0.079	11.099	***	Hypothesis 1 supported
Support service satisfaction	<---	University social capital	0.512	0.072	11.214	***	Hypothesis 3 supported
Peer network	<---	University social capital	0.448	0.075	10.163	***	Hypothesis 2 supported
Employability trust	<---	University social capital	0.586	0.103	11.099	***	Hypothesis 4 supported
Dropout intentions	<---	University social capital	−0.361	0.057	−8.767	***	Hypothesis 5 supported
Employability trust	<---	Teacher student relationship	0.3	0.054	8.114	***	Hypothesis 6 supported
Employability trust	<---	Support service satisfaction	0.22	0.043	6.291	***	Hypothesis 8 supported
Employability trust	<---	Peer network	0.085	0.035	2.737	0.006	Hypothesis 7 supported
Dropout intentions	<---	Employability trust	−0.186	0.03	−4.556	***	Hypothesis 9 supported
Dropout intentions	<---	Teacher student relationship	−0.191	0.041	−5.008	***	Hypothesis 10 supported
Dropout intentions	<---	Support service satisfaction	0.091	0.031	2.552	0.011	Hypothesis 12 not supported
Dropout intentions	<---	Peer network	−0.125	0.026	−3.875	***	Hypothesis 11 supported

Note: *** $p \leq 0.001$.

Table 5 presents the results of how employability trust (ET) mediates the relationship between teacher–student relationship (TSR), peer network (PN), support service satisfaction (SS), and dropout intentions (DI). For TSR and DI, the total effect of TSR on DI is negative (−0.262 **), indicating that positive teacher–student relationships reduce dropout intentions. The indirect effect (−0.059 *) indicates that ET partially mediates their relationship. The direct effect (−0.203 **) of TSR on DI remains statistically significant, suggesting that while ET explains some of the relationship, TSR independently influences dropout intentions. For SS and DI, the direct effect of SS on DI is positive (0.080 **), unexpectedly suggesting that higher satisfaction with support services is associated with increased dropout intentions. However, when mediated by ET, the indirect effect is negative (−0.036 **), which implies that higher employability trust can mitigate the positive relationship between SS and DI. For PN and DI, PN has a total negative effect on DI (−0.115 **), and this relationship is partially mediated by ET, with an indirect effect (−0.013 **). It implies that a strong peer network can reduce dropout intentions and that this effect is slightly enhanced by employability trust.

Table 5. Results of mediation analysis.

Path	Total Effects	Direct Effects	Indirect Effects	Remarks
TSR > ET > DI	−0.262 **	−0.203 **	−0.059 *	Hypothesis 13 supported
SS > ET > DI	0.044	0.080 **	−0.036 **	Hypothesis 15 supported
PN > ET > DI	−0.115 **	−0.102 **	−0.013 **	Hypothesis 14 supported

Note: * $p \leq 0.05$, ** $p \leq 0.01$; TSR = Teacher–student relationship, PN = Peer network, SS = Support service satisfaction, ET = Employability trust, DI = Dropout intentions.

5. Discussion

The objective of this study was to investigate the role of social capital within the university context in retaining working students. Specifically, it aimed to understand how components such as teacher–student relationship (TSR), peer network (PN), support services (SS), and employability trust (ET) influence students’ academic persistence or dropout intentions (DI). Using data from the Eurostudent VII survey, the study employed factor analysis techniques and structural equation modeling to derive its findings. This study proposed 15 hypotheses, all of which were supported except for hypothesis 12. These findings offer several important insights specific to the Estonian context.

The findings show that university social capital reduces dropout intentions, with a statistically significant negative effect (−0.36) on these intentions. This social capital is positively influenced by strong teacher–student relationships (0.76), satisfaction with support services (0.51), robust peer networks (0.45), and high employability trust (0.59).

Teacher–student relationships are foundational to university social capital. They are built on teachers’ motivation for students (0.78), interest in students (0.72), clarity in instruction (0.68), nurturing faculty–student rapport (0.67), and providing constructive feedback (0.71). Particularly, teachers’ motivation plays a crucial role. Previous studies [62–64] have shown that the quality of teaching and classroom management practices affect students’ academic success. In this study, it was found that for working students, the quality of teachers and their teaching practices significantly impact the TSR, which in turn influences dropout intentions. A negative correlation (−0.19) between TSR and DI underscores the importance of strong teacher–student relationships in reducing dropout intentions. While positive TSR alone reduces dropout intentions, employability trust further strengthens this effect by partially mediating the relationship. For working students, who often manage dual responsibilities, supportive and understanding faculty can provide necessary resources, enhancing their commitment to continuing their studies.

Similarly, peer networks are vital for fostering university social capital, significantly affecting student retention. Peer networks facilitate networking (0.91) and collegiality (0.78), providing students with contacts and support within their study programs. A strong peer network directly reduces dropout intentions (−0.12) and enhances employability trust (0.09). Previous studies have highlighted the importance of peer networks for integration into university life, although not all engagement activities are equally effective [65,66]. Working students, constrained by strict time management, seek meaningful connections that support their present and future conditions. For them, the sense of belonging and support derived from peer interactions, such as shared academic resources and study groups, is particularly important. These networks help alleviate the isolation that working students may feel due to limited campus time and divided focus.

Support services also play a crucial role in retaining working students by bridging the gap between students and the institution [62,66]. Students’ satisfaction with support services is reflected in how well they feel supported in balancing work, family, and career preparation. Interestingly, the findings show that higher satisfaction with support services directly correlates (0.09) with increased dropout intentions. However, employability trust mediates this relationship, resulting in a negative indirect effect (−0.036). It suggests

that while working students value support services, satisfaction alone does not guarantee retention. Instead, the effectiveness of these services in enhancing employability trust ultimately reduces dropout intentions. Working students often have unique needs, such as flexible scheduling, financial advice, and career counselling tailored to their employment, which standard support services may not fully address.

In this context, employability trust emerges as a critical factor, consistent with findings from a previous study [67]. The mediation role of employability trust indicates that students' belief in the relevance and effectiveness of their education in securing future employment significantly influences their persistence. From Bourdieu's perspective [25], this trust acts as symbolic capital for these students. Already in the labor market, they may pursue higher education to advance their careers. Therefore, their belief in education's relevance and effectiveness in securing better employment opportunities strongly influences their decision to continue their studies. This study highlights that employability trust significantly mediates the relationships between TSR, PN, SS, and DI, emphasizing the need for higher education institutions to align their programs with real-world employment opportunities. It is not just about improving academic quality but also about providing meaningful networking opportunities that directly contribute to employability. This mediation effect of employability trust also reflects the value students place on their educational investment. For many working students, pursuing higher education involves significant financial and personal sacrifices. This study's findings indicate that when these students trust that their education will lead to better employment opportunities, they are more likely to persist with their studies. In this context, the negative effects of TSR and PN on DI, mediated by employability trust, suggest that strong support from faculty and peers increases students' confidence in the value of their education, encouraging them to continue their studies.

These findings provide universities with both promising opportunities and significant challenges that demand attention. First, the importance of strong teacher–student relationships and peer networks cannot be overstated. The results clearly show that these relationships play a pivotal role in reducing dropout intentions, particularly among working students who are at risk of feeling isolated. It underscores the necessity of fostering engaging, motivating, and supportive interactions within the academic environment. However, the challenge lies not just in recognizing this importance but also in actively enhancing these relationships, which leads to the next point. Second, improving the quality of the classroom environment is a critical challenge that universities may need to address head-on. While high-quality teaching is fundamental to understanding and improving what happens in the classroom, the current trend towards digitalized learning poses significant obstacles. The shift from face-to-face interactions to digital platforms has the potential to erode the personal connections that are essential for student engagement and retention. It is particularly concerning as these meaningful connections are becoming increasingly virtual, risking a decline in the quality of teacher–student and peer interactions. Therefore, universities may need to explore innovative strategies to maintain and even strengthen these relationships in a digital context.

Third, the managerial implications for universities are profound. Ensuring that the educational environment is conducive to building social capital among students requires more than just maintaining the status quo. University administrators may need to consider investing in targeted teacher training programs that emphasize the importance of interpersonal skills and adaptability to different student needs. Furthermore, they need to recognize the specific challenges faced by working students and tailor the academic environment to support them effectively. This could involve more dedicated support services and an increased focus on creating inclusive classroom dynamics that address the diverse needs of all these students.

Fourth, the relationship between support service satisfaction and dropout intentions introduces a complex challenge. While one might assume that high levels of satisfaction with support services would correlate with lower dropout rates, the findings suggest otherwise. Such a paradox calls for a more comprehensive understanding of what support

services are truly effective and how they can be better aligned with the needs of students, particularly those who are integrating academic and professional commitments. Finally, recognizing the role of employability trust as a crucial factor in working students' retention is essential. Students' belief that their education will lead to real-world job opportunities needs to be nurtured. This trust is not merely about the quality of the educational programs but also about how well these programs are communicated and perceived by students. If students do not see a clear connection between their studies and their future employability, their commitment to their education may wane, leading to higher dropout rates. It highlights the need for universities to not only design curricula that are closely aligned with job market demands but also to effectively communicate these alignments to students. Thus, while this study highlights promising strategies for enhancing retention through social capital, it also stresses the necessity for a comprehensive support system that addresses the diverse needs of the working student population.

6. Conclusions

With ongoing dropout practices from higher education over the past few years, Estonia's universities continue to grapple with persistent retention challenges. A critical factor contributing to this problem is the high number of students working during their studies due to financial constraints, which is linked to lower retention rates and higher dropout risks. Compounding this issue is the challenge universities face in investing in essential support systems due to limited resources and a shift towards revenue-focused models, which has led to an erosion of the social capital crucial for student success. This study aimed to investigate the role of social capital within the university context in retaining working students. This research provided evidence on how teacher–student relationships impact the retention of working students, in what ways peer networks influence their academic success, how satisfaction with support services affects their dropout intentions, and what role employability trust plays in their retention. By shedding light on these aspects, this study offers insights into enhancing the retention of working students through the strengthening of social capital in universities.

Although this study offers valuable insights, it also has some limitations. For instance, it focuses on dropout intentions rather than actual dropout rates. While understanding dropout intentions helps gauge the effectiveness of existing resources in retaining students, considering actual dropout rates would provide a clearer picture of how well these resources are being utilized within universities. Moreover, this study is correlational and does not account for the longitudinal nature of dropout and retention, which are processes that unfold over time. This study uses cross-sectional data from the Eurostudent VII survey, capturing information at a single point in time. A longitudinal study would be more effective in understanding the gradual impact of related factors on academic completion. Additionally, this study excludes students from distance learning programs, defined here as courses without any physical face-to-face interaction during lectures, which are usually not part of university degree programs. As a result, the focus is specifically on working students enrolled in university degree programs to provide insights that are directly relevant to the university context, where in-person interactions and the integration of work and study play significant roles. However, while the Eurostudent survey may not have specifically aimed to include distance learners, this exclusion represents a future opportunity. Including data from distance learners, even if they fall outside the scope of university degree programs, could have provided a more comprehensive understanding of dropout and retention across various educational formats. Furthermore, the study is centered on working students in Estonia. Comparing this with data from other countries could provide valuable insights into how the situation for working students varies internationally.

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Appendix 3. Study III

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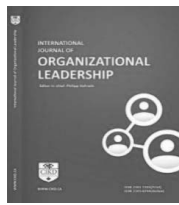
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Organising Student Support Services: A Closer Look at the Needs and Satisfaction Levels of Working University Students in Estonia

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Career need, Career transition, Higher education, Student support, Student satisfaction, Working student

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ABSTRACT

This study explores the specific support needs of working university students and examines how socio-demographic factors (age, qualification, field of study, parental education, work hours, and education-job alignment) influence their satisfaction with support services (tutoring, academic writing, mentoring, library, computer centre, and balancing study-work-family). Using Estonian-based Eurostudent VII survey data and student interviews, the study revealed unique strengths and substantial gaps in support services. High satisfaction with learning facilities (library, computer centre, work places) suggested successful resource allocation, while significant dissatisfaction with services for balancing studies and work or family indicated urgent areas for improvement. The field of study and education-job alignment significantly influenced satisfaction with study support services, such as organised tutoring, academic writing, bridging courses, and mentoring. Satisfaction with learning facilities, including libraries, computer centres, and workspaces, was primarily affected by the field of study and age. Support for balancing studies and jobs showed significant variation based on qualification type and age. Additionally, satisfaction with support for balancing studies and family life was influenced by the field of study and the number of work hours per week. Students working (<20 hours/week) in non-aligned jobs require cross-training and skill-bridging courses. Those working (>20 hours/week) in aligned jobs need flexible scheduling and job retention services, while those in non-aligned jobs need career transition support. By revealing these insights, this study contributes to the discourse on supporting working students.

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The Estonian higher education sector is currently navigating a period of significant transition, characterised by efforts to cater to an increasingly diverse student population. Among these students, working university students stand out as a particularly noteworthy demographic. Economic and social changes have turned this group into a unique and significant segment within universities. Addressing their needs poses distinct challenges, making it essential to understand and enhance their satisfaction with available support services.

Recent data from Statistics Estonia (2024) reveals that the employment rates of young students have varied over the past few years. In 2017, there were 22,392 working students, which increased to 22,923 in 2018. Although there was a decline in 2020, the numbers rose again to 21,998 in 2021. Additionally, overall employment figures increased from 40,835 in 2020 to 43,607 in 2023, showing a growing accommodation for student workers in the labour market. The interaction between students' academic and employment environments affects the support services they require, their satisfaction, and their outcomes (Beerkens et al., 2010; Bornschlegl & Caltabiano, 2022). As these tendencies persist, it will become more important to understand the specific needs of working students and their satisfaction with the services provided by universities, as these are integral to their academic success.

Student support services play a critical role in improving the academic experience, employability, and easing the transition into the workforce (Hayden & Ledwith, 2014; McGrath, 2002). These services include academic assistance, social support, career guidance, and campus facilities. As the educational market evolves and student profiles become more diverse, the needs and preferences regarding support services also vary widely (Dey & Cruzvergara, 2014). In Estonia, universities are striving to create an enriching learning environment that combines academic rigour with various support services, aligning them with the distinct needs of students (Löfström & Eisenschmidt, 2009; Morita, 2018). Understanding student satisfaction with these support services is crucial, as it offers insights into areas needing improvement (Campos & Campos, 2023; Engelland et al., 2000; Terzaroli & Oyekunle, 2019).

Multiple studies have explored the effectiveness of student support services and their impact on student outcomes (Guthrie et al., 2022; Lehker & Furlong, 2006; Vinson et al., 2014). These studies acknowledge the diverse needs of students stemming from their varying backgrounds, commitments, and aspirations. Nonetheless, literature often ignores the realities of working students, putting a focus on the traditional non-working students (Toyon, 2023, 2024a). Research by Remenick and Bergman (2021) and Usher and Kwong (2014) has highlighted the heightened support needs of working students, who often struggle to balance academic and work commitments. Several researchers have emphasised the importance of aligning student support services with student needs to boost satisfaction and academic outcomes (Bradley et al., 2021; Fung & Wong, 2012; Turner & Berry, 2000). These studies reveal that many students still have unmet needs despite existing support services, indicating a need for more precise and effective support strategies.

For universities to support students effectively and ensure their academic success, it is crucial to understand both institutional factors and how socio-demographic factors influence their satisfaction with services, as well as to identify the specific additional support they require (Martirosyan, 2015; Nwenyi & Baghurst, 2013). In this context, little is known about the specific demands and satisfaction levels of Estonian working university students regarding the support provided by universities. This research aims to fill this gap by analysing university

support services and assessing how well they meet the unique demands of students, especially working students. Understanding the interplay of socio-demographic factors and student satisfaction can provide valuable insights for creating an inclusive, effective, and equitable educational environment that tailors service provision, addresses disparities, informs resource allocation, supports student retention and success, and contributes valuable insights to educational research and policy development. Therefore, this research intends to answer the following questions: Are working university students satisfied with the support they receive from their universities? How do socio-demographic factors influence the satisfaction of working university students in Estonia with various support services from universities, and what are the specific services these students need from universities? The rest of the paper is organised into the following sections: literature review, methodology, results and discussion, and conclusion.

Literature Review

Conceptual Clarification

Universities offer a wide variety of services. Multiple studies have shown evidence of transformations in the types, delivery, and quality of services offered by universities globally (Dey & Cruzvergara, 2014; Ellison et al., 2018; Maloni et al., 2019; Yang et al., 2002; Zahid et al., 2020). Accommodation assistance, health and wellness facilities, libraries, study spaces, sports and recreation, and multi-faith institutions are among the services that assist students in adjusting to university life and preserving a healthy balance. Academic support, including tutoring, language classes, mentoring, and advising, enhances students' confidence and performance, while career services, including counselling, resume seminars, internships, and networking events, prepare them for their professional futures. Diversity and inclusion services, such as cultural centres, anti-racism initiatives, and accessibility resources, guarantee that all students feel respected and supported. Furthermore, student life and engagement opportunities, such as clubs, athletics, leadership programmes, and volunteer activities, foster community and improve the university experience. These support services play a crucial role in assisting students with the transition from academia to the professional world and are often tailored to equip students with the necessary competencies to navigate the professional sphere (Bradley et al., 2021; Rowley & Purcell, 2002; Schlesinger et al., 2021).

Service quality and student satisfaction, while interconnected, represent distinct constructs in higher education that must be understood to enhance the student experience effectively (Athiyaman, 1997). Service quality refers to an overarching, long-term evaluation of the university's offerings, encompassing factors such as teaching effectiveness, accessibility of staff, and the adequacy of facilities, which collectively reflect a holistic perception of the institution's performance. In contrast, student satisfaction is a short-term, transaction-specific reaction to individual educational experiences, such as particular courses or service interactions. While high service quality generally enhances student satisfaction, the latter is more immediate and influenced by whether specific encounters meet or exceed students' expectations. Understanding these distinctions is crucial for universities aiming to improve both overall institutional reputation and day-to-day student experiences (Athiyaman, 1997).

Support service satisfaction is a critical area of focus for university managers, as it encompasses both student support services and student satisfaction, forming the concept of

student support satisfaction. This means that the effectiveness and quality of support services provided by an educational institution directly affect how satisfied students are with their overall experience. When these services are well-integrated and effectively meet the diverse needs of students, they contribute meaningfully to higher levels of student satisfaction (Kakada et al., 2019). Student support services, including academic advising, technological resources, social integration programmes, and campus facilities, provide the necessary infrastructure and assistance for students to thrive. When students perceive these services as adequate, accessible, and of high quality, their overall satisfaction with their educational experience increases (Kakada et al., 2019). This heightened satisfaction reflects the successful fulfilment of their needs and expectations. Therefore, student support satisfaction is achieved when there is seamless interaction between the provision of support services and the resultant student satisfaction. It is not merely the presence of these services but their effective implementation and the positive experiences they generate for students that define student support satisfaction. This concept underscores the importance of a holistic approach where all aspects of support are interconnected and collectively contribute to a fulfilling and supportive educational environment.

Relevant Theories

The theoretical framework of this study is grounded in the theories of customer segmentation (Smith, 1956), customer satisfaction (Fornell, 1992), and theory of practice (Bourdieu, 1977, 1984, 1986, 1993). Customer segmentation theory (Smith, 1956) has been a cornerstone of marketing strategy, allowing businesses to divide their market into distinct subsets of consumers with shared characteristics and tailor their products and services to meet the specific needs of these groups. This theory has evolved significantly with advancements in data analytics and technology, offering more refined and dynamic segmentation approaches that enhance the effectiveness of marketing strategies (Wedel & Kamakura, 2012). The theoretical framework of customer segmentation provides a valuable lens through which it is possible to analyse student satisfaction with support services. By identifying distinct student segments and tailoring services to meet their specific needs, it is possible to take targeted initiatives to enhance the overall student experience, support academic success, and improve retention.

Similarly, the literature on service satisfaction and effectiveness is extensive, focussing on classic traditional models to evaluate various industries and organisations. Fornell's (1992) customer satisfaction index provides a comprehensive framework, linking customer satisfaction with its precursors (expectations, perceived quality, and value) and its outcomes (complaints and loyalty). SERVQUAL, developed by Parasuraman et al. (1988) along with the quality expectation model by Zeithaml et al. (1990), identifies gaps between customer expectations and perceptions across dimensions like tangibles, reliability, responsiveness, assurance, and empathy. These models help organisations pinpoint discrepancies between expected and actual service delivery, offering a clear method to address service quality issues. The Kano model (Kano et al., 1984) further categorises customer preferences into must-be quality, one-dimensional quality, attractive quality, indifferent quality, and reverse quality, aiding organisations in prioritising features and improvements based on their impact on customer satisfaction. This model offers strategic insights into how different service attributes contribute to overall satisfaction, guiding service development and enhancements. The

customer effort score (Dixon et al., 2010) measures the ease of customer interactions, emphasising the reduction of customer effort as a key driver of loyalty, thereby providing actionable insights for process improvements and reducing friction points in customer service.

In educational settings, these models are particularly beneficial as they offer a structured approach to understanding and enhancing student experiences. They help organisations identify strengths and areas for improvement in their services. However, these models have limitations (Ilias et al., 2008; Ham & Hayduk, 2003). They often focus on surface-level interactions and immediate perceptions, potentially oversimplifying the complex experiences of students. The models mentioned above might not fully capture the diverse needs of students, particularly those from varied sociocultural backgrounds, leading to an incomplete understanding of the deeper factors influencing student satisfaction and service effectiveness. In this context, Bourdieu's theories (1977, 1984) provide a valuable complement to these models by introducing concepts of practice, habitus, capital, and field.

Bourdieu's (1977, 1984, 1986, 1993) theories emphasise the significance of socio-demographic factors in shaping individuals' experiences and perceptions. Integrating Bourdieu's insights can enhance traditional models, offering a more comprehensive understanding of student satisfaction. Bourdieu's framework underscores how students' backgrounds, including their social resources, cultural knowledge, and ingrained habits, influence their interactions with university services. His perspective is crucial for addressing the specific needs of individual students, particularly those who may face additional challenges, such as working students. These students often juggle multiple responsibilities and have different expectations and requirements from university services compared to their peers. Incorporating Bourdieu's theories into service satisfaction evaluations adds a critical layer of analysis often missed by traditional models that just include social dimensions in a linear fashion. It ensures that evaluations of student satisfaction take into account not just their immediate impressions but also the larger social reality in which they function. His approach acknowledges the diversity of student experiences and the necessity of tailoring services to meet their unique needs, ultimately fostering a more inclusive and effective strategy for enhancing satisfaction and support within educational institutions.

Bourdieu's notion of habitus, which refers to the ingrained habits, skills, and dispositions individuals possess due to their life experiences, can help in understanding how working students navigate and perceive university support services. Working students, balancing multiple responsibilities, develop specific coping mechanisms and expectations based on their backgrounds. These experiences shape their habitus, influencing their expectations and satisfaction levels with support services. For instance, a working student might seek different types of support than a traditional full-time student. Understanding their habitus allows for the identification of support services that align better with these students' unique needs and experiences.

Moreover, Bourdieu's concept of capital, encompassing economic, cultural, social, and symbolic forms, is instrumental in analysing support service satisfaction. Each type of capital plays a distinct role in shaping students' experiences and perceptions of the services they receive. Cultural capital, which includes educational background, skills, and knowledge, affects how students navigate and interact with support services. Those with higher cultural capital may find it easier to understand and utilise complex systems or communicate their needs

effectively, leading to better outcomes and increased satisfaction. Conversely, students with lower cultural capital might struggle with these aspects, potentially leading to frustration and dissatisfaction with support services. Social capital, which involves networks and relationships, is crucial for support service satisfaction. A strong network of family, friends, and acquaintances can provide valuable information, emotional support, and advocacy, enhancing the overall experience with support services. Symbolic capital, associated with prestige and recognition, also influences support service satisfaction. Students who perceive themselves as valued by service providers may feel more satisfied with the support they receive.

Additionally, Bourdieu's idea of the field, referring to the various social arenas where people compete for resources and status, provides a lens to view the university environment itself. The university can be seen as a field with its own rules, norms, and forms of capital. Working students might find themselves at a disadvantage in this field if the dominant forms of capital valued by the university, such as cultural capital in the form of academic knowledge and campus involvement, are not those they possess abundantly. Similarly, the workplace where students are employed can be viewed as a field, and the capital embedded there can influence these students' academic lives. Understanding the dynamics of this field reveals how universities can adjust their support services to be more inclusive. By adopting a Bourdieu-inspired approach, it is possible to critically examine and understand student satisfaction in a more equitable way.

Previous Studies

Student support services are essential for fostering student retention and success (Tinto, 1987, 2023). These seminal works argue that these services create a supportive learning environment that enhances student engagement and academic achievement. Kuh et al. (2006) concur, emphasising that effective student support services significantly contribute to higher levels of student engagement and academic performance. They note that these services help students navigate their educational journey, thereby improving retention rates and overall success. Conversely, Bean (1980) suggests that student support services play a vital role in shaping students' academic and social integration, influencing their decision to persist or drop out. These services are particularly important for non-traditional students, including those who work while studying.

Despite their importance, the utilisation of university support services is inconsistent among students. Research by Perna (2010) indicates that while these services are crucial for academic success, not all students take advantage of them due to various barriers such as time constraints, lack of awareness, and perceived irrelevance. Dundes and Marx (2006) found that many students, especially those balancing work and study, face time limitations that prevent them from accessing support services. Their study highlights that working students often prioritise immediate academic and work responsibilities over seeking additional support, even if it could be beneficial in the long run.

Additionally, the literature indicates that several institutional factors affect student satisfaction with support services. Elling and Elling (2000) and Mann (2020) found that many students are less engaged with available support services due to gaps in communication and outreach by universities. Cultural and psychological factors, such as the stigma of seeking help and the perceived irrelevance of services, also play a role (Bryson, 2014; Vogel et al., 2010).

Career centres often prioritise placement over exploration, limiting opportunities for students to explore diverse career paths (Yang et al., 2012).

Universities operate within unique settings and resource constraints, offering various services like Work-Integrated Learning (WIL), academic support, social support, and psychological assistance to meet student needs. However, access to these programmes can vary, requiring tailored approaches for equitable participation (Jackson & Dean, 2023). Support services are crucial for working students who face unique challenges that impact their academic and personal lives (Remenick & Bergman, 2021; Dominguez-Whitehead, 2017). These students benefit from tailored advice, flexible learning solutions, and specialised support (Andrewartha & Harvey, 2017; Brar et al., 2012; Dey & Cruzvergara, 2014). Mentorship significantly influences career planning and job search intentions, reducing self-defeating behaviours and enhancing career success (Renn et al., 2014; Shen & Herr, 2004). International studies highlight diverse counselling practices, with research emphasising technology integration, strategic marketing, robust alumni networks, and employer relationships (Lee & Goh, 2003; Furbish, 2012; McKenzie & Howell, 2005). Localised approaches ensure inclusivity and equity in career services (Mcilveen et al., 2005). Flexible and accessible support services are vital for working students. Specialised services for student-athletes and graduates help them balance commitments and adapt to the labour market, respectively (Fahrner & Burk, 2023; Ryndak et al., 2022). Employment and career centres enhance job searching, resume building, and interview preparation, with reliability, tangible support, assurance, and empathy being crucial factors in improving these services and student satisfaction (Ciobanu, 2013; Hasan, 2019).

However, students' expectations and perceptions of service quality are influenced not only by the adequacy of the services but also by their unique backgrounds. These backgrounds shape their needs and how they assess the effectiveness of the support they receive (Oldfield & Baron, 2000). For instance, a first-generation college student might prioritise academic advising and mentorship differently than a student with a family history of higher education. In the same vein, students who are employed full-time may have unique requirements for social integration support in comparison to traditional full-time students. Therefore, educational institutions must gather detailed information about their students' socio-demographic characteristics to tailor support services effectively. In this context, several studies have highlighted the role demographic factors play in student satisfaction. Martirosyan (2015) demonstrated that gender, institution type, residence status, and employment status significantly predict overall satisfaction with the college experience, whereas factors such as age, academic classification, academic major, institution location, and housing status do not have a statistically significant impact. Nwenyi and Baghurst (2013) emphasised that years in school, race, and ethnicity were also significant predictors, while academic discipline, age group, and gender were not. Additionally, Ham and Hayduk (2003) found a link between age and satisfaction.

The discussion thus far underscores the complexity of support service satisfaction, particularly for working university students, by highlighting that different demographic factors can play varying roles in shaping their experiences. As such, educational institutions need to adopt an approach that considers the diverse backgrounds of these students to enhance support service satisfaction effectively. By doing so, they can better meet the distinct needs of their

student populations, ultimately fostering a more supportive and satisfying educational environment.

Method

Objective and Task

The primary aim of this research is to provide insights that can help universities tailor their support services more effectively to meet the specific needs of diverse student groups, particularly working university students in Estonia. For this purpose, the study has adopted the mixed method (Bryman, 2016; Creswell, 2012) and assigned the following tasks:

(1) To calculate the perceived satisfaction levels regarding the support services available to working students.

(2) To determine the association between socio-demographic variables and their satisfaction level with study support services.

(3) Perform interviews based on the findings from previous tasks to identify students' specific support service needs.

Source of Data

For research tasks 1 and 2, data from the Eurostudent VII survey (Cuppen et al., 2023) was utilised, focusing specifically on working students. Out of the total 2,760 Estonian student respondents, 1,902 were working students, defined as university students who combine their studies with paid employment. The Eurostudent VII survey method report (Cuppen et al., 2021) highlights important information regarding the validity and reliability of the survey across different countries. Moreover, previous research (Toyon, 2024b) has also demonstrated the validity and reliability of the Eurostudent data, specifically for working students in Estonia.

Table 1 includes the sample characteristics. The working student sample consisted of 57.7% pursuing a bachelor's degree (ISCED 6), 36.6% enrolled in master's programmes (ISCED 7), and 5.6% in long national degree programmes (exceeding three years). The age distribution was varied: 18.5% were 21 years old or younger, 24.3% were between 22 and 24 years old, 21.3% were between 25 and 29 years old, and 35.9% were 30 years or older. There was also a notable gender disparity, with females representing 76.9% of the demographic and males comprising 23.1%.

Table 1
Sample Details

Variables	Frequency	Percent
Gender:		
Female	1463	76.9
Male	439	23.1
Age:		
Up to 21 years	351	18.5
22 to <25 years	463	24.3
25 to <30 years	405	21.3
30 years or over	683	35.9
Parents education:		
Low education background (ISCED 0-2)	118	6.2
Medium education level of parents (ISCED 3-4)	488	25.7
High education level of parents (ISCED 5-8)	1232	64.8
No answer	38	2.0
Don't know	26	1.4
Qualification:		
Bachelor	1098	57.7
Master	697	36.6
Long national degree	107	5.6
Field of study:		
Education	212	11.1
Arts and humanities	316	16.6
Social sciences, journalism, and information	253	13.3
Business, administration, and law	367	19.3
Natural sciences, mathematics, and statistics	122	6.4
ICTs	151	7.9
Engineering, manufacturing, and construction	95	5.0
Agriculture, forestry, fisheries, and veterinary	15	.8
Health & welfare	293	15.4
Services	75	3.9
No answer	3	.2
Working hour:		
1-20h	675	35.5
>20h	1181	62.1
Education-job matching:		
Matched	788	41.4
Unmatched	429	22.6
N	1902	100

The Eurostudent VII survey identifies five key areas of student support services, as outlined in Table 3. Firstly, it assesses satisfaction with study support services, such as organised tutoring, academic writing assistance, bridging courses, and mentoring. Secondly, it evaluates satisfaction with the provision of learning facilities, including libraries, computer centres, and workplaces. Thirdly, the survey measures satisfaction with support for balancing studies and paid jobs. Fourthly, it examines support for balancing studies and family responsibilities. Lastly, it assesses satisfaction with the support provided in preparing for future work life. These variables are measured on a 5-point scale, ranging from 'entirely sufficient' to 'not sufficient at all'.

Besides these, the socio-demographic variables considered in this study include students' age, field of study, highest education attainment of their parents, education level, number of hours worked, and education-job alignment.

Following the insights gained from research tasks 1 and 2, interviews were conducted with university students for research tasks 3. The sample (Table 2) consisted of 8 working students purposefully selected to represent a diverse range of fields of study, qualification levels, ages, work statuses, and education-job alignments. Table 2 details the characteristics of the

interviewee sample. Students were asked what additional services they wanted from the universities beyond those they currently received. Each interview was conducted at different points in time, from 2022 to 2023. These students were approached personally through snowball techniques, and each interview lasted 45 minutes.

Table 2
Interviewee Details

Interviewee number	serial	Field of study	Qualification	Age	Weekly working hour	Education-job alignment
1		ICTs	Bachelor	22	<20 hours	Matched
2		Health and welfare	Master	25	<20 hours	Matched
3		Business	Bachelor	24	>20 hours	Matched
4		Natural sciences	Master	28	>20 hours	Matched
5		Engineering	Bachelor	23	<20 hours	Mismatched
6		Social sciences	Master	26	<20 hours	Mismatched
7		Humanities	Bachelor	25	>20 hours	Mismatched
8		Services	Master	29	>20 hours	Mismatched

Analytical Strategy

For research task 1 and 2, besides descriptive measures, the exhaustive Chi-squared Automatic Interaction Detection (CHAID) technique has been employed to accomplish these tasks. The independent variables include the socio-demographic factors mentioned earlier, while the dependent variables (see Table 3) pertain to aspects relevant to student support services. Exhaustive CHAID is an advanced statistical technique used for identifying interactions between variables and predicting outcomes (Milanović & Stamenković, 2016). Primarily, exhaustive CHAID is utilised for classification and regression analysis, making it especially reliable in various fields like market research, medical research, and educational studies to understand how different factors influence a particular outcome. The technique starts by splitting the data into distinct groups based on independent variables. It examines all possible splits for each variable to find the one that best separates the data in terms of the dependent variable. Using Chi-squared tests, exhaustive CHAID determines the statistical significance of each split, evaluating whether the observed differences in the dependent variable between groups are significant. If some categories of a variable are not significantly different, the method merges them, reducing complexity and ensuring that only meaningful distinctions are made. The process of splitting and merging continues iteratively, forming a tree structure where each node represents a subset of the data with similar characteristics. The algorithm explores all potential splits exhaustively at each step, ensuring the most optimal split is chosen. The process stops splitting when no further significant splits can be found or when other predefined criteria, such as minimum node size or maximum tree depth, are met.

Table 3
Specifications of CHAID Analysis

		Model 1	Model 2	Model 3	Model 4	Model 5
Specifications:	Growing method	Exhaustive Chi-square automatic interaction detection				
	Dependent variable	SS1	SS2	SS3	SS4	SS5
	Independent variables	D2 Age, D3 Highest educational attainment of parents lo/med/hi, D4 Qualification studied for, D5 Field of study, D8 Number of hours students work, D9 Education-job matching				
	Validation	Cross Validation	Cross Validation	Cross Validation	Cross Validation	Cross Validation
	Maximum tree depth	3	3	3	3	3
	Minimum cases in parent node	100	100	100	100	100
	Minimum cases in child node	50	50	50	50	50
Results:	Independent variables included	D5 Field of study, D9 Education-job matching	D5 Field of study, D2 Age	D4 Qualification studied for, D9 Education-job matching, D2 Age	D5 Field of study, D8 Number of hours students work	D2 Age, D5 Field of study, D9 Education-job matching
	Number of nodes	7	10	10	7	11
	Number of terminal nodes	5	7	7	5	7
	Depth	2	2	3	2	3

Note. SS1 = Satisfaction with study support services (e.g., organised tutoring, academic writing, bridging courses, mentoring), SS2 = Satisfaction with provision of learning facilities (e.g., library, computer centre, work places), SS3 = Satisfaction with support to balance my studies and paid job, SS4 = Satisfaction with support to balance my studies and family, SS5 = Satisfaction with support in the preparation for my (future) work life

Exhaustive CHAID offers several advantages (Milanović & Stamenković, 2016). By examining all possible splits, it ensures a thorough analysis, potentially revealing subtle interactions between variables that might be missed with simpler methods. The resulting tree structure is easy to interpret, showing how different variables and their interactions lead to variations in the dependent variable. Additionally, it can handle various types of data, including nominal, ordinal, and continuous variables, making it versatile for different research contexts. This advanced statistical method is particularly suitable for identifying interactions between variables and predicting outcomes, making it highly reliable for this type of research. CHAID's iterative process of splitting and merging data based on statistical significance ensures that the resulting model is both detailed and accurate (Milanović & Stamenković, 2016). The cross-validation approach used in the CHAID analysis further validates the robustness of the findings by preventing overfitting and ensuring that the model performs well on unseen data. Table 3 presents the specifications of the exhaustive CHAID extracted from the SPSS-23 used in this research.

For research tasks 3, after collecting the interview data, the data were analysed using the thematic analysis technique. Thematic analysis is an analytical strategy that examines qualitative data, such as interview transcripts or survey responses, to identify categories and trends that can provide deeper insights into a particular research issue or topic (Guest et al., 2012). Initially, all interview transcripts were read multiple times to gain a thorough understanding of the content. The identified themes were reviewed and refined to ensure they accurately represented the data, involving a check to see if the themes worked in relation to the

coded extracts and the entire data set. Ethical considerations were meticulously addressed throughout the research process. Participants were fully informed about the study's purpose, procedures, and their rights, including the right to withdraw at any time. Confidentiality and anonymity were strictly maintained to protect participants' privacy.

Combining quantitative and qualitative analytical techniques not only triangulates the data but also provides a comprehensive understanding of the research problem. In this way, the findings become robust and well-rounded, offering both numerical insights and deeper, more detailed perspectives. The quantitative data offers objective views, while the qualitative data enriches this by providing detailed insights into individual experiences and needs. Blending these approaches creates a more complete and reliable picture, ultimately enhancing this study's ability to inform effective support services for working university students in Estonia.

Results

Levels of Satisfaction with Various Student Support Services

In the assessment of student satisfaction with support services, the findings for each category present a different picture (see Table 4). For study support services (SS1), the overall sentiment is moderately positive. A considerable portion of students find these services either sufficient or entirely sufficient (35.3%). However, a notable percentage remains neutral (21.2%), indicating room for improvement. Additionally, a significant number of students express dissatisfaction (10.4% not sufficient at all) or a lack of need for these services (18.9%). The mean score of 3.40, with a standard deviation of 1.71, suggests that while the services meet the needs of some students, others find them lacking or unnecessary.

In contrast, satisfaction with the provision of learning facilities (SS2) is notably high. A majority of students report that these facilities are entirely sufficient (37.8%) or sufficient (31.0%). Only a small fraction expresses dissatisfaction or no need for these facilities (7.5%). The mean score of 2.25, with a lower standard deviation of 1.44, reflects higher satisfaction and more consistent experiences among students compared to study support services.

Table 4

Levels of Satisfaction with Various Student Support Services

Services and satisfaction levels	Working students perception							Total	Mean (SD)
	Entirely sufficient	-	-	-	Not sufficient at all	I do not need /want support	No answer		
	Count %	Count %	Count %	Count %	Count %	Count %	Count %		
SS1	299 15.7 %	372 19.6%	403 21.2%	259 13.6%	197 10.4%	360 18.9%	12 .6%	1902 100.0%	3.40 1.71
SS2	719 37.8%	589 31.0%	285 15.0%	107 5.6%	40 2.1%	141 7.4%	21 1.1%	1902 100.0%	2.25 1.44
SS3	183 9.6%	277 14.6%	401 21.1%	373 19.6%	389 20.5%	252 13.2%	27 1.4%	1902 100.0%	3.67 1.52
SS4	173 9.1%	206 10.8%	367 19.3%	302 15.9%	271 14.2%	555 29.2%	28 1.5%	1902 100.0%	4.04 1.67
SS5	217 11.4%	335 17.6%	517 27.2%	368 19.3%	231 12.1%	213 11.2%	21 1.1%	1902 100.0%	3.37 1.48

Note. SS1 = Satisfaction with study support services (e.g., organised tutoring, (academic) writing, bridging courses, mentoring), SS2 = Satisfaction with provision of learning facilities (e.g., library, computer centre, work places), SS3 = Satisfaction with support to balance my studies and paid job, SS4 = Satisfaction with support to balance my studies and family, SS5 = Satisfaction with support in the preparation for my (future) work life, SD = Standard deviation.

Support to balance studies and a paid job (SS3) appears to be a challenging area. While some students are satisfied (9.6% fully satisfied), a significant portion expresses dissatisfaction (19.6% not sufficient and 20.5% not sufficient at all). A notable 21.1% of students remain neutral. The mean score of 3.67 and a standard deviation of 1.52 indicate that while some students benefit from this support, many others do not find it adequate, highlighting a substantial demand for better support in balancing work and studies.

Support to balance studies and family life (SS4) shows diverse responses. A significant portion of students (29.2%) indicate no requirement or desire for this type of support, which may reflect varying personal circumstances. Satisfaction levels are mixed, with some students fully satisfied (9.1%) and others entirely dissatisfied (14.2%). The mean score of 4.04, with a standard deviation of 1.67, suggests that while some students are content with the support provided, a substantial portion do not find it necessary or adequate.

Lastly, satisfaction with support in preparation for work life (SS5) reveals a mixed but moderately positive picture. Many students remain neutral (27.2%), while a considerable fraction expresses satisfaction (11.4% entirely sufficient, 17.6% sufficient). However, a significant number are completely dissatisfied (12.1%) or feel no need for this support (11.2%). The mean score of 3.37, with a standard deviation of 1.48, indicates moderate satisfaction with noticeable variability in perceptions.

Interaction of Socio-Demographic Factors with Support Service Satisfaction

Study Support Services

The initial CHAID tree (see Figure 1) presents an analysis of satisfaction with study support services (e.g., organised tutoring, academic writing, bridging courses, mentoring) among working university students in Estonia, broken down by statistically significant factors such as their field of study (Chi-square = 44.03, $p = .001$) and whether their job matches (Chi-square = 19.44, $p = .03$) their field of education. The decision tree identifies three main clusters.

The first cluster includes ICTs, education, social sciences, journalism and information, engineering, manufacturing and construction, agriculture, forestry, fisheries, and veterinary. This cluster shows a relatively balanced distribution among the categories of satisfaction. However, a notable proportion of students express that they do not need or want support (19.3%), and only a small percentage find the support entirely sufficient (12.6%).

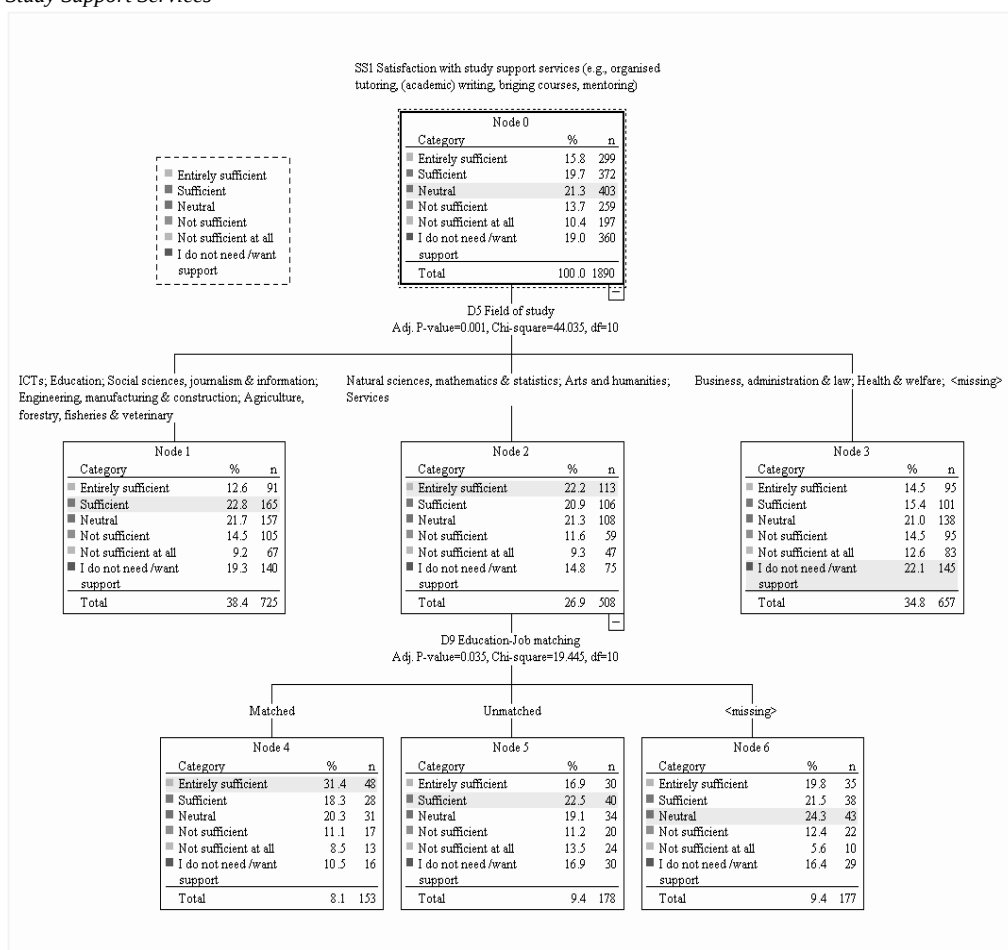
The second cluster comprises the natural sciences, mathematics and statistics, arts and humanities, and services. Students in these fields report a higher satisfaction level, with 22.2% rating the support as entirely sufficient. This group also has a lower proportion of students stating they do not need or want support (14.8%) compared to the first cluster. Within this cluster, further differentiation is based on whether the students' education aligns with their job expectations. Students whose education aligns with their job expectations report higher satisfaction, with 31.4% finding the support entirely sufficient and only 10.5% indicating they do not need or want support. It suggests that the perceived relevance of study support services is higher when students see a clear link between their studies and future employment. Conversely, satisfaction decreases among students whose education does not align with their job expectations, with only 16.9% rating the support as entirely sufficient and 16.3% stating

they do not need or want support. This indicates that a misalignment between education and job expectations can lead to the perception that study support services are less beneficial or relevant.

The third cluster includes students from the business, administration, law, and health and welfare fields. This cluster reveals a higher percentage of students who do not need or want support (22.1%). Satisfaction levels are relatively lower, with only 14.5% rating the support as entirely sufficient.

The findings from this CHAID (i.e., Figure 1) analysis highlight the importance of tailoring study support services (e.g., organised tutoring, academic writing, bridging courses, mentoring) to the specific needs of different fields of study. Particularly, it advocates that students in fields with a clear connection to job, such as natural sciences, mathematics, statistics, arts, and humanities, are more likely to value these services. Conversely, students in fields such as business, administration, law, and health and welfare may require different types of support or have different expectations.

Figure 1
Study Support Services

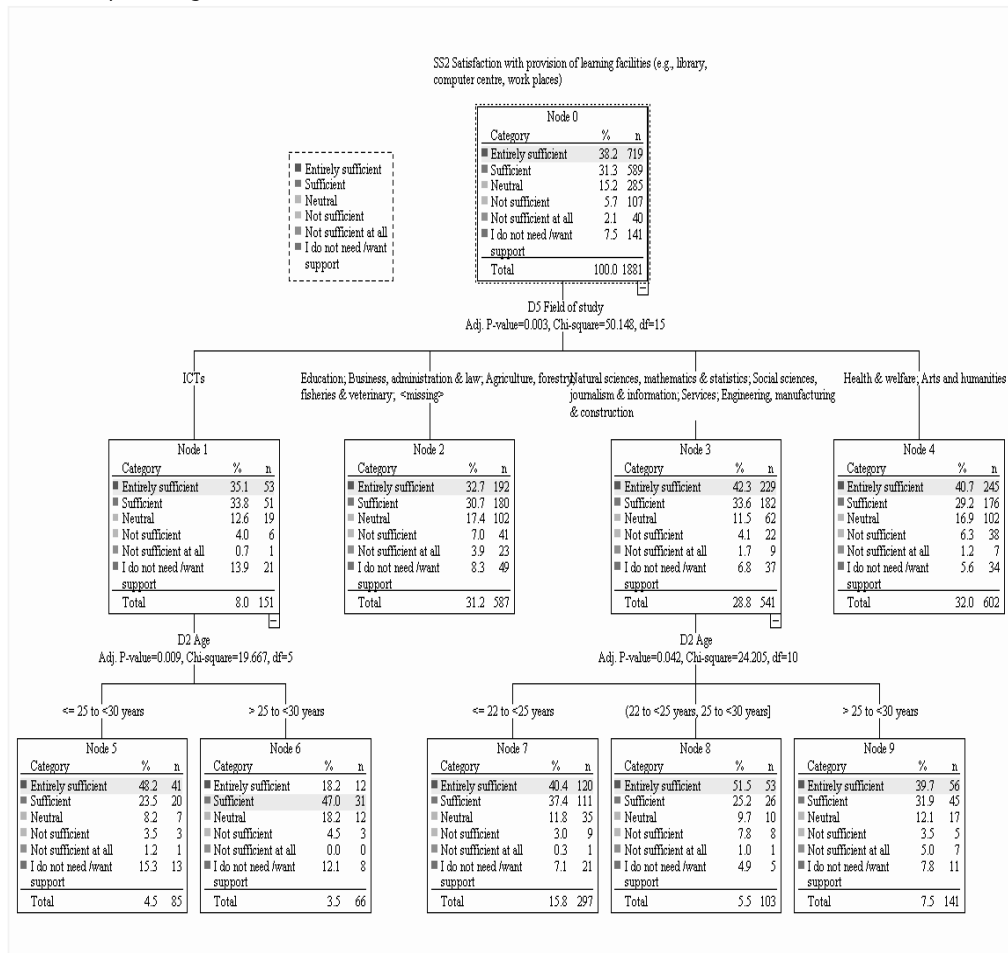


Provision of Learning Facilities

The second tree (see Figure 2) analyses satisfaction with the provision of learning facilities (e.g., library, computer centre, work places) among working university students in Estonia. The analysis indicates that satisfaction with learning facilities is predominantly influenced by the field of study (Chi-square = 50.14, $p = .003$). Within the field of ICTs, satisfaction is further refined by age (Chi-square = 19.66, $p = .009$), with younger students (≤ 25 to ≤ 30 years) showing higher satisfaction levels (48.2% entirely sufficient) than older students (> 25 to ≤ 30 years). Education, business, administration and law, agriculture, forestry, fisheries, and veterinary fields exhibit a moderate level of satisfaction (32% entirely sufficient) without further age differentiation. Students in the natural sciences, mathematics and statistics, social sciences, journalism and information, services, and engineering fields report higher satisfaction, with younger students (25 to ≤ 30 years) (Chi-square = 24.20, $p = .04$) expressing significant satisfaction (51.5% entirely sufficient). The health, welfare, arts, and humanities fields also show higher satisfaction levels (40.7% entirely sufficient).

Figure 2

Provision of Learning Facilities



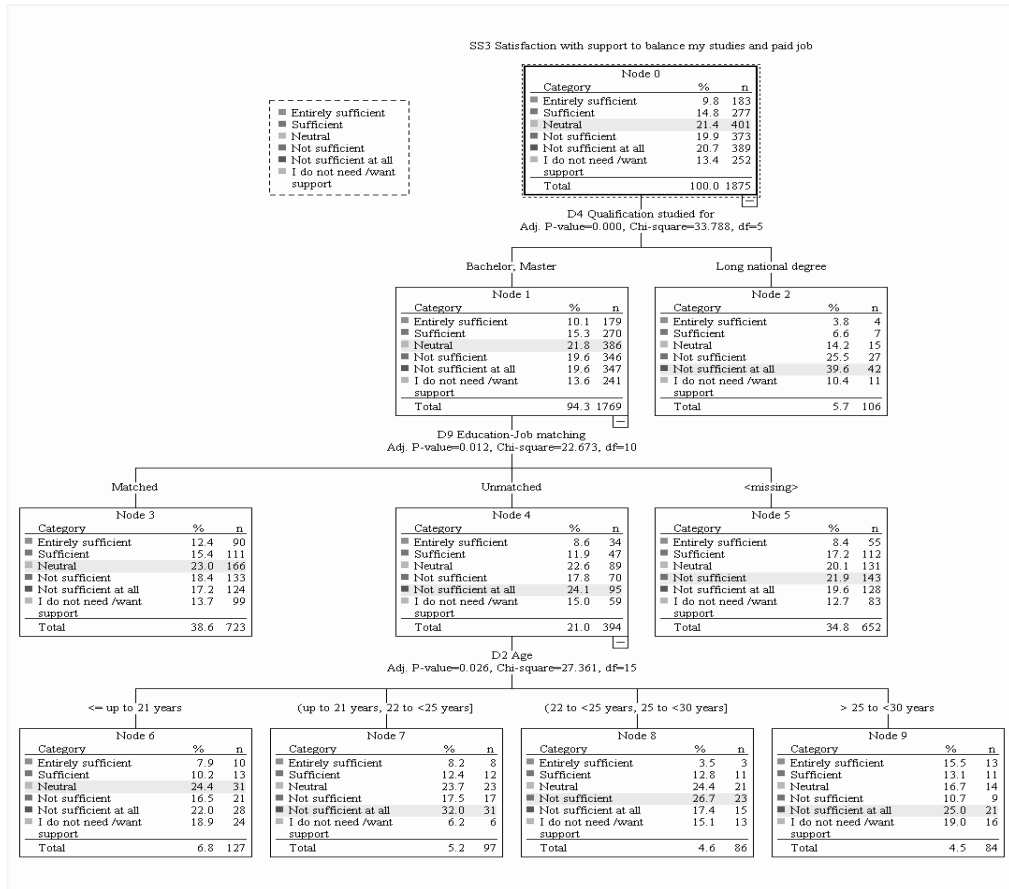
Support to Balance Studies and Job

The third tree (see Figure 3) examines satisfaction with support services to balance studies and paid jobs among working university students in Estonia.

The first split follows based on the qualification students are studying for, differentiating between those pursuing a bachelor's or master's degree (node 1) and those pursuing a long national degree (node 2). Here, the split is statistically significant (Chi-square = 33.78, $p < .001$), suggesting that the type of qualification has a major influence on satisfaction levels. Node 1, representing the majority of the sample (1,769 students), is further split based on the match between education and job (node 3 and node 4). The second split is also statistically significant (Chi-square = 22.67, $p < .012$). Node 3 shows that among students with a matched education-job situation, 12.4% find the support entirely sufficient, with a notable 13.7% indicating they do not need or want support. Node 4, representing students with an unmatched education-job situation, shows lower satisfaction, with 8.6% finding the support entirely sufficient and a higher percentage, 15.0%, not needing or wanting support. Within this unmatched cluster, further splits based on age (Chi-square = 27.36, $p = .02$) reveal that younger students (node 6), up to 21 years, have 7.9% of student finding support entirely sufficient, but 16.5% find it not sufficient at all. In the age group up to 21 years and 22 to <25 years (node 7), 17.5% are not satisfied at all. Those aged 22 to <25 years (node 8) show very low levels of complete satisfaction (3.5%), with a significant 26.7% finding support not sufficient at all. Older students, over 30 years (node 9), have a higher rate of complete satisfaction at 15.3%, yet 25% find it not sufficient at all.

These findings show that satisfaction with support for balancing studies and paid jobs is influenced by the qualifications studied. Students pursuing bachelor's or master's degrees show varied levels of satisfaction, further influenced by whether their education matches their job expectations. Those with matched education and job expectations report higher satisfaction levels compared to those whose education does not match their job expectations. Age further differentiates satisfaction among students with unmatched education-job alignment, with younger students (<25 years) showing more dissatisfaction. Students pursuing long national degrees report significantly lower satisfaction levels, with a high percentage finding the support not sufficient or not sufficient at all.

Figure 3
Support to Balance Studies and Job



Support to Balance Studies and Family

The fourth tree (see Figure 4) shows the satisfaction with support to balance studies and family among working university students in Estonia, with the root-node (node 0), similar to other trees, representing satisfaction levels categorised from 'entirely sufficient' to 'I do not need/want support'.

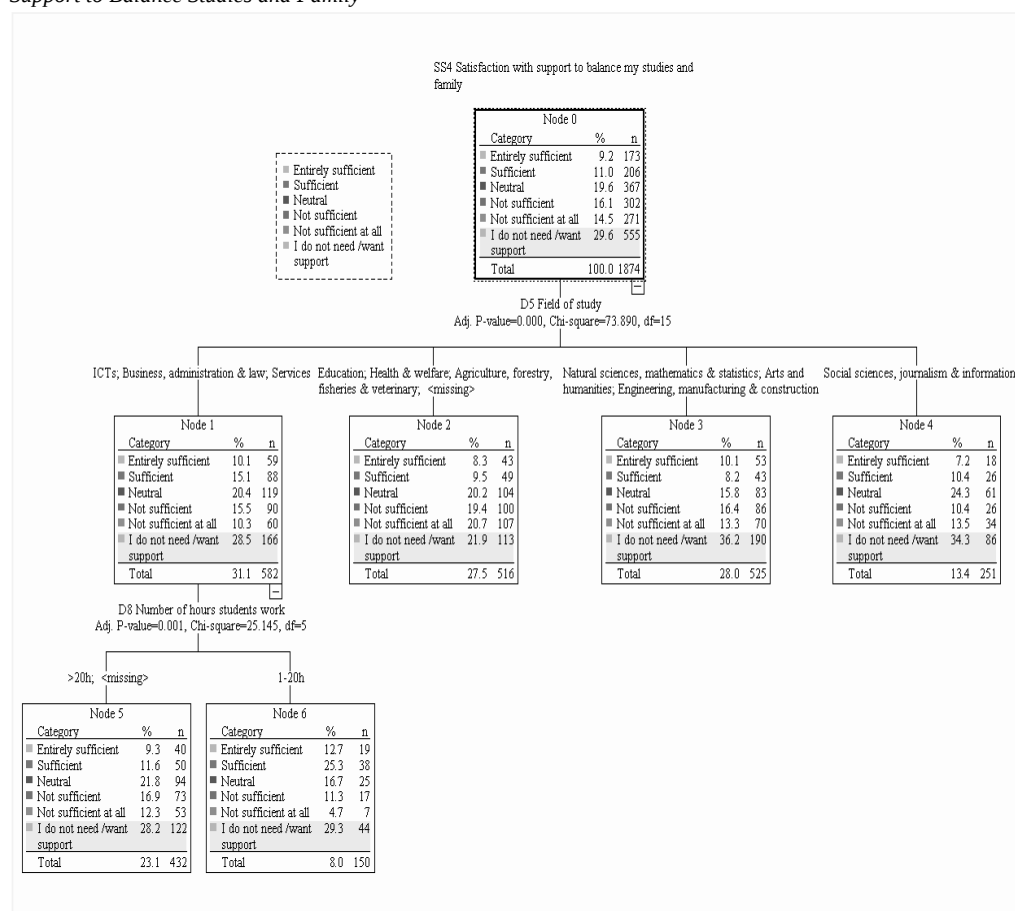
The first significant (Chi-square = 73.89, $p < .001$) split happens based on the field of study. Nodes 1 to 4 represent different fields of study with varying levels of satisfaction. For instance, node 1 includes students from ICTs, business, administration, law, and services, showing a high percentage (28.5%) indicating they do not need or want support. Node 2 represents fields like education, health, welfare, and agriculture, among others, with 21.9% not needing or wanting support. Node 3 includes natural sciences, mathematics, statistics, arts and humanities, and similar fields, with a notably high percentage (36.2%) not needing or wanting support. Node 4 comprises social sciences, journalism and information, with 34.3% not needing or wanting support. The second significant (Chi-square = 25.14, $p = .001$) split within node 1 is built on the number of hours students work per week. Node 5 shows students working more

than 20 hours per week, with 11.3% finding support entirely sufficient, and 28.2% not needing or wanting support. Node 6, representing students working 1–20 hours per week, shows higher satisfaction with 12.7% finding support entirely sufficient, and only 2.9% not needing or wanting support.

These results indicate that the field of study significantly influences the perceived need for support services to balance studies with family life, with students in certain fields indicating a lesser need for such support. Students in ICTs, business, administration, law, and services show varied satisfaction levels, further influenced by their work hours. Those working 1–20 hours per week report higher satisfaction levels than those working more than 20 hours. Students in education, health, welfare, agriculture, forestry, fisheries, and veterinary fields exhibit moderate levels of satisfaction, with significant proportions indicating insufficient support. The natural sciences, mathematics, statistics, arts and humanities, and engineering fields show lower satisfaction, with a high percentage indicating they do not need or want support. The social sciences, journalism, and information fields also show lower satisfaction, with a notable proportion indicating they do not need or want support.

Figure 4

Support to Balance Studies and Family



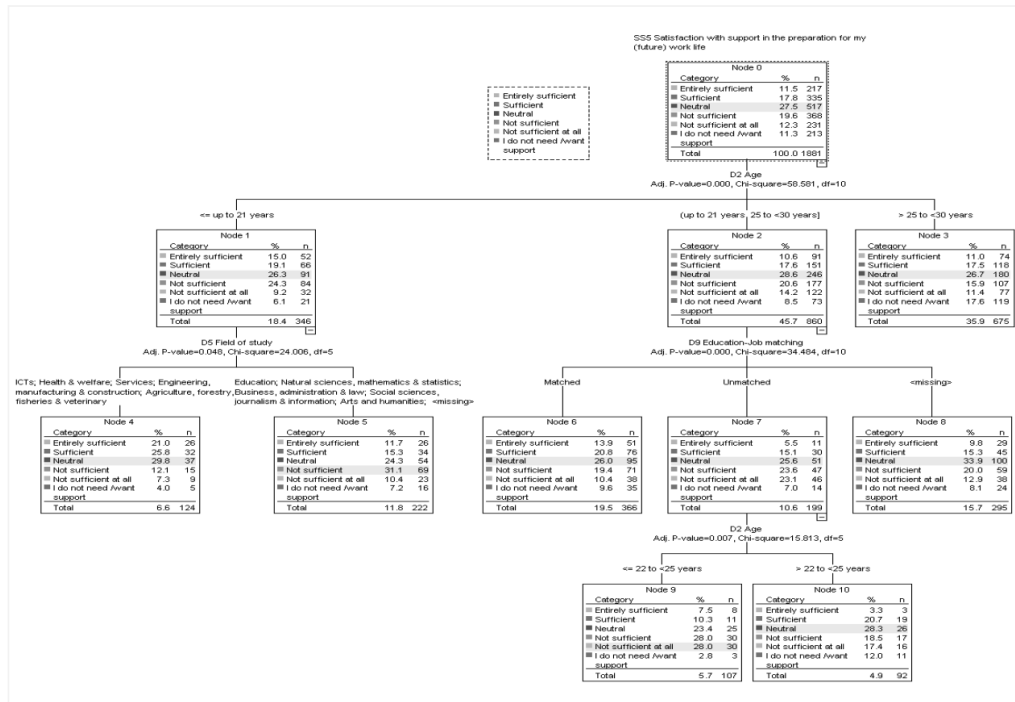
Support in Preparation for Work Life

The decision tree (Figure 5) analyses satisfaction with support in preparation for future work life among working university students in Estonia. The primary split (Chi-square = 58.58, $p < .001$) is based on students' age, dividing them into three groups: up to 21 years, 21 to <30 years, and over 30 years. Each age group is further split based on their field of study and the match between their education and job, indicating these factors significantly influence students' satisfaction.

In the youngest age group (up to 21 years), the students are further segmented (Chi-square = 24.00, $p < .04$) by their field of study into nodes 4 and 5. Node 4 shows relatively higher satisfaction, with 21.0% feeling support is entirely sufficient, while node 5 shows only 11.7% feeling the same level of satisfaction. Notably, a smaller percentage in both nodes do not feel the need for such support. In the middle segment (21 to <30 years), nodes 6 and 7 are split based on the match between education and job (Chi-square = 34.48, $p < .001$). Node 6, representing those with a matched education-job situation, shows 13.9% of students are entirely satisfied with the support for (future) work-life preparation, whereas node 7 shows only 5.5% feeling entirely satisfied among those with an unmatched situation. The subsequent split (Chi-square = 15.81, $p < .001$) in nodes 6 and 7 based on age yields nodes 9 and 10. Within these nodes, satisfaction varies, with 10.5% in the younger subset (node 9) and 3.7% in the older (more than 25 years old) subset (node 10) feeling entirely satisfied with support for future work-life preparation. Notably, the need for such support seems less felt among the older age group in node 10.

Figure 5

Support in Preparation for (Future) Work Life



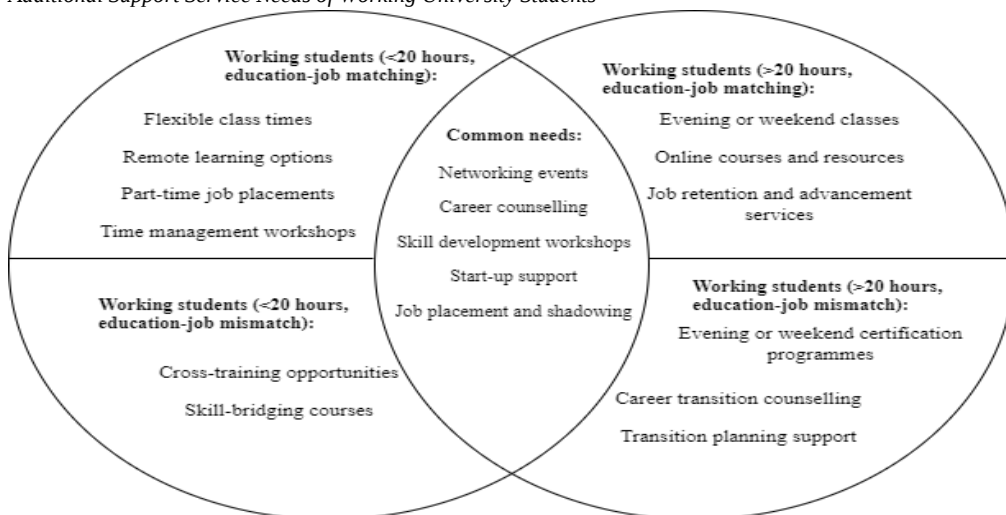
These results indicate that age is a critical factor affecting satisfaction with support for (future) work-life preparation, with younger students generally indicating higher levels of satisfaction. However, the relevance of a student's job to their field of study also influences satisfaction, with those in matched situations reporting higher satisfaction levels.

Additional Support Service Needs of Working Students

The findings discussed thus far provide a quantitative view of the factors influencing student satisfaction with various support services, including study support, learning facilities, balancing studies with paid jobs, and balancing studies with family responsibilities. The decision tree analyses reveal that student satisfaction with various support services is diverse, influenced primarily by the field of study, education-job alignment, the number of hours worked, and age. Following these insights, interviews were conducted, and further findings were generated, as illustrated in Figure 6.

Figure 6

Additional Support Service Needs of Working University Students



For instance, Interviewee 1, studying ICTs at the bachelor level and working less than 20 hours per week, stressed the importance of flexible class times, remote learning options, part-time job placements, and time management workshops. These services are crucial for students managing to align their education with their job responsibilities, but they still need flexibility and support to balance both effectively. Similarly, Interviewee 2, pursuing a master's degree in health and welfare and also working less than 20 hours per week with a matched education-job alignment, echoed these needs. Students who have education-related jobs and can work fewer hours seem to have a steady demand for this. On the other hand, those such as Interviewee 3 and Interviewee 4, both working more than 20 hours weekly in fields such as business and natural sciences, respectively, find evening or weekend classes, online courses, and job retention and advancement services more beneficial. The increased workload necessitates different support structures that accommodate their limited availability during regular hours.

For students such as Interviewee 5, studying engineering with less than 20 working hours but facing an education-job mismatch, the need for cross-training opportunities and skill-

bridging courses is apparent. This group requires specific interventions to bridge the gap between their current job skills and educational pursuits. The same need was identified by Interviewee 6 in social sciences, highlighting a recurring theme for students in mismatched jobs. Students such as Interviewee 7 in humanities and Interviewee 8 in services, who work more than 20 hours per week and face an education-job mismatch, find evening or weekend certification programmes, career transition counselling, and transition planning support essential. These services help them navigate the significant challenges posed by their heavy workload and the disconnect between their job and educational fields.

Across all these groups, common needs such as networking events, career counselling, skill development workshops, start-up support, and job placement and shadowing were identified. These services represent a foundational layer of support that can benefit all working students, regardless of their specific circumstances.

Discussion

The aim of this research was to understand the support service satisfaction levels of working university students in Estonia and how socio-demographic factors (such as students' age, field of study, qualification level, parents' education, number of hours worked, and education-job alignment) influence their satisfaction with various university support services (e.g., organised tutoring, academic writing, bridging courses, mentoring, learning facilities like libraries, computer centres, and workplaces, balancing studies with paid jobs, and balancing studies with family responsibilities). Additionally, the research sought to identify the specific services that these students need. Calculations were performed to assess the perceived satisfaction levels of working students with available support services, highlighting the link between socio-demographic variables and their satisfaction. Additionally, interviews were conducted to gain deeper insights and identify the specific support service needs of working university students.

The analysis of the level of satisfaction with student support services among working students reveals unique areas of strength as well as substantial gaps. The high satisfaction with learning facilities indicates successful resource allocation and effective infrastructure development. This finding aligns with existing literature, which emphasises the importance of well-maintained and accessible learning environments in enhancing student satisfaction and academic performance. According to Kuh et al. (2006), well-equipped learning facilities contribute significantly to the overall student experience, providing the necessary tools and environment conducive to learning. Such facilities include libraries, computer labs, and work spaces, all of which are crucial for non-traditional students, especially those who work while studying.

In contrast, the significant dissatisfaction among working students regarding support for balancing studies with work and family responsibilities underscores a critical gap. These students often struggle with time management, stress, and the competing demands of their academic, professional, and personal lives. Bean and Metzner (1985) and Ross et al. (1999), as well as more recent research conducted by Toyon (2023), have demonstrated that non-traditional students, such as those who work while studying, encounter significant difficulties in their academic pursuits as a result of these pressures. In order to fill these gaps, universities may need to come up with new ideas for comprehensive support services, determine why current help is inadequate, and offer solutions.

Additionally, the findings reveal substantial variations in satisfaction levels based on factors such as the field of study, alignment between education and job, age, qualification level, and the number of hours students work.

For study support services (e.g., organised tutoring, academic writing, bridging courses, mentoring), the most significant factor influencing satisfaction is the field of study. In addition, education-job alignment emerges as a crucial factor in fields such as natural sciences, mathematics, statistics, and arts and humanities. Satisfaction with learning facilities (e.g., library, computer centre, workspaces) is primarily affected by the field of study and age. ICT students, especially the younger ones, display higher levels of satisfaction. Similarly, students in natural sciences and engineering, particularly younger students report higher satisfaction. Support for balancing studies and jobs shows significant variation based on qualification type. Bachelor's or Master's students with aligned education and jobs express higher satisfaction (12.4% entirely sufficient) compared to those without alignment (8.6%). Younger students under 25 years old pursuing bachelor's and master's degrees are more likely to report dissatisfaction with the support for balancing studies and jobs when their education and job are not aligned.

Satisfaction with the support to balance studies and family life is influenced by the field of study and the number of work hours per week. Students in ICT and business show high levels of disinterest (28.5%). Among these students, those working fewer hours (1-20 per week) report higher satisfaction levels with the support for balancing studies and family life. Support for work-life preparation is predominantly influenced by age. Younger students generally exhibit higher satisfaction, particularly when their field of study aligns with their job. For instance, students up to 21 years old report higher satisfaction (21.0% entirely sufficient). However, for students aged 22 to 24 whose jobs do not match their education, the support for work-life preparation is significantly insufficient, with 28% indicating it is not sufficient at all.

Moreover, the findings indicated that working students have diverse additional needs for support services. For instance, working students who work fewer than 20 hours per week but whose jobs do not align with their education require cross-training opportunities and skill-bridging courses. Those who work more than 20 hours per week and whose jobs align with their education need evening or weekend classes, online courses and resources, and job retention and advancement services. Those working more than 20 hours per week but whose jobs do not match their education require evening or weekend certification programmes, career transition counselling, and transition planning support.

For university managers, these findings highlight several important points that need to be addressed to meet the diverse needs of working students. Despite the availability of specific support services at universities, their demand among working students points to critical issues that need attention. The mere presence of support services does not ensure their effectiveness or accessibility. Researchers (Ciobanu, 2013; Dominguez-Whitehead, 2017; Fornell, 1992) emphasise that student services require institutional agents to deeply understand student development and the university environment's impact on student behaviour. This implies that university managers must not only provide support services but also ensure these services are designed and delivered in a way that genuinely meets the needs of working students. Currently, support services often fall short because they are not sufficiently tailored to the unique circumstances of working students, who juggle extensive work commitments alongside their

academic responsibilities. Such inadequacy points to a critical failure in the design and implementation of these services and questions the inclusiveness as well as the responsiveness of the support mechanisms. Working students in Estonia often face rigid schedules and high demands both at work and in their studies (Toyon, 2023). If support services are not adaptable to these constraints, their effectiveness is significantly compromised. Therefore, university managers need to adopt a more personalised approach to service design, ensuring that the timing, format, and content of these services are flexible enough to cater to working students, considering their demographic factors.

The varying satisfaction levels, influenced by socio-demographic factors, highlight the inadequacy of one-size-fits-all support services. It underscores the necessity for more personalised and adaptive support systems that evolve with students' changing needs over time. The findings also point to the need for field-specific support structures that accommodate the unique characteristics of each discipline and for re-evaluating support offerings for students with heavier work commitments and education-job alignment issues. Ultimately, the critical issue is not just the availability of support services but their relevance, accessibility, and adaptability to the diverse and dynamic needs of working students.

Conclusion

This study centres on the issue of comprehending and enhancing the sufficiency and effectiveness of support services for working university students in Estonia. By analysing how socio-demographic factors (such as age, field of study, parental education, work hours, and alignment between education and job) influence students' satisfaction with various support services, the study provides valuable insights into the strengths and gaps in the current support systems. The findings substantiate important insights for organising support services by highlighting areas in which students are satisfied as well as areas that require immediate improvement.

Additionally, this research reflects Bourdieu's theoretical discourse (1977, 1984, 1986, 1993) and customer segmentation literature (Smith, 1956) by providing empirical evidence and offering valuable insights into how working students' backgrounds influence their perceptions and interactions within the university environment. Customer segmentation theory underscores the importance of customising educational support to meet the diverse needs of different student groups, while Bourdieu's theory emphasises the role of capital and habitus in shaping these needs. The varying satisfaction levels across different socio-demographic factors illustrate how the cultural capital they possess, the workplace capital they carry, and their habitus shape their experiences and the perceived quality of the services provided by universities.

While this research substantiates its novelty with its focus on the Estonian context, the integration of socio-demographic factors, the use of mixed methods, and the detailed examination of field-specific and job alignment influences on satisfaction, it does have limitations. The sample's focus on the Estonian context may restrict the generalizability of the results to other regions or countries. Future research could expand the sample to include a more diverse demographic, both geographically and culturally, to enhance the applicability of the findings. Incorporating longitudinal data and objective measures of satisfaction and support service utilisation could provide a more comprehensive understanding of the issues.

Furthermore, the study does not account for the potential impact of external factors, such as economic conditions or the qualifications and training of those providing the services, on student satisfaction. Future research should consider these variables to offer a more holistic view of the factors influencing student satisfaction with support services.

Declarations

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Appendix 4. Supplementary materials

Table 1. Overview of non-working & working students survey responses

Variable	Non-working students (n=858)	Mean (SD)	Working students (n=1902)	Mean (SD)
Sex	Female: 71%, Male: 29%	1.29 (.45)	Female: 76.9%, Male: 23.1%	1.23 (.42)
Age	Up to 21: 43.7%, 22-25: 28.8%, 25-30: 13.5%, 30+: 14.0%	1.98 (1.06)	Up to 21: 18.5%, 22-25: 24.3%, 25-30: 21.3%, 30+: 35.9%	2.75 (1.13)
Parents' education	High: 72%, Medium: 23.4%, Low: 4.5%	2.68 (.56)	High: 67%, Medium: 26.6%, Low: 6.4%	2.61 (.606)
Qualification studied for	Bachelor: 69.9%, Master: 17.1%, Long National: 12.9%	2.73 (1.15)	Bachelor: 57.7%, Master: 36.6%, Long National: 5.6%	2.54 (.766)
Field of study	Health & Welfare: 18.6%, Arts & Humanities: 17.9%, Social Sciences: 9.8%	5.17 (2.76)	Business: 19.3%, Arts & Humanities: 16.6%, Health & Welfare: 15.4%	4.61 (2.77)
Financial difficulties	Without: 43.5%, With: 26.8%, Middle: 29.7%	2.17 (.82)	Without: 51.5%, With: 20.1%, Middle: 28.4%	2.31 (.79)
Lecturers give helpful feedback	Strongly Agree: 26.3%, Agree: 38.6%, Neutral: 21.2%, Disagree: 13.8%	2.26 (1.07)	Strongly Agree: 24.2%, Agree: 38.9%, Neutral: 23.2%, Disagree: 13.8%	2.30 (1.05)
Lecturers motivate to do best work	Strongly Agree: 17.9%, Agree: 33.9%, Neutral: 29.8%, Disagree: 18.3%	2.53 (1.08)	Strongly Agree: 16.7%, Agree: 33.2%, Neutral: 31.9%, Disagree: 18.2%	2.55 (1.04)
Lecturers extremely good at explaining things	Strongly Agree: 14.7%, Agree: 44.2%, Neutral: 32.3%, Disagree: 9.3%	2.38 (.89)	Strongly Agree: 14.4%, Agree: 43.4%, Neutral: 34.0%, Disagree: 8.2%	2.37 (.85)
Get along well with lecturers	Strongly Agree: 43.9%, Agree: 39.0%, Neutral: 14.5%, Disagree: 2.7%	1.76 (.81)	Strongly Agree: 39.8%, Agree: 42.1%, Neutral: 15.0%, Disagree: 3.1%	1.82 (.82)
Lecturers interested in what students have to say	Strongly Agree: 25.7%, Agree: 34.2%, Neutral: 26.6%, Disagree: 13.5%	2.31 (1.06)	Strongly Agree: 23.7%, Agree: 39.4%, Neutral: 25.6%, Disagree: 11.3%	2.27 (1.01)
Knows fellow students to discuss questions	Strongly Agree: 32.2%, Agree: 24.9%, Neutral: 20.6%, Disagree: 22.2%	2.40 (1.27)	Strongly Agree: 32.2%, Agree: 29.3%, Neutral: 22.1%, Disagree: 16.5%	2.27 (1.15)
Contact with students in study programme	Strongly Agree: 29.2%, Agree: 24.2%, Neutral: 19.7%, Disagree: 26.9%	2.53 (1.32)	Strongly Agree: 29.0%, Agree: 28.4%, Neutral: 22.6%, Disagree: 20.0%	2.40 (1.21)
Thinking about changing main study programme	Strongly Agree: 4.7%, Agree: 4.7%, Neutral: 8.4%, Disagree: 82.2%	4.31 (1.11)	Strongly Agree: 3.2%, Agree: 3.4%, Neutral: 6.8%, Disagree: 86.6%	4.49 (.98)
Thinking about abandoning studies	Strongly Agree: 2.1%, Agree: 2.9%, Neutral: 5.2%, Disagree: 89.8%	4.60 (.88)	Strongly Agree: 2.2%, Agree: 2.8%, Neutral: 4.8%, Disagree: 90.2%	4.62 (.88)
Satisfaction with study support services	Entirely Sufficient: 17.1%, Sufficient: 22.7%, Neutral: 19.1%, Not Sufficient: 22.5%	3.31 (1.73)	Entirely Sufficient: 15.8%, Sufficient: 19.7%, Neutral: 21.3%, Not Sufficient: 33.6%	3.40 (1.71)
Satisfaction with learning facilities	Entirely Sufficient: 45%, Sufficient: 30.7%, Neutral: 12.1%, Not Sufficient: 12.2%	2.03 (1.31)	Entirely Sufficient: 38.2%, Sufficient: 31.3%, Neutral: 15.2%, Not Sufficient: 15.3%	2.25 (1.45)
Balance studies & paid job	Entirely Sufficient: 9.5%, Sufficient: 12.4%, Neutral: 21.4%, Not Sufficient: 46.7%	4.05 (1.70)	Entirely Sufficient: 9.8%, Sufficient: 14.8%, Neutral: 21.4%, Not Sufficient: 53.3%	3.67 (1.52)
Balance studies & family	Entirely Sufficient: 10.1%, Sufficient: 11.0%, Neutral: 16.0%, Not Sufficient: 62.9%	4.18 (1.76)	Entirely Sufficient: 9.2%, Sufficient: 11.0%, Neutral: 19.6%, Not Sufficient: 60.2%	4.04 (1.67)
Preparation for future work life	Entirely Sufficient: 11.8%, Sufficient: 21.0%, Neutral: 27.5%, Not Sufficient: 39.7%	3.21 (1.40)	Entirely Sufficient: 11.5%, Sufficient: 17.8%, Neutral: 27.5%, Not Sufficient: 43.2%	3.37 (1.49)
Preparation for national labour market	Very Well: 21.7%, Well: 33.5%, Neutral: 20.7%, Poorly: 24.1%	2.72 (1.53)	Very Well: 26.1%, Well: 32.9%, Neutral: 22.7%, Poorly: 18.3%	2.49 (1.37)
Preparation for international labour market	Very Well: 10.3%, Well: 24.5%, Neutral: 25.1%, Poorly: 40.2%	3.33 (1.55)	Very Well: 11.5%, Well: 21.8%, Neutral: 23.8%, Poorly: 42.9%	3.39 (1.58)

Table 2. Group statistics for 1–20 hours working vs. >20 hours working students

Variables	Number of hours students working from time to time or during the whole lecture period including non-working students (0h)	N	Mean	Std. Deviation	Std. Error Mean
Sex	1-20h	675	1.23	.419	.016
	>20h	1181	1.23	.422	.012
Age	1-20h	675	2.18	1.074	.041
	>20h	1181	3.06	1.037	.030
Highest educational attainment of parents lo/med/hi	1-20h	654	2.67	.584	.023
	>20h	1146	2.57	.616	.018
Qualification studied for	1-20h	675	2.49	.896	.034
	>20h	1181	2.57	.678	.020
Field of study	1-20h	675	4.52	2.785	.107
	>20h	1178	4.62	2.747	.080
Students with/without financial difficulties	1-20h	673	2.28	.788	.030
	>20h	1169	2.34	.780	.023
Teaching scale: lecturers give helpful feedback	1-20h	675	2.26	1.015	.039
	>20h	1181	2.32	1.066	.031
Teaching scale: lecturers motivate to do best work	1-20h	666	2.54	1.033	.040
	>20h	1163	2.56	1.040	.030
Lecturers extremely good at explaining things	1-20h	661	2.33	.796	.031
	>20h	1160	2.39	.882	.026
Get along well with lecturers	1-20h	666	1.78	.786	.030
	>20h	1162	1.84	.823	.024
Lecturers interested in what students has to say	1-20h	663	2.25	.997	.039
	>20h	1160	2.29	1.005	.029
Knows a lot of fellow students to discuss subject-related questions	1-20h	663	2.29	1.142	.044
	>20h	1161	2.26	1.159	.034
Contact with many students in study programme	1-20h	665	2.39	1.188	.046
	>20h	1162	2.41	1.224	.036
Satisfaction with study support services (e.g., organised tutoring, (academic) writing, bridging courses, mentoring)	1-20h	672	3.29	1.725	.067
	>20h	1176	3.46	1.702	.050
Satisfaction with provision of learning facilities (e.g., library, computer centre, work places)	1-20h	669	2.14	1.359	.053
	>20h	1170	2.31	1.486	.043
Satisfaction with support to balance my studies and paid job	1-20h	668	3.60	1.534	.059
	>20h	1165	3.71	1.518	.044
Satisfaction with support to balance my studies and family	1-20h	668	4.03	1.749	.068
	>20h	1164	4.05	1.633	.048
Satisfaction with support in the preparation for my (future) work life	1-20h	669	3.21	1.379	.053
	>20h	1169	3.47	1.536	.045
How well the study programme prepares for the national labour market	1-20h	672	2.54	1.384	.053
	>20h	1174	2.44	1.351	.039
How well the study programme prepares for the international labour market	1-20h	667	3.30	1.563	.061
	>20h	1156	3.43	1.581	.046
I am seriously thinking about changing my current main study programme	1-20h	672	4.43	1.059	.041
	>20h	1176	4.54	.926	.027
I am seriously thinking of completely abandoning my higher education studies	1-20h	672	4.64	.870	.034
	>20h	1174	4.61	.872	.025

Table 3. Independent samples t-test results for 1–20 hours working vs. >20 hours working students

Variables		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Sex	Equal variances assumed	.197	.657	-.221	1854	.825	-.004	.020	-.044	.035
	Equal variances not assumed			-.222	1410.503	.825	-.004	.020	-.044	.035
Age	Equal variances assumed	1.112	.292	-17.277	1854	.000	-.876	.051	-.975	-.776
	Equal variances not assumed			-17.112	1362.333	.000	-.876	.051	-.976	-.775
Highest educational attainment of parents lo/med/hi	Equal variances assumed	18.394	.000	3.173	1798	.002	.094	.030	.036	.152
	Equal variances not assumed			3.219	1418.073	.001	.094	.029	.037	.151
Qualification studied for	Equal variances assumed	24.212	.000	-2.041	1854	.041	-.075	.037	-.148	-.003
	Equal variances not assumed			-1.895	1119.005	.058	-.075	.040	-.153	.003
Field of study	Equal variances assumed	.582	.446	-.794	1851	.427	-.106	.133	-.367	.156
	Equal variances not assumed			-.791	1387.896	.429	-.106	.134	-.368	.157
Students with/without financial difficulties	Equal variances assumed	.014	.904	-1.563	1840	.118	-.059	.038	-.134	.015
	Equal variances not assumed			-1.559	1390.890	.119	-.059	.038	-.134	.015
Lecturers give helpful feedback	Equal variances assumed	3.322	.069	-1.211	1854	.226	-.061	.051	-.160	.038
	Equal variances not assumed			-1.227	1460.413	.220	-.061	.050	-.159	.037
Lecturers motivate to do best work	Equal variances assumed	.039	.844	-.458	1827	.647	-.023	.050	-.122	.076
	Equal variances not assumed			-.459	1392.426	.647	-.023	.050	-.122	.076
Lecturers extremely good at explaining things	Equal variances assumed	11.191	.001	-1.525	1819	.127	-.063	.041	-.145	.018
	Equal variances not assumed			-1.569	1490.517	.117	-.063	.040	-.142	.016

Table 3 (continued)

Get along well with lecturers	Equal variances assumed	.254	.614	-1.623	1826	.105	-.064	.039	-.141	.013
	Equal variances not assumed			-1.643	1438.046	.101	-.064	.039	-.140	.012
Lecturers interested in what students has to say	Equal variances assumed	.364	.547	-.770	1821	.442	-.038	.049	-.133	.058
	Equal variances not assumed			-.771	1386.268	.441	-.038	.049	-.133	.058
Knows a lot of fellow students to discuss subject-related questions	Equal variances assumed	.001	.975	.422	1822	.673	.024	.056	-.086	.134
	Equal variances not assumed			.423	1393.915	.672	.024	.056	-.086	.133
Contact with many students in study programme	Equal variances assumed	1.461	.227	-.394	1825	.694	-.023	.059	-.139	.092
	Equal variances not assumed			-.397	1416.314	.692	-.023	.058	-.138	.091
Satisfaction with study support services (e.g., organised tutoring, (academic) writing, bridging courses, mentoring)	Equal variances assumed	.003	.957	-2.036	1846	.042	-.168	.083	-.331	-.006
	Equal variances not assumed			-2.028	1380.791	.043	-.168	.083	-.331	-.006
Satisfaction with provision of learning facilities (e.g., library, computer centre, work places)	Equal variances assumed	12.046	.001	-2.338	1837	.019	-.163	.070	-.300	-.026
	Equal variances not assumed			-2.396	1494.086	.017	-.163	.068	-.297	-.030
Satisfaction with support to balance my studies and paid job	Equal variances assumed	.081	.776	-1.557	1831	.120	-.115	.074	-.260	.030
	Equal variances not assumed			-1.553	1377.877	.121	-.115	.074	-.261	.030
Satisfaction with support to balance my studies and family	Equal variances assumed	9.769	.002	-.218	1830	.827	-.018	.081	-.177	.142
	Equal variances not assumed			-.214	1313.269	.830	-.018	.083	-.180	.145
Satisfaction with support in the preparation for my (future) work life	Equal variances assumed	21.220	.000	-3.579	1836	.000	-.257	.072	-.398	-.116
	Equal variances not assumed			-3.685	1515.846	.000	-.257	.070	-.394	-.120
How well the study programme prepares for the national labour market	Equal variances assumed	1.106	.293	1.556	1844	.120	.103	.066	-.027	.232
	Equal variances not assumed			1.546	1369.422	.122	.103	.066	-.028	.233

Table 3 (continued)

How well the study programme prepares for the international labour market	Equal variances assumed	.459	.498	-1.747	1821	.081	-.134	.077	-.284	.016
	Equal variances not assumed			-1.752	1402.308	.080	-.134	.076	-.283	.016
I am seriously thinking about changing my current main study programme	Equal variances assumed	11.313	.001	-2.238	1846	.025	-.106	.047	-.198	-.013
	Equal variances not assumed			-2.158	1248.577	.031	-.106	.049	-.202	-.010
I am seriously thinking of completely abandoning my higher education studies	Equal variances assumed	1.436	.231	.863	1844	.388	.036	.042	-.046	.119
	Equal variances not assumed			.864	1399.507	.388	.036	.042	-.046	.119

Table 4. Group statistics for non-working vs. 1–20 hours working students

Variables	Number of hours students working from time to time or during the whole lecture period including non-working students (0h)	N	Mean	Std. Deviation	Std. Error Mean
Sex	0h	859	1.29	.454	.015
	1-20h	675	1.23	.419	.016
Age	0h	859	1.98	1.064	.036
	1-20h	675	2.18	1.074	.041
Highest educational attainment of parents lo/med/hi	0h	795	2.68	.557	.020
	1-20h	654	2.67	.584	.023
Qualification studied for	0h	859	2.56	1.015	.035
	1-20h	675	2.49	.896	.034
Field of study	0h	859	5.17	2.765	.094
	1-20h	675	4.52	2.785	.107
Students with/without financial difficulties	0h	847	2.17	.823	.028
	1-20h	673	2.28	.788	.030
Lecturers give helpful feedback	0h	855	2.26	1.066	.036
	1-20h	675	2.26	1.015	.039
Lecturers motivate to do best work	0h	839	2.53	1.075	.037
	1-20h	666	2.54	1.033	.040
Lecturers extremely good at explaining things	0h	838	2.37	.892	.031
	1-20h	661	2.33	.796	.031
Get along well with lecturers	0h	837	1.76	.812	.028
	1-20h	666	1.78	.786	.030
Lecturers interested in what students has to say	0h	835	2.31	1.060	.037
	1-20h	663	2.25	.997	.039
Knows a lot of fellow students to discuss subject-related questions	0h	839	2.40	1.273	.044
	1-20h	663	2.29	1.142	.044
Contact with many students in study programme	0h	840	2.53	1.316	.045
	1-20h	665	2.39	1.188	.046
Satisfaction with study support services (e.g., organised tutoring, (academic) writing, bridging courses, mentoring)	0h	850	3.31	1.732	.059
	1-20h	672	3.29	1.725	.067
Satisfaction with provision of learning facilities (e.g., library, computer centre, work places)	0h	849	2.03	1.314	.045
	1-20h	669	2.14	1.359	.053
Satisfaction with support to balance my studies and paid job	0h	847	4.05	1.699	.058
	1-20h	668	3.60	1.534	.059
Satisfaction with support to balance my studies and family	0h	844	4.18	1.756	.060
	1-20h	668	4.03	1.749	.068
Satisfaction with support in the preparation for my (future) work life	0h	850	3.21	1.396	.048
	1-20h	669	3.21	1.379	.053
How well the study programme prepares for the national labour market	0h	852	2.72	1.528	.052
	1-20h	672	2.54	1.384	.053
How well the study programme prepares for the international labour market	0h	843	3.33	1.546	.053
	1-20h	667	3.30	1.563	.061
I am seriously thinking about changing my current main study programme	0h	850	4.31	1.110	.038
	1-20h	672	4.43	1.059	.041
I am seriously thinking of completely abandoning my higher education studies	0h	849	4.60	.881	.030
	1-20h	672	4.64	.870	.034

Table 5. Independent samples t-test results for non-working vs. 1–20 hours working students

Variables		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Sex	Equal variances assumed	32.480	.000	2.800	1532	.005	.063	.023	.019	.107
	Equal variances not assumed			2.827	1493.014	.005	.063	.022	.019	.107
Age	Equal variances assumed	2.241	.135	-.3724	1532	.000	-.205	.055	-.312	-.097
	Equal variances not assumed			-.3720	1441.344	.000	-.205	.055	-.313	-.097
Highest educational attainment of parents lo/med/hi	Equal variances assumed	.839	.360	.242	1447	.809	.007	.030	-.052	.066
	Equal variances not assumed			.241	1366.124	.810	.007	.030	-.052	.067
Qualification studied for	Equal variances assumed	11.077	.001	1.450	1532	.147	.072	.050	-.025	.169
	Equal variances not assumed			1.472	1511.421	.141	.072	.049	-.024	.168
Field of study	Equal variances assumed	.062	.803	4.619	1532	.000	.659	.143	.379	.939
	Equal variances not assumed			4.615	1442.776	.000	.659	.143	.379	.939
Students with/without financial difficulties	Equal variances assumed	1.176	.278	-.2842	1518	.005	-.119	.042	-.200	-.037
	Equal variances not assumed			-.2857	1466.806	.004	-.119	.041	-.200	-.037
Lecturers give helpful feedback	Equal variances assumed	1.652	.199	.062	1528	.950	.003	.054	-.102	.109
	Equal variances not assumed			.063	1475.609	.950	.003	.053	-.101	.108
Lecturers motivate to do best work	Equal variances assumed	1.253	.263	-.109	1503	.914	-.006	.055	-.114	.102
	Equal variances not assumed			-.109	1449.807	.913	-.006	.055	-.113	.101
Lecturers extremely good at explaining things	Equal variances assumed	7.983	.005	1.014	1497	.311	.045	.044	-.042	.132
	Equal variances not assumed			1.028	1474.515	.304	.045	.044	-.041	.131

Table 5 (continued)

Get along well with lecturers	Equal variances assumed	1.664	.197	-.316	1501	.752	-.013	.042	-.095	.068
	Equal variances not assumed			-.317	1444.590	.751	-.013	.041	-.094	.068
Lecturers interested in what students has to say	Equal variances assumed	7.231	.007	1.158	1496	.247	.062	.054	-.043	.168
	Equal variances not assumed			1.166	1453.869	.244	.062	.053	-.042	.167
Knows a lot of fellow students to discuss subject-related questions	Equal variances assumed	15.998	.000	1.796	1500	.073	.114	.063	-.010	.238
	Equal variances not assumed			1.819	1475.883	.069	.114	.062	-.009	.236
Contact with many students in study programme	Equal variances assumed	18.971	.000	2.262	1503	.024	.148	.065	.020	.276
	Equal variances not assumed			2.289	1477.217	.022	.148	.065	.021	.275
Satisfaction with study support services (e.g., organised tutoring, (academic) writing, bridging courses, mentoring)	Equal variances assumed	.231	.631	.199	1520	.842	.018	.089	-.157	.193
	Equal variances not assumed			.199	1442.651	.842	.018	.089	-.157	.193
Satisfaction with provision of learning facilities (e.g., library, computer centre, work places)	Equal variances assumed	1.456	.228	-1.654	1516	.098	-.114	.069	-.249	.021
	Equal variances not assumed			-1.647	1411.239	.100	-.114	.069	-.250	.022
Satisfaction with support to balance my studies and paid job	Equal variances assumed	16.632	.000	5.425	1513	.000	.457	.084	.292	.622
	Equal variances not assumed			5.491	1485.667	.000	.457	.083	.294	.620
Satisfaction with support to balance my studies and family	Equal variances assumed	.332	.564	1.595	1510	.111	.145	.091	-.033	.323
	Equal variances not assumed			1.596	1433.921	.111	.145	.091	-.033	.323
Satisfaction with support in the preparation for my (future) work life	Equal variances assumed	.332	.565	-.047	1517	.962	-.003	.072	-.144	.137
	Equal variances not assumed			-.047	1442.015	.962	-.003	.072	-.144	.137
How well the study programme prepares for the national labour market	Equal variances assumed	6.683	.010	2.358	1522	.018	.178	.076	.030	.327
	Equal variances not assumed			2.386	1493.253	.017	.178	.075	.032	.325

Table 5 (continued)

How well the study programme prepares for the international labour market	Equal variances assumed	.243	.622	.383	1508	.701	.031	.080	-.127	.189
	Equal variances not assumed			.383	1421.982	.702	.031	.081	-.127	.189
I am seriously thinking about changing my current main study programme	Equal variances assumed	4.611	.032	- 2.170	1520	.030	-.122	.056	-.232	-.012
	Equal variances not assumed			- 2.182	1467.436	.029	-.122	.056	-.231	-.012
I am seriously thinking of completely abandoning my higher education studies	Equal variances assumed	1.913	.167	- 1.010	1519	.313	-.046	.045	-.134	.043
	Equal variances not assumed			- 1.011	1447.435	.312	-.046	.045	-.134	.043

Table 6. Group statistics for non-working vs. >20 hours working students

Variables	Number of hours students working from time to time or during the whole lecture period including non-working students (0h)	N	Mean	Std. Deviation	Std. Error Mean
Sex	0h	859	1.29	.454	.015
	>20h	1181	1.23	.422	.012
Age	0h	859	1.98	1.064	.036
	>20h	1181	3.06	1.037	.030
Highest educational attainment of parents lo/med/hi	0h	795	2.68	.557	.020
	>20h	1146	2.57	.616	.018
Qualification studied for	0h	859	2.56	1.015	.035
	>20h	1181	2.57	.678	.020
Field of study	0h	859	5.17	2.765	.094
	>20h	1178	4.62	2.747	.080
Students with/without financial difficulties	0h	847	2.17	.823	.028
	>20h	1169	2.34	.780	.023
Lecturers give helpful feedback	0h	855	2.26	1.066	.036
	>20h	1181	2.32	1.066	.031
Lecturers motivate to do best work	0h	839	2.53	1.075	.037
	>20h	1163	2.56	1.040	.030
Lecturers extremely good at explaining things	0h	838	2.37	.892	.031
	>20h	1160	2.39	.882	.026
Get along well with lecturers	0h	837	1.76	.812	.028
	>20h	1162	1.84	.823	.024
Lecturers interested in what students has to say	0h	835	2.31	1.060	.037
	>20h	1160	2.29	1.005	.029
Knows a lot of fellow students to discuss subject-related questions	0h	839	2.40	1.273	.044
	>20h	1161	2.26	1.159	.034
Contact with many students in study programme	0h	840	2.53	1.316	.045
	>20h	1162	2.41	1.224	.036
Satisfaction with study support services (e.g., organised tutoring, (academic) writing, bridging courses, mentoring)	0h	850	3.31	1.732	.059
	>20h	1176	3.46	1.702	.050
Satisfaction with provision of learning facilities (e.g., library, computer centre, work places)	0h	849	2.03	1.314	.045
	>20h	1170	2.31	1.486	.043
Satisfaction with support to balance my studies and paid job	0h	847	4.05	1.699	.058
	>20h	1165	3.71	1.518	.044
Satisfaction with support to balance my studies and family	0h	844	4.18	1.756	.060
	>20h	1164	4.05	1.633	.048
Satisfaction with support in the preparation for my (future) work life	0h	850	3.21	1.396	.048
	>20h	1169	3.47	1.536	.045
How well the study programme prepares for the national labour market	0h	852	2.72	1.528	.052
	>20h	1174	2.44	1.351	.039
How well the study programme prepares for the international labour market	0h	843	3.33	1.546	.053
	>20h	1156	3.43	1.581	.046
I am seriously thinking about changing my current main study programme	0h	850	4.31	1.110	.038
	>20h	1176	4.54	.926	.027
I am seriously thinking of completely abandoning my higher education studies	0h	849	4.60	.881	.030
	>20h	1174	4.61	.872	.025

Table 7. Independent samples t-test results for non-working vs. >20 hours working students

Variables		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Sex	Equal variances assumed	34.880	.000	3.006	2038	.003	.059	.020	.020	.097
	Equal variances not assumed			2.971	1767.050	.003	.059	.020	.020	.097
Age	Equal variances assumed	.472	.492	-22.980	2038	.000	-1.080	.047	-1.172	-.988
	Equal variances not assumed			-22.885	1820.448	.000	-1.080	.047	-1.173	-.988
Highest educational attainment of parents lo/med/hi	Equal variances assumed	34.002	.000	3.705	1939	.000	.101	.027	.048	.155
	Equal variances not assumed			3.773	1809.418	.000	.101	.027	.049	.154
Qualification studied for	Equal variances assumed	90.815	.000	-.089	2038	.929	-.003	.038	-.077	.070
	Equal variances not assumed			-.084	1398.250	.933	-.003	.040	-.082	.075
Field of study	Equal variances assumed	1.252	.263	4.476	2035	.000	.553	.124	.311	.796
	Equal variances not assumed			4.472	1841.635	.000	.553	.124	.311	.796
Students with/without financial difficulties	Equal variances assumed	1.969	.161	-4.933	2014	.000	-.178	.036	-.248	-.107
	Equal variances not assumed			-4.891	1765.073	.000	-.178	.036	-.249	-.106
Lecturers give helpful feedback	Equal variances assumed	.207	.649	-1.209	2034	.227	-.058	.048	-.152	.036
	Equal variances not assumed			-1.209	1840.585	.227	-.058	.048	-.152	.036
Lecturers motivate to do best work	Equal variances assumed	1.161	.281	-.608	2000	.543	-.029	.048	-.123	.065
	Equal variances not assumed			-.604	1769.368	.546	-.029	.048	-.123	.065
Lecturers extremely good at explaining things	Equal variances assumed	.062	.803	-.458	1996	.647	-.018	.040	-.097	.060
	Equal variances not assumed			-.457	1790.676	.648	-.018	.040	-.097	.061

Table 7 (continued)

Get along well with lecturers	Equal variances assumed	.724	.395	-2.076	1997	.038	-.077	.037	-.150	-.004
	Equal variances not assumed			-2.081	1816.120	.038	-.077	.037	-.150	-.004
Lecturers interested in what students has to say	Equal variances assumed	6.054	.014	.528	1993	.597	.025	.047	-.067	.116
	Equal variances not assumed			.523	1738.083	.601	.025	.047	-.068	.117
Knows a lot of fellow students to discuss subject-related questions	Equal variances assumed	20.454	.000	2.507	1998	.012	.137	.055	.030	.245
	Equal variances not assumed			2.470	1701.582	.014	.137	.056	.028	.246
Contact with many students in study programme	Equal variances assumed	13.505	.000	2.183	2000	.029	.125	.057	.013	.237
	Equal variances not assumed			2.157	1727.971	.031	.125	.058	.011	.238
Satisfaction with study support services (e.g., organised tutoring, (academic) writing, bridging courses, mentoring)	Equal variances assumed	.390	.533	-1.951	2024	.051	-.151	.077	-.302	.001
	Equal variances not assumed			-1.946	1810.039	.052	-.151	.077	-.302	.001
Satisfaction with provision of learning facilities (e.g., library, computer centre, work places)	Equal variances assumed	26.155	.000	-4.345	2017	.000	-.277	.064	-.403	-.152
	Equal variances not assumed			-4.430	1940.058	.000	-.277	.063	-.400	-.155
Satisfaction with support to balance my studies and paid job	Equal variances assumed	25.370	.000	4.742	2010	.000	.342	.072	.200	.483
	Equal variances not assumed			4.658	1697.644	.000	.342	.073	.198	.486
Satisfaction with support to balance my studies and family	Equal variances assumed	16.516	.000	1.667	2006	.096	.127	.076	-.022	.277
	Equal variances not assumed			1.648	1736.850	.100	.127	.077	-.024	.278
Satisfaction with support in the preparation for my (future) work life	Equal variances assumed	18.609	.000	-3.906	2017	.000	-.260	.067	-.391	-.130
	Equal variances not assumed			-3.965	1919.871	.000	-.260	.066	-.389	-.132
How well the study programme prepares for the national labour market	Equal variances assumed	16.684	.000	4.372	2024	.000	.281	.064	.155	.407
	Equal variances not assumed			4.287	1694.457	.000	.281	.066	.152	.409

Table 7 (continued)

How well the study programme prepares for the international labour market	Equal variances assumed	1.675	.196	-1.450	1997	.147	-.103	.071	-.242	.036
	Equal variances not assumed			-1.455	1837.057	.146	-.103	.071	-.241	.036
I am seriously thinking about changing my current main study programme	Equal variances assumed	39.081	.000	-5.019	2024	.000	-.227	.045	-.316	-.139
	Equal variances not assumed			-4.876	1621.352	.000	-.227	.047	-.319	-.136
I am seriously thinking of completely abandoning my higher education studies	Equal variances assumed	.099	.753	-.236	2021	.814	-.009	.039	-.087	.068
	Equal variances not assumed			-.235	1816.297	.814	-.009	.040	-.087	.068

Table 8. List of variables

Qualification studied for (1=Bachelor [ISCED 6], 2=Master [ISCED 7], 3=Long national degree [ISCED 7]), ISCED = International Standard Classification of Education
Age (1= up to 21 years, 2=22 to <25 years, 3=25 to <30 years, 4=30 years or over)
Sex (1= Female, 2= Male)
Field of study (Education, Arts and humanities, Social sciences, journalism & information, Business, administration & law, Natural sciences, mathematics & statistics, ICTs, Engineering, manufacturing & construction, Agriculture, forestry, fisheries & veterinary, Health & welfare, Services)
Students with/without financial difficulties (1=Students with financial difficulties, 2=Middle category, 3=Students without financial difficulties)
Lecturers give helpful feedback. (1=Strongly agree to 5=Do not agree at all)
Lecturers motivate to do best work. (1=Strongly agree to 5=Do not agree at all)
Lecturers are extremely good at explaining things. (1=Strongly agree to 5=Do not agree at all)
Get along well with lecturers. (1=Strongly agree to 5=Do not agree at all)
Lecturers are interested in what students have to say. (1=Strongly agree to 5=Do not agree at all)
Know a lot of fellow students to discuss subject-related questions. (1=Strongly agree to 5=Do not agree at all)
Contact with many students in the study programme. (1=Strongly agree to 5=Do not agree at all)
Satisfaction with study support services (e.g., organised tutoring, (academic) writing, bridging courses, mentoring). (1=Entirely sufficient to 5=Not at all)
Satisfaction with the provision of learning facilities (e.g., library, computer centre, workplaces). (1=Entirely sufficient to 5=Not at all)
Satisfaction with support to balance my studies and paid job. (1=Entirely sufficient to 5=Not at all)
Satisfaction with support to balance my studies and family. (1=Entirely sufficient to 5=Not at all)
Satisfaction with support in the preparation for my (future) work life. (1=Entirely sufficient to 5=Not at all)
How well the study programme prepares for the national labour market. (1=Very well to 5=Very poorly)
How well the study programme prepares for the international labour market. (1=Very well to 5=Very poorly)
How closely related is/are your paid job(s) to the content of your study programme? (1=Matched, 2=Unmatched)
Number of hours students work. (1=0 hours, 1=1-20h, 3=>20h)
Students (not) living with parents. (0=Students living with parents, 1=Students not living with parents)
Highest educational attainment of parents: low/med/hi. [1=Low education background (ISCED 0-2), 2=Medium education level of parents (ISCED 3-4), 3=High education level of parents (ISCED 5-8)]
I am seriously thinking about changing my current main study programme (1=Strongly agree to 5=Strongly disagree)
I am seriously thinking of completely abandoning my higher education studies (1=Strongly agree to 5=Strongly disagree)

SUMMARY IN ESTONIAN

Üliõpilaste püsijäämine on üks asjakohaseid näitajaid selle kohta, kui tõhusalt ülikoolid toetavad õppimist ja edendavad institutsionaalset mainet. Eestis, kus iga kolmas üliõpilane identifitseerib end eelkõige töötajana (Hauschildt jt, 2021), nõuab püsijäämise mõistmine üliõpilaste kaksikrollide kui nii õppijate kui ka töötajate tunnustamist ning uurimist, kuidas see duaalsus kujundab nende pühendumust kõrghariduses jätkamisele. Kuigi töö võib pakkuda rahalist kindlust ja väärtuslikku professionaalset kogemust, võib see samuti raskendada üliõpilastel akadeemiliselt kaasatuks jäämist või isiklike ja akadeemiliste kohustuste tasakaalustamist. Tegelikult võib töötavate ülikooliüliõpilaste püsijäämist kujundada keeruline tegurite võrgustik, sealhulgas isiklikud asjaolud ja institutsionaalne keskkond, mis kas toetab või takistab nende osalemist. Siiski on üliõpilaste, kes töötavad õppimise ajal, kogemused endiselt ebapiisavalt mõistetud (Summer jt, 2023). See mõistmise puudumine võib takistada sisulist institutsionaalset kasvu, vältides ülikoole nende üliõpilaste vajadusi täielikult toetada ja nende akadeemilist püsijäämist edendada. Nendest teadmistest lähtudes on selle uurimistöö eesmärk anda empiirilisi tõendeid selle kohta, kuidas sotsiaal-demograafilised tegurid ja institutsionaalsed tingimused kujundavad töötavate üliõpilaste katkestamiskavatsusi kõrghariduses. Selle uuringu keskne uurimisküsimus oli: Kuidas saavad ülikoolid paremini arvestada töötavate üliõpilaste ootustega, et parandada püsijäämist? Selle üldise küsimuse lahendamiseks esitati järgmised alapüsimumused: (1) Millised sotsiaal-demograafilised tegurid mõjutavad töötavate üliõpilaste katkestamiskavatsusi? (2) Kuidas seostuvad ülikooli sotsiaalse kapitali tajumused töötavate üliõpilaste katkestamiskavatsustega? (3) Milliseid konkreetseid tugiteenuseid peavad töötavad üliõpilased oluliseks akadeemiliste, professionaalsete ja isiklike kohustuste integreerimisel?

Dissertatsioon kasutas kvantitatiivset metoodikat, rakendades statistilisi tehnikaid, nagu mitteparametrilised testid, uurivad ja kinnitavad faktoranalüüsid, struktuurivõrrandite modelleerimine ja Chi-ruudu automaatne interaktsiooni tuvastamine. Selle uuringu andmed pärinevad Eurostudent VII uuringust (2018-2021), mis on riikideülene projekt, mis kogub ühtlustatud teavet kõrgharidusüliõpilaste kohta kogu Euroopas. Eestis viidi Eurostudent VII uuring läbi ajavahemikus veebruarist juulini 2019, mille tulemusena saadi 1902 töötava üliõpilase valim. Uuring

hõlmab rahvuslikult esinduslikke valimeid üliõpilastest, kes on registreerunud kolmanda taseme haridusse, ja pakub üksikasjalikku teavet nende sotsiaalmajandusliku tausta, elamis- ja õpitingimuste, tööalase tegevuse õpingute ajal, tugiteenuste kasutamise ning kõrghariduse tajumise kohta.

Käesoleva dissertatsiooni teoreetiline raamistik pakkus struktureeritud lähenemisviisi, mis aitas uurida individuaalsete väljakutsete ja institutsionaalsete dünaamikate vastasmõju, tuues esile, kuidas erinevad kapitalivormid - kultuuriline, rahaline, perekondlik, tööalane ja sotsiaalne – kujundavad töötavate üliõpilaste püsijäämist. Esimene alapüsimus uurib, millised üliõpilased on kõige suuremas katkestamisohus, vaadeldes peamisi püsimist mõjutavaid tegureid, sealhulgas sugu, vanust, vanemate haridust, õpitavat kvalifikatsiooni, õppevaldkonda, rahalist olukorda, elukorraldust, hariduse ja töö vastavust ning töötunde. Teine alapüsimus käsitleb sotsiaalsete sidemete rolli ülikoolis, küsides, kas suhted õppejõudude ja kaasüliõpilastega ning rahulolu tugiteenustega mõjutavad töötavate üliõpilaste õpingutes püsimist. Kolmas alapüsimus hindab, kuidas need üliõpilased tajuvad olemasolevaid tugiteenuseid ja kas nende rahulolu varieerub sõltuvalt nende sotsiaal-demograafilisest taustast.

Tulemused tõid esile, et töötavad üliõpilased Eestis, rühm, mida iseloomustavad mitmekesised demograafilised taustad ja märkimisväärne rahaline iseseisvus, seisavad silmitsi keeruliste pingetega. Peamiselt keskklassi või madalama sissetulekuga taustast pärit üliõpilased peavad toime tulema töö ja akadeemiliste nõudmiste vastandlike ootustega. Rahaline surve ilmnes eriti olulise probleemina, kuna paljud üliõpilased töötavad elamiskulude või haridusega seotud kulude katmiseks. Siiski ei ole kogu tööalane tegevus kooskõlas nende õppevaldkonnaga, mis võib kujutada potentsiaalset ohtu pikaajalistele karjäärivõimalustele. Töö ja õpingute topeltsurve süveneb veelgi institutsionaalsete takistuste tõttu, sealhulgas jäigad akadeemilised struktuurid, ajakava konfliktid ja kohustusliku osalemise nõuded.

Uurimistöö esitas veenvaid tõendeid seoste kohta erinevate sotsiaal-demograafiliste tegurite ja töötavate üliõpilaste katkestamiskavatsuste vahel. Näiteks on sool statistiliselt oluline mõju kavatsusele õpingud täielikult katkestada – meessoost üliõpilased kaaluvad ülikoolist lahkumist tõenäolisemalt kui naissoost üliõpilased, kuigi see ei mõjuta otsuseid õppekava vahetada. Vanusel on oluline mõju õppekava vahetamise tõenäosusele - nooremad üliõpilased on altimad oma akadeemilist teed

ümber mõtlema, kuid vanus ei avalda statistiliselt olulist mõju kavatsustele kõrgharidusest loobuda. Ka kvalifikatsioonitasemel on oma roll, kuna bakalaureuseõppe üliõpilased kaaluvad õppekava vahetamist tõenäolisemalt kui magistriõppe üliõpilased, kuid see ei mõjuta oluliselt tõenäosust ülikoolist täielikult lahkuda. Õppevaldkonnal on mõlema tulemuse puhul suur tähtsus – kunsti- ja humanitaarteaduste ning IKT valdkonna üliõpilased on altimad oma õppekava ümber hindama ja väljendavad sagedamini kavatsust õpingud katkestada. Vanemate haridustase ei avalda aga statistiliselt olulist mõju ei õppekava vahetamisele ega ülikoolist lahkumise kavatsustele. Rahalised raskused suurendavad oluliselt nii õppekava vahetamise tõenäosust kui ka kavatsust õpingud katkestada. Samuti on hariduse ja töö mittevastavusel statistiliselt oluline mõju – üliõpilased, kes töötavad töökohtadel, mis ei ole seotud nende õpingutega, kaaluvad tõenäolisemalt nii õppekava vahetamist kui ka ülikoolist lahkumist. Ka töötundide arv mõjutab mõlemat tulemust – üliõpilased, kes töötavad 1-20 tundi nädalas, on oluliselt altimad oma õpinguid ümber mõtlema võrreldes nendega, kes töötavad pikemaid tunde.

Peale selle toovad tulemused esile, et ülikooli sotsiaalsel kapitalil on statistiliselt oluline mõju töötavate üliõpilaste katkestamiskavatsuste vähendamisel. Tegelikult näitasid tulemused, et ülikooli sotsiaalne kapital koosneb neljast peamisest mõõtmest: õppejõu ja üliõpilase suhted, rahulolu tugiteenustega, eakaaslaste võrgustikud ja tööhõiveusalduse (employability trust) tase. Nendest osutusid kõige tugevamaks teguriks õppejõu ja üliõpilase suhted, millele järgnesid tööhõiveusk, rahulolu tugiteenustega ja eakaaslaste võrgustikud. Õppejõu ja üliõpilase suhte mõjukuse aluseks on motivatsiooni, toe ja kaasatuse tunne, mida see loob. Üliõpilased tundsid end julgustatuna, kui õppejõud motiveerisid neid andma endast parima, pakkusid kasulikku tagasisidet ja näitasid üles siirast huvi nende ideede ja kogemuste vastu. Tööhõiveusk mängis samuti olulist rolli, peegeldades üliõpilaste kindlustunnet, et nende kraadi hinnatakse tööturul ja see on asjakohane nende tulevaste karjääride jaoks. Kuigi eakaaslaste võrgustikud ja tugiteenused andsid positiivse panuse ülikooli sotsiaalsesse kapitali, olid nende mõjud väiksemad, mis viitab sellele, et tähenduslikud akadeemilised suhted ja selge karjäärialane seotus on töötavate üliõpilaste jaoks eriti olulised.

Tulemused näitasid samuti, et õppejõu ja üliõpilase suhted, rahulolu tugiteenustega ja eakaaslaste võrgustikud mõjutavad katkestamiskavatsusi nii otseselt kui ka kaudselt tööhõiveusalduse kaudu. Iga neist teguritest ennustas positiivselt tööhõiveusku, mis omakorda oli negatiivselt seotud

katkestamiskavatsustega. Teisisõnu, üliõpilased, kes kogevad toetavaid suhteid, usaldusväärseid teenuseid ja tugevat seotust ülikooliga, usuvad tõenäolisemalt oma kraadi sümboolsesse väärtusesse, mis vähendab nende tõenäosust kaaluda õpingute katkestamist. Samal ajal avaldasid need tegurid ka otsest mõju katkestamiskavatsustele, kusjuures õppejõu ja üliõpilase suhted avaldasid kõige tugevamat mõju ning eakaaslaste võrgustikud kõige nõrgemat. See muster viitas osalisele vahendusele: tööhõiveusk selgitab osa mõjust, kuid iga tegur kujundab katkestamiskavatsusi ka iseseisvalt. See tähendab, et õppejõu ja üliõpilase suhted on kõige mõjukamad nii tööhõiveusalduse tugevdamise kaudu kui ka otseselt katkestamiskavatsuste vähendamisel, millele järgnevad rahulolu tugiteenustega ja eakaaslaste võrgustikud, mis mängivad väiksemaid, kuid siiski olulisi rolle. Selles kontekstis avaldas rahulolu tugiteenustega keerukamat seost katkestamiskavatsustega. Kuigi töötavad üliõpilased hindasid üldiselt olemasolevaid teenuseid, ei käsitlenud need alati põhiväljakutseid, millega töötavad üliõpilased silmitsi seisavad akadeemiliste, tööalaste ja isiklike kohustuste integreerimisel. Siiski näitasid tugiteenused tööhõiveusalduse vahendusel märkimisväärset potentsiaali vähendada katkestamiskavatsusi, viidates sellele, et toetuse tihedam seostamine töötavate üliõpilaste karjääripüüdluste ja pikaajaliste hariduseesmärkidega võib suurendada nende püsivust.

Lisaks näitavad tulemused, milliseid tugiteenuseid peavad töötavad üliõpilased oluliseks akadeemiliste, tööalaste ja isiklike kohustuste ühendamisel. Tulemused näitavad, et rahulolu ülikoolide tugiteenustega varieerub sõltuvalt õppevaldkonnast, vanusest, töötundide arvust ja sellest, kui tihedalt on üliõpilaste töö seotud nende õpingutega. Õppetoetusteenuste, nagu juhendamine, mentorlus ja akadeemiline kirjutamine, puhul eristati kolm rühma. IKT ja sotsiaalteaduste üliõpilased teatasid mõõdukast rahulolust, kuid nende hulgas oli ka märkimisväärne arv neid, kes tundsid, et nad ei vaja tuge. Loodusteaduste ja kunstide üliõpilased olid üldiselt rahulolevamad, eriti siis, kui nende töö vastas nende õppevaldkonnale. Vastupidi, majanduse ja tervishoiu valdkonna üliõpilased olid vähem rahul ja ilmutasid suuremat huvipuudust. Rahulolu õpikeskkonnaga, sealhulgas raamatukogude ja arvutikeskustega, oli üldiselt kõrgem. IKT ja loodusteaduste üliõpilased, eriti nooremad, väljendasid suurimat rahulolu, samas kui teised jäid pigem neutraalseks. Toetus õpingute ja töö tasakaalustamiseks hinnati aga palju madalamaks. Pika õppevormi üliõpilased olid eriti rahulolematud ning nooremad bakalaureuse- ja magistriõppe üliõpilased, kelle töö ei vastanud nende õpingutele, väljendasid samuti tugevat rahulolematust. Sarnased mustrid

ilmnesid õpingute ja pereelu tasakaalustamise toetuses: IKT ja majanduse üliõpilased olid kõige vähem huvitatud, samas kui hariduse ja tervishoiu üliõpilased teatasid mõõdukast rahulolust. Vähem tunde töötavad üliõpilased hindasid neid tugivõimalusi üldiselt positiivsemalt. Töölukuks ettevalmistamise toetus näitas samuti selgeid vanuselisi erinevusi. Nooremad üliõpilased, eriti kuni 21-aastased majanduse, kunsti ja humanitaarteaduste õppijad, olid kõige vähem rahul, samas kui 25-30 aasta vanused üliõpilased ning need, kelle töö vastas nende õpingutele, olid positiivsemad. Üldiselt oli rahulolu tase kõrgem, kui haridus ja töö olid omavahel kooskõlas.

Veelgi enam rõhutab käesolev uurimistöö vajadust kohandatud tugiteenuste järele töötavatele üliõpilastele, et käsitleda nende ainulaadseid vajadusi õpingute, töö ja pereelu tasakaalustamisel. Tulemused toovad esile töötavate üliõpilaste konkreetsete tugivajadused vastavalt nende nädalasele töötundide arvule ja töö ning hariduseesmärkide vastavusele. Üliõpilaste puhul, kes töötavad vähem kui 20 tundi nädalas ja kelle töö vastab nende õpingutele, on peamiseks vajadusteks paindlikud õppetundide ajad, kaugõppevõimalused, osalise tööajaga praktikakohad ja ajajuhtimise töötoad. Seevastu üliõpilased, kelle töö ei ole seotud nende õpingutega, vajavad valdkondadevahelisi koolitusvõimalusi ja oskuste ühtlustamise kursusi. Üliõpilased, kes töötavad rohkem kui 20 tundi nädalas vastavuses oma õpingutega, saavad enim kasu õhtustest või nädalavahetuse õppetundidest, veebikursustest ja -ressurssidest ning töö hoidmise ja karjääriarengu teenustest. Need, kes töötavad samas mahu töökohtadel, mis ei vasta nende õpingutele, väljendavad vajadust õhtuste või nädalavahetuse sertifikaadiprogrammide, karjäärimuutuse nõustamise ja üleminekutoe järele. Kõigi rühmade ühised vajadused hõlmavad võrgustumisüritusi, karjäärinõustamist, oskuste arendamise töötubasid, iduettevõtluse tuge ning tööpraktika ja töövarjutamise võimalusi. Need tulemused rõhutavad vajadust pakkuda diferentseeritud ja kohandatud teenuseid, et arvestada töötavate üliõpilaste erinevate olukordadega.

Kokkuvõttes viitavad need tulemused sellele, et ülikoolid saavad paremini arvestada töötavate üliõpilaste ootustega, rakendades püsijäämise suhtes mitmemõõtmelist lähenemisviisi. See lähenemisviis hõlmab sotsiaal-demograafiliste ebavõrdsuste käsitlemist sihipärase rahalise ja akadeemilise toe kaudu, ülikooli sotsiaalse kapitali tugevdamist positiivsete õppejõu-üliõpilase suhete ja eakaaslaste võrgustike edendamise teel, paindlike ja karjääriga seotud õpivõimaluste kujundamist, mis peegeldavad üliõpilaste tööga seotud reaalsust, ning kõrghariduse tajutud

väärtuse suurendamist tähenduslike seoste kaudu tööturu ja pikaajalise karjäärialase arenguga. Käesolevate tulemuste esitamisega pakub see uurimistöö väärtuslikke teadmisi õpetajatele, kõrgkoolidele ja hariduse juhtimise sidusrühmadele.

CURRICULUM VITAE

Education

2020–2024	Ph.D. in Management, Estonian Business School.
2017–2019	MA, Cultural Management (Applied Heritage), University of Tartu.
2016–2017	MA, Quantitative Economics, University of Tartu.
2013–2015	MBA, International Business, University of Dhaka.
2012–2014	Diploma (Level 7) in Banking, Institute of Bankers Bangladesh.
2006–2011	BBA, Finance, University of Dhaka.

Institutions and job positions

2024–present	European College of Polytechnics, Head of Academic Division.
2020– present	Estonian Business School, Ph.D. Student/TA.
2023–2024	Woxsen University, Assistant Professor of Management.
2022–2023	Sillamäe №3 Secondary School, TEFL Teacher.
2019–2021	Estonian Refugee Council, Trainer/Academic Facilitator.
2016–2017	Global University Bangladesh, Lecturer.
2012–2015	Sunrise College, Lecturer.

Research fieldwork

2018–2019	Council of Europe, Strasbourg, France.
2018–2019	CRISCO-EU, Tartu City Municipality, Estonia.

Teaching courses

Bachelor	Human Resource Management, Research Methods, Principles of Management, Organisational Behaviour, E-commerce.
Masters	Managerial Economics, Strategic Leadership, Academic Writing.

Honours & awards

2020 – 2024	State Funded Doctoral Position, Estonian Business School, Estonia.
2023 – 2024	Research funding, Estonian Business School, Estonia.
2020– 2020	Scholarship Support for Art activities, Estonian Ministry of Culture.
2018– 2018	Raefond Scholarship, University of Tartu Foundation, Estonia.
2016– 2016	Writers Association Fund, Bangladesh.

Publication & other info

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RETENTION OF WORKING UNIVERSITY STUDENTS IN HIGHER EDUCATION: INSIGHTS FROM THE ESTONIAN CONTEXT

This dissertation draws on three published articles that together explore what matters for the retention of working students in higher education. This research aims to determine how universities can better meet the expectations of working students and enhance their persistence. Specifically, it examines which socio-demographic characteristics affect dropout intentions, how perceptions of university social capital relate to these intentions, and which support services students consider most important when integrating academic, professional, and personal responsibilities. The quantitative analysis is based on Eurostudent VII survey data (2018–2021) comprising 1,902 working students in Estonia.

The results show that gender, age, qualification level, field of study, financial situation, work–study alignment, and weekly working hours all matter. Male students are more likely than females to consider abandoning studies, while younger and bachelor’s students tend to reconsider their study programmes. Students in the arts, humanities, and ICT fields are the most likely to express dropout intentions. Financial hardship and employment unrelated to the field of study further increase the likelihood of both programme change and complete withdrawal. Interestingly, students working between one and twenty hours per week are more inclined to rethink their studies than those working longer hours. University social capital also plays a decisive role in reducing dropout intentions. It comprises four dimensions—teacher–student relationships, employability trust, support service satisfaction,

and peer networks. Among these, teacher–student relationships exert the strongest influence, both directly and indirectly, by fostering employability trust—the belief that one’s degree holds value in the labour market. Students who experience motivating and supportive relationships with lecturers are less likely to consider leaving university. Employability trust itself emerges as a key protective factor, linking positive academic experiences to a lower likelihood of dropout. Support services and peer networks also contribute positively, though to a lesser extent. Support service satisfaction affects dropout intentions indirectly through employability trust: when students perceive services as relevant to their careers, their confidence in the value of their education strengthens, reducing dropout intentions. However, many working students felt that existing services did not fully address their challenges in balancing study, work, and personal responsibilities. Satisfaction with support services varies by discipline, age, working hours, and job alignment. Students whose employment relates to their studies report higher satisfaction, especially in ICT and the natural sciences. Those working fewer hours appreciate flexible schedules and remote learning options, while those working longer or in unrelated jobs value targeted career support and skills development.

By presenting these findings, the research offers empirical evidence and discusses their key implications for improving the retention of working students in higher education.

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