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TLIC PAPER

Institutional Factors and Student Satisfaction of Post-graduate Adult Learners

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ABSTRACT

In recent years, various stakeholders, including researchers, policymakers, and students, have displayed a growing interest in assessing the effectiveness and performance of higher education institutions. Although no single indicator is sufficient to describe the organizational quality of the university, student satisfaction is one of the most often used indicators. Extensive prior research has consistently demonstrated that high levels of student satisfaction positively influence crucial performance measures such as student retention and institutional graduation rates. Although student satisfaction has been extensively studied, particularly among undergraduate students, much less research has been done among adult learners returning to college. This paper aims to identify the key institutional factors that significantly impact the satisfaction of part-time postgraduate students. We hope that the insights of the study can help universities to allocate their limited resources and ultimately to enhance the well-being of the students.

KEYWORDS

student satisfaction, institutional factors

1 INTRODUCTION

Universities worldwide are progressively acknowledging that higher education is evolving into a service-oriented industry [1]. In higher education, student satisfaction is of utmost importance, benefiting both educational institutions and the individual students themselves [2]. To successfully meet their students' expectations and to make them satisfied, tertiary institutions must allocate their limited resources to their most essential activities. This paper continues the substantial literature that examines student satisfaction and tries to provide valuable insight on those essential institutional factors leading to higher student satisfaction. We believe that institutions that continually evaluate their own activities can meet the expectations of different stakeholders and create an environment where students are satisfied and successful in their studies.

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The paper is organized as follows. Section 2 offers a short literature review focusing on the models and measurements of student satisfaction. While scholars have extensively explored student satisfaction at the undergraduate level, there has been significantly less research attention dedicated to the master's level [3]. Furthermore, there is notable lack of studies and reports addressing this issue within the context of part-time adult learners. In sections 3 and 4, we do our part to fill this gap by reporting the findings of our three experiments on the relationship between institutional factors and overall student satisfaction among part-time postgraduate students. The purpose of the experiments is to identify which areas of the university's activities have a significant impact on the satisfaction experienced by part-time postgraduate students. The results of three experiments are summarized in Section 5, and the paper ends in Section 6 where a few concluding thoughts and suggested directions for future research are provided.

2 STUDENT SATISFACTION IN HIGHER EDUCATION

From the students' point of view, the key objective for higher education institutions is to provide good educational services [4]. Although there are several methods of evaluating the quality of education, student satisfaction is probably the most popular metric. Scholars have defined student satisfaction in many ways. For example, it has been seen as "an assessment of student outcomes and experiences in education and life on campus" [5], or as "the students' perception of graduate educational experiences and values received when enrolling in a training institution" [4]. Although there are certain differences in definitions, student satisfaction arises when actual performance meets or exceeds the student's expectations.

2.1 Modeling student satisfaction

Scholars have tried to analyze the key elements of student satisfaction at higher education in different ways. For example, Shonfeld [6] recognized the following three components: instructors, quality, and teaching methods. On the other hand, Alnawas [7] identified the following factors: organization and management, quality of teaching, personal development, assessment and feedback, learning resources and academic support. Trang et al. [4] focused on post graduate students' satisfaction from different perspectives, and they found out that tuition fees, serviceability, and lecturers had statistically significant impact on satisfaction.

In previous studies, factors affecting customer satisfaction are typically categorized into two primary groups: institutional factors and personal factors [8]. Institutional factors encompass elements such as course structure and content, support from faculty and staff, facilities (including classrooms and equipment), and the overall campus environment (including social life and activity involvement). On the other hand, personal factors encompass student characteristics like age, gender, motivation, and lifestyle [9]. Given that previous research has demonstrated that institutional variables tend to have a more significant impact on satisfaction than personal ones [10], this study concentrates only on the institutional factors.

2.2 Measuring student satisfaction

Previous studies have indicated that student satisfaction has a positive effect on several indicators of university performance, such as: individual student retention

[11], institutional graduation rates [12], and institutional alumni giving rates [13]. Therefore, higher education institutions all over the world are collecting students' feedback on different areas of academic life. The main data collection method has been some kind of satisfaction survey where researchers have used different approaches. The first approach is to see higher education as a service industry [1] and to use a standardized service quality questionnaire like SERVQUAL. SERVQUAL is an off-the-shelf instrument containing 22 items and each item measures both the perception and the expectation of a particular service factor [14]. Though widely used, its application in higher education satisfaction studies has also received some criticism from various researchers [15]. For example, if higher education institutions prioritize pleasing the students the same way companies cater to their customers, it could lead to a reduced focus on fulfilling students' essential learning needs and a greater emphasis on fulfilling their desires [2]. The second alternative is to focus on the special features of higher education and developed tailor-made student satisfaction questionnaires. For example, ref. [16] has created a widely accepted questionnaire based on the expectation–confirmation model, the technology acceptance model, the theory of planned behavior, and flow theory. Other examples of this popular approach are e.g. refs. [17] and [18]. Although this approach has many advantages, its main challenge is the comparability and commensurability of the results obtained in the various studies.

The third option has emerged from the desire of policymakers and other stakeholders to be able to evaluate and compare higher education institutions and their performance. To this end, a variety of national student satisfaction measurement methods have been developed in several countries. For example, in the UK nearly half a million final year students across the UK are invited to take part in the National Student Survey (NSS) every year [19]. NNS was created as a tool by which universities could assess their own teaching quality and seek to improve student satisfaction [20]. It contains questions on the following aspects of student experience [19]: Teaching on my course, Learning opportunities, Marking and assessment, Academic support. Organization and management, Learning resources, Student voice, Mental well-being services, and Freedom of expression/Overall Satisfaction. In Finland, a similar approach is used and Statistics Finland, the Ministry of Culture and Education and the Finnish National Agency for Education co-organize a national AVOP survey for all students graduating from the Finnish universities of applied sciences. To ensure the privacy of respondents, it is not possible to retrieve an individual student's answers from the AVOP database, but the results are summarized. The annual summary of the degree program includes the number of respondents and the mean values for each question. If there are fewer than five respondents per year, results for that year is not presented.

3 STUDY DESIGN OF THE FIRST EXPERIMENT

As mentioned earlier we will report the findings of three student satisfactions studies and the aim of all of them is to identify the institutional factors having the statistically significant impact on general student satisfaction among post-graduate adult learners. Our first study examines the student satisfaction in seven engineering programs at a Finnish university of applied sciences. The indicative duration of the analyzed degree programs is two years, but each student is automatically granted a three-year right of study. If the student has not completed his or her studies within three years, he or she may apply for a discretionary extension of up to one year.

All students in these programs are adults with several years of work experience after gaining their bachelor's degree, and they have returned to college for further education. Our sample contained all students who graduated from those programs in 2019–2022. The total number of graduated students was 339, and they earned their degree in seven different engineering programs (EP1-EP7). Table 1 shows the number of graduates in each program together with graduation and admission rates. Although in those degree programs which are easier to access (higher acceptance rates) have a slightly lower degree of graduation, the difference is not statistically significant.

Table 1. Number of graduates, graduation and admission rates of the degree programs

Degree Program	N	Graduation Rate	Admission Rate
EP1	27	63.6	73.3
EP2	78	79.1	53.1
EP3	42	70.8	64.0
EP4	21	44.4	75.0
EP5	51	66.7	72.9
EP6	60	64.2	60.9
EP7	60	75.5	77.8

3.1 Satisfaction data

The student satisfaction data was retrieved from the Finnish national AVOP survey database. The master's degree version of the AVOP survey measures student satisfaction from eleven specific and one general perspectives, as can be seen in Table 2.

Table 2. Question groups and the number of questions in each group

Question Group	Number of Questions
Study content	3
Planning and counselling	2
Teaching	3
Studying	2
Learning environments	3
Support services	3
Feedback and assessment	3
Internationality and multiculturalism	2
Connections with the working life	2
Career services	2
Thesis	2
General satisfaction	1

Based on the question groups of the AVOP survey, a conceptual model shown in Figure 1 was developed to examine the impact of different institutional factors on

the general student satisfaction. The original research hypothesis was that all eleven factors have a significant positive impact on student satisfaction.

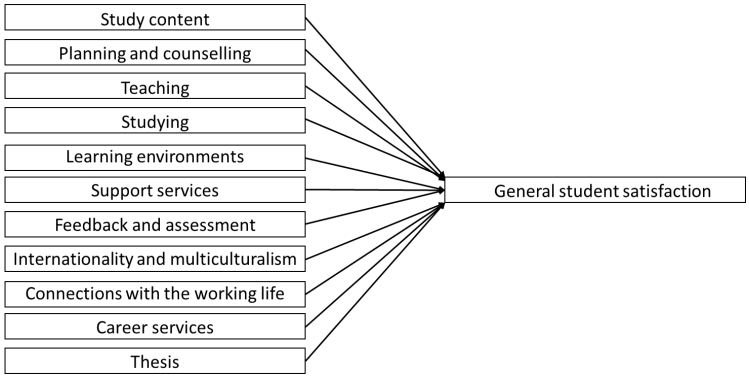

Fig. 1. Original conceptual model

To verify the model, we calculated the correlations between the factors of the model and general satisfaction (see Table 3). The results indicate that seven areas (study content, planning and counselling, teaching, studying, feedback and assessment, career services, and thesis) have a statistically significant effect on general student satisfaction at 0.01 level and one area (learning environments) at 0.05 level. Three areas (support services, internationality and multiculturalism, and connections with the working life) instead do not have statistically significant effect on student satisfaction.

Table 3. Correlations between general and area-specific student satisfactions

Institutional Factor	Correlation	p-Value
Study content	0.91**	0.004
Planning and counselling	0.93**	0.002
Teaching	0.95**	0.001
Studying	0.93**	0.002
Learning environments	0.87*	0.011
Support services	0.62	0.136
Feedback and assessment	0.90**	0.005
Internationality and multiculturalism	0.14	0.767
Connections with the working life	0.65	0.116
Career services	0.89**	0.008
Thesis	0.93**	0.002

Notes: *p < .05; **p < .01.

4 GENERALIZING AND VERIFYING THE ORIGINAL RESULTS

The results reported on the previous section used the data of the engineering students from a single college. In this section, we broaden our investigation two different ways. First, we want to see if our findings can be generalized to other Finnish schools of engineering by conducting the same analyses for eight other universities of applied sciences. Secondly, we will also extend the examination to

adult students from other fields, and we will conduct the same experiment using data from seven non-engineering degree programs.

4.1 The results of other Finnish schools of engineering

There are 22 universities of applied sciences operating under the Ministry of Education and Culture in Finland, 18 of which provide training in the field of technology [21]. Because the colleges are of different sizes, the exam was limited to eight UASs, each of which gave 100–300 Master of Engineering degrees during 2019–2022. The total number of students in this sample was 1,368.

Correlations and associated p-values of these eight UAS are shown in Table 4. The results are largely consistent with the findings reported in the previous chapter. However, data from other engineering schools showed that two additional factors (relationships with working life and support services) also had a statistically positive effect on overall student satisfaction.

Table 4. Results of other schools of engineering

Institutional Factor	Correlation	p-Value
Study content	0.78*	0.022
Planning and counselling	0.85**	0.008
Teaching	0.87**	0.005
Studying	0.76*	0.028
Learning environments	0.81*	0.014
Support services	0.86**	0.006
Feedback and assessment	0.78*	0.021
Internationality and multiculturalism	–0.35	0.391
Connections with the working life	0.74*	0.036
Career services	0.84**	0.010
Thesis	0.80*	0.018

Notes: *p < .05; **p < .01.

4.2 Comparing the results on other disciplines

Next, we wanted to assess whether the factors affecting the student satisfaction of engineering students differ from the experiences of students in other fields. To find out this, we looked at the AVOP responses of seven non-engineering degree programs. These degree programs were all from the same UAS and they represented different fields of study including business, design, and health care. Also in this case, all students earned a post-graduate degree during 2019–2022 and the total number of students in this sample was 477.

Table 5 shows the results of these seven non-engineering degree programs. They indicate that there are three institutional factors that do not have statistically significant effect on general student satisfaction. These are internationality and multiculturalism, connections with the working life and career services. Other eight factors had either very high or high correlation with student satisfaction.

Table 5. Results of other disciplines

Institutional Factor	Correlation	p-Value
Study content	0.87*	0.012
Planning and counselling	0.93**	0.002
Teaching	0.98**	0.001
Studying	0.93**	0.002
Learning environments	0.90**	0.005
Support services	0.94**	0.002
Feedback and assessment	0.94**	0.002
Internationality and multiculturalism	0.43	0.334
Connections with the working life	0.74	0.055
Career services	0.58	0.168
Thesis	0.96**	0.001

Notes: *p < .05; **p < .01.

5 DISCUSSION

Table 6 summarizes the findings of all three experiments. In addition, it presents the common factors found in all three studies. According to first two experiments, the satisfaction of engineering students is a multi-dimensional structure influenced by eight factors, which are study content, planning and counselling, teaching, studying, learning environments, feedback and assessment, career services, and thesis. When the engineering students' results are compared with those of students in other fields, the only difference is in career services. The results of the study suggest that the general student satisfaction is influenced by several institutional factors. This result is consistent with earlier findings (e.g. refs. [4], [6], [7], [22], [23]).

Table 6. Correlations between general and area-specific student satisfactions

Institutional Factor	First Study	Second Study	Third Study	All Three
Study content	very high	high	high	yes
Planning and counselling	very high	high	very high	yes
Teaching	very high	high	very high	yes
Studying	very high	high	very high	yes
Learning environments	high	high	very high	yes
Support services	no	high	very high	no
Feedback and assessment	very high	high	very high	yes
Internationality and multiculturalism	no	no	no	no
Connections with the working life	no	high	no	no
Career services	high	high	no	no
Thesis	very high	high	very high	yes

While we recognize that correlation does not necessarily mean causality, we are encouraged by the parallel results of all three experiments and present the modified conceptual model shown in Figure 2. It lists the most important institutional factors that affect student satisfaction of the part-time post-graduate adult students in Finland. It is worth mentioning that only those factors which had statistically significance in all three experiments were accepted to the modified model.

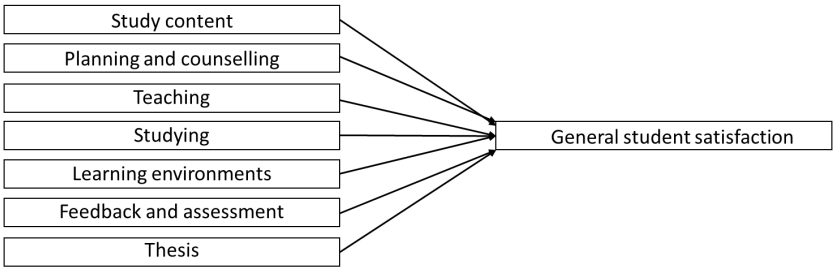

Fig. 2. The modified conceptual model

6 CONCLUSIONS

The aim of the study was to identify the key institutional factors having a significant effect on student satisfaction of the part-time post-graduate students. The results of our experiments suggest that student satisfaction is a multidimensional structure influenced by several institutional factors. This result is consistent with earlier findings (e.g. refs. [4], [6], [7], [22], [23]). Our results identified the following seven significant institutional factors: study content, planning and counselling, teaching, studying, learning environment, feedback and assessment, and thesis. On the other hand, support services, internationality and multiculturalism, connections with working life, and career services did not affect students' general satisfaction.

Previous research indicates that by conducting a thorough analysis of the institutional factors influencing student satisfaction, colleges can identify their strengths and areas that need improvement [12]. We hope that this research for its part can help universities in optimizing their allocation of limited resources. By prioritizing activities that are integral to student well-being, institutions can enhance student satisfaction and ultimately fostering a conducive environment for learning and graduation.

Naturally, it is also essential to acknowledge the limitations of the study. The primary concern is probably the generalizability of the results. Because we used the data from the Finnish national AVOP survey, we were able to compare student satisfaction both between Finnish higher education institutions and between different disciplines. However, our results cannot be directly generalized to other countries. First, similar survey is not carried out in other countries and second the education systems of different countries differ significantly. For example, in Finland there are no tuition fees for EU/EEA citizens, and in some other countries tuition fees have a clear impact on student satisfaction. In addition, opportunities for adult learning differ significantly from country to country, both in terms of practical arrangements and financial opportunities. As a result, the subject still required a lot of further research and international cooperation.

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