

Influence of Parental Education on Decision-Making Factors for Choosing Fee-levying Higher Education Institutes among Computer Science Undergraduates in Sri Lanka

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DOI: <https://dx.doi.org/10.47772/IJRISS.2024.802025>

Received: 28 January 2024; Accepted: 01 February 2024; Published: 02 March 2024

ABSTRACT

The choice of a fee-levying higher education institute (HEI) is critical for students as it can significantly impact their future. However, research indicates that the process students follow to select an HEI is complex and is carried out in several stages. Hence parents often become involved in the selection process to help their children make the right choice. With the rising number of fee-levying HEIs, the higher education sector has become highly competitive and institutes invest heavily in strategies to attract not only students but also parents. Furthermore, Sri Lanka's growing Information and Communication Technology (ICT) sector has resulted in a rise in the enrolments of undergraduates majoring in computer science (CS). Hence, the main objective of this study was to determine if parental education influences the key determinants namely, internal characteristics of students, institute-specific factors, and communication methods used by HEIs, shaping Sri Lankan students' choice of a fee-levying HEI for CS degrees. The study used a quantitative approach, and data was collected from 510 students studying at eight fee-levying HEIs using the survey method. The results of the study revealed that neither fathers' nor mothers' education has an impact on any of the three key determinants. Hence, HEIs can consider this outcome when formulating their student enrolment strategies. Further research is also suggested with samples that include a higher percentage of students having parents with higher education and parents of students from other disciplines besides CS before generalising this outcome to the higher education sector of Sri Lanka.

Keywords: Parental Education, Fee-levying Higher Education Institutes, Impact of Parental Education on University Choice, Computer Science Undergraduates.

INTRODUCTION

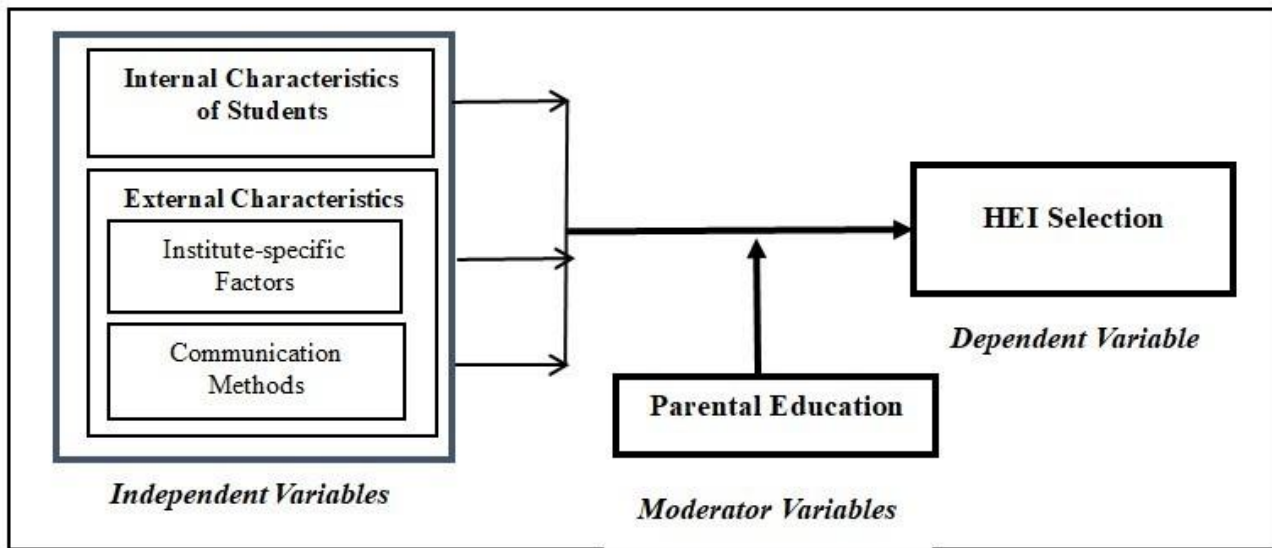
The choice of a higher education institute (HEI) is crucial for students since it can have a significant impact on their careers and ultimately, on their future goals and expectations. However, research shows that the process students follow to select an HEI is highly complex (Draisey, 2016) and consists of several steps or stages (Litten, 1982; Hossler & Stage, 1992). As a result, parents often become involved in this process to

help their children make this important decision. Due to the increase in global demand for skilled labour, the demand for higher education has been steadily increasing over the past few years. With it, an increasing number of fee-levying HEIs have been established to cater to this demand, creating enormous competition among these institutes. This has resulted in HEIs allocating a significant percentage of their annual budgets to activities such as improving infrastructure and student services as well as advertising and promotion in the hopes of attracting students. Hence, to ensure that these institutes are allocating their funds effectively, HEIs are increasingly focusing their efforts not only on identifying the key determinants that impact students when selecting an HEI but also on the extent of parental involvement in this selection process. This is mainly because parents are seen as providing the necessary guidance and financial support for their children's higher education and, therefore, most often have the final say in the choice of HEI. Accordingly, research has been done to identify the factors shaping students' HEI choices and the impact that parents have on these key influences. These studies show that the impact of parents depends on many factors, such as their education level, financial status, social status, cultural background, expectations for their children, and family traditions (Maniu & Maniu, 2014). Some studies have also specifically examined whether parents' education affects their children's decisions during the selection process since it is believed that parents with an educational background are more inclined to encourage their children to pursue higher education and share their experiences in choosing a suitable institute.

Sri Lanka is one of the few developing countries that offers free undergraduate education at state universities. However, owing to the rise in demand for higher education in recent years, a large number of fee-levying state and private HEIs have been established across the country to address this growing demand that state universities alone cannot meet. Thus, many students who decide to pursue higher education and are unable to enter state universities, choose to enrol in fee-levying HEIs. However, due to the large number of players, the higher education sector has become highly competitive in Sri Lanka, forcing these fee-levying institutes to invest heavily in improving and expanding their academic activities, campus infrastructure, and marketing activities to attract students. Furthermore, traditionally, Sri Lankan parents provide the necessary guidance, encouragement and financial support for their children's higher education and actively participate in helping their children choose a suitable HEI. Due to this, HEIs are also seen targeting not only students but also parents in their institutional strategies. In addition, with the rapid development of the Information and Communication Technology (ICT) sector in Sri Lanka, a career in the IT sector has become highly rewarding and therefore, more students are showing interest in joining degree programmes in computer science (CS) and related programmes such as Computer Applications, Software Engineering and Management Information Systems. However, despite HEIs' keen interest in identifying the key determinants that aid students in choosing a suitable HEI, the involvement of parents in this process and the impact of parental education on the motivational factors, there has been very limited research conducted within the country to determine the role of parents in HEI selection and the impact of factors such as their education on the key influences of students specifically enrolled in CS degree programmes. Hence, the main objective of the study is to determine whether **parental education has an impact on the decision-making factors for choosing a fee-levying HEI among computer science undergraduates in Sri Lanka**. This study takes into consideration the motivational factors identified in the study conducted by Wickramasinghe et al.(2023) on students pursuing CS-related degree programmes in fee-levying HEIs in Sri Lanka. These factors identified in the study are based on Chapman's (1981) model of student college choice and they are namely internal characteristics of students, Institute-specific factors, and methods used by the HEIs to communicate with students (Wickramasinghe et al., 2023). Accordingly, the conceptual framework used in this study is based on the findings of Wickramasinghe et al.(2023) and is shown in Figure 1, where internal characteristics of students, Institute-specific factors, and methods used by HEIs to communicate with the students were considered as the independent variables, HEI selection by students as the dependent variable, and parental education as the moderator variable.

Figure 1

The proposed conceptual framework adopted from Wickramasinghe et al. (2023)



LITERATURE REVIEW

Considerable research has been conducted to identify the influence of parents in choosing a fee-levying HEI, and some have observed that the advice given by parents is one of the key determinants for students when they choose a suitable HEI. However, others have observed that, especially due to the development of online communication methods, students have increasingly become independent and, therefore, tend to make their own choices. For example, studies by Adeyanju et al. (2020), Islam and Shoron (2020), Mehboob et al. (2012), Proboyo and Soedarsono (2015) all state that the advice and recommendations made by the parents have a positive impact on the decision-making process where Islam and Shoron (2020) in their study have further elaborated that the mother exerts more influence since they tend to be more involved in their children’s education. However, contradicting these views Abeygunawardena (2018), Awale (2021), Mishra and Gupta (2021) and Nor (2018) have stated that the influence of parents is very low.

Studies also show that the influence exerted by parents mainly depends on factors such as their educational background, financial status, social background and expectations for their children (Maniu & Maniu, 2014). Since studies show that educated parents tend to encourage their children to pursue higher education, the impact of parental education on the key influencers of students in the selection of an HEI has been widely discussed in numerous studies and is also included in student decision-making models such as those proposed by Litten (1982) and Hossler & Stage (1992). According to the decision-making models proposed in both of these studies, as the first step in choosing an HEI, students would decide whether to pursue higher education and during this stage, the student’s parents’ educational background would play a crucial role in encouraging them to pursue higher education. As stated by the U.S. Education Department’s National Center for Education Statistics cited in Bird (2018), this is mainly because parents with higher education are more likely to encourage their children to also pursue higher education.

Moreover, several recent studies have expressed similar views stating that educated parents not only support their children to pursue higher education but also participate in the HEI selection process by sharing their expectations and experiences with their children. Hence, these studies have expressed that such parents impact the factors that influence students when they choose an HEI. Accordingly, some of these studies indicate that parents from high education backgrounds tend to select HEIs with good reputations and

facilities disregarding factors such as course fees because they tend to have high expectations regarding the academic standards of the institutes they select. These studies have further explained that parents with lesser educational backgrounds tend to make decisions regarding the choice of an institute based on the information they gather from the HEIs. For example, studies conducted by Akareem and Hossain (2016) and Mustafa et al. (2018) state that parents who possess a diploma/associate degree or a university degree are more concerned about the academic reputation or the academic quality of HEIs than about economic factors such as course fees when helping their children decide on an HEI. Mustafa et al. (2018) further explained that parents who have a lower educational background are more concerned about course fees and prefer to select institutes that respect and maintain cultural values. Furthermore, a study by Eldegwy et al. (2021) states that when both parents have attained a similar level of higher education, they tend to be more concerned about the quality of facilities provided by the institutes than parents who do not have such qualifications. In addition, Eldegwy et al. (2021) further explained that when parents have different levels of higher education, they are more likely to gather information from HEI staff at the institute to help them with their selection as compared to students with parents having a similar level of higher educational backgrounds. The researchers suggest that this may be because equally educated parents believe that they have sufficient knowledge and experience to choose a suitable HEI for their children without obtaining any information or advice from the institute.

Studies on the impact of parental education on the key influences of students during the HEI selection process have also discussed which parent exerts the greatest impact. However, mixed opinions have been expressed in these studies where some have identified that educated mothers exert the greatest impact whereas others have identified it as the father. For example, research conducted by Walsh and Cullinan (2017) observed that if the mother has attained higher education qualifications, then she will exert the greatest impact on the key influencers of students. However, a study by Lien et al. (2015) has contradicted this view by stating that the father's educational background influences the key determinants of students' choice processes.

METHODOLOGY

The research methodology used was a quantitative approach and the survey method was used for data collection. A questionnaire was used to collect data and it was adapted from the questionnaires used by Adília & José (2021), Chaubey et al. (2011) and Peró et al., (2015). The questionnaire was distributed among first-year CS students enrolled in eight fee-levying HEIs with main campuses and branch campuses located in five major cities, Colombo, Kandy, Kurunegala, Galle, and Matara in Sri Lanka. The population for this study was first-year undergraduates studying CS degree programmes such as Computer Science, Software Engineering, Computer Applications and Information Systems. The sample size was 800 of which 556 responses were collected and 510 responses were included in the final data analysis. Two-stage cluster sampling was employed as the sampling technique of this study. In the first stage, eight fee-levying HEIs were selected based on their ranking in the Webometrics 2022 ranking of Sri Lankan universities, while in the second stage, 50-150 students from each of the HEIs were selected using a convenience sampling technique and the questionnaire was distributed.

Since the main objective of this study was to determine whether parental education influences the key determinants motivating CS undergraduates in choosing a fee-levying HEI in Sri Lanka, the study aimed at answering the research question “**Does parental education influence the decision-making factors for choosing fee-levying HEIs among CS undergraduates in Sri Lanka?**”. Accordingly, as per the proposed framework, the following hypotheses were tested to answer this research question.

H1 – Influential internal characteristics of students differ based on the student's father's educational level

H2 -Influential internal characteristics of students differ based on the student’s mother’s educational level

H3 -Influential institute-specific factors differ based on the student’s father’s educational level

H4 -Influential institute-specific factors differ based on the student’s mother’s educational level

H5 -Influential communication methods differ based on the student’s father’s educational level

H6 -Influential communication methods differ based on the student’s mother’s educational level

The primary data were collected using a questionnaire that was administered to first-year undergraduates enrolled in CS degree programmes in eight fee-levying HEIs. The questionnaire was distributed by visiting the institutes and via email using a Google form. Demographic data relating to the educational level of students’ parents were analysed using descriptive statistics. Since the data were not normally distributed and there were several groups of independent data to be compared with the level of parental education, namely “Junior Secondary Education or lower”, “G.C.E Ordinary Level”, “G.C.E Advanced Level”, “Bachelor’s degree”, and “Master’s degree or above”, the non-parametric Independent Samples Kruskal-Wallis test was used to test the hypotheses. SPSS software was used to analyse the data.

RESULTS

Initially, demographic data related to the students’ fathers’ and mothers’ educational qualifications were summarized. According to the analysis, 42.2% of the respondents’ fathers held the General Certificate of Education (G.C.E.) Advanced Level as their highest educational qualification while 22.9% of the fathers held a professional certificate or diploma. The summarized data also indicated that 13.1% of the fathers had a bachelor’s degree and 6.1% had a master’s degree or above indicating that 19.2% of the fathers had university education. Only 2.8% of fathers had an education of up to Junior secondary level or lower. Table 1 shows the distribution of the educational qualifications of students’ fathers (FEQ).

Table 1

Educational Qualifications of Fathers (FEQ)

Category	Frequency	Percentage	Cumulative Percentage
Junior Secondary Education or lower	14	2.8%	2.8%
G.C.E Ordinary Level	66	12.9%	15.7%
G.C.E Advanced Level	215	42.2%	57.9%
Professional certificate/diploma	117	22.9%	80.8%
Bachelor’s degree	67	13.1%	93.9%
Master’s degree or above	31	6.1%	100.0%
Total	510	100.0%	

According to the analysed data relating to the educational background of mothers, 45.9% held G.C.E. Advanced Level as the highest educational qualification and 22.2% held a professional certificate or diploma. The data also showed that 14.7% of the mothers held a bachelor’s degree while 3.1% held a master’s degree or above indicating that 17.8% had a university education. Only a mere 2.2% of the mothers had studied up to the Junior secondary level or lower. Table 2 shows the distribution of the educational qualifications of the mothers (MEQ).

Table 2

Educational Qualifications of Mothers (MEQ)

	Frequency	Percentage	Cumulative Percentage
Junior Secondary Education or lower	11	2.1%	2.1%
G.C.E Ordinary Level	61	12.0%	14.1%
G.C.E Advanced Level	234	45.9%	60.0%
Professional certificate/diploma	113	22.2%	82.2%
Bachelor's degree	75	14.7%	96.9%
Master's degree or above	16	3.1%	100.0%
Total	510	100.0%	

Once the demographic data were analysed, the six hypotheses that were developed were tested using the Independent Samples Kruskal-Wallis test and the results are shown in Table 3.

Table 3

Results of Hypothesis Testing

Hypothesis	Significance	Decision
H1	0.638	Reject the hypothesis.
H2	0.191	Reject the hypothesis.
H3	0.579	Reject the hypothesis.
H4	0.603	Reject the hypothesis.
H5	0.052	Reject the hypothesis.
H6	0.798	Reject the hypothesis.

Note. Asymptotic significances are displayed. The significance level is .050.

As per the analysed data, the p-values obtained through the Independent-Samples Kruskal-Wallis Test were greater than 0.05 for both the fathers' and mothers' educational qualifications for the six hypotheses tested. Hence, the null hypotheses were retained and therefore it can be concluded that the educational qualifications of students' fathers or mothers do not have any impact on the internal characteristics of students, institute-related characteristics or communication methods used by institutes that influence students when selecting a fee-levying HEI to pursue a CS degree programme in Sri Lanka.

DISCUSSION

The aim of this study was to assess whether the key influencers of students identified by Wickramasinghe et al. (2023), namely internal characteristics of students, Institute-specific factors, and methods used by the HEIs to communicate with students, differ based on parental education when choosing an HEI to pursue a CS degree programme in Sri Lanka. The study revealed that parental education has no impact on the factors shaping the decisions of students during the selection of a fee-levying HEI. Hence, these results contradict the views expressed by Akareem and Hossain (2016), Bird (2018), Eldegwy et al. (2021), Lien et al.(2015), Mustafa et al.(2018), and Walsh and Cullinan (2017) who have all identified that parental education influences the factors shaping students' choice of a fee-levying HEI. According to the studies conducted by

Bird (2018), Mustafa et al. (2018) and Akareem and Hossain (2016), parents possessing a bachelor's degree or master's degree are more likely to influence their children to continue with higher education than those who do not have such qualifications. Therefore, one reason why this study contradicts the views of other researchers may be that 42.2% of the fathers and 45.9% of the mothers of the students who participated in the study have attained only the G.C.E. Advanced Level as the highest educational qualification, whereas only 19.2% of the fathers and 17.8% of the mothers had a university degree. Therefore, it is recommended to carry out additional research with samples that consist of a greater percentage of parents with a university education.

CONCLUSION AND RECOMMENDATIONS

This study was conducted to determine whether parental education has an impact on the key influences identified by Wickramasinghe et al. (2023) namely, internal characteristics of students, Institute-specific factors, and communication methods used by HEIs differ based on parental education when students choose a fee-levying HEI to pursue a CS degree programme. Quantitative research was conducted using the survey method and a questionnaire was distributed to collect data. Six hypotheses were tested using data collected from 510 first-year CS undergraduates studying in eight fee-levying HEIs. The results indicated that influential internal characteristics of students, Institute-specific factors, and communication methods did not differ based on students' fathers' or mothers' education when they choose a fee-levying HEI to pursue a CS degree programme in Sri Lanka, suggesting that students tend to make such decisions independent of their parents' educational background. Therefore, HEIs should consider the findings of this study when formulating student enrolment strategies and planning marketing campaigns that also target parents and when allocating their funds to implement them. The institutes can then ensure that they utilise their funds only in areas that would assist them in enrolling students. However, it is recommended to conduct further research with samples containing a higher percentage of students having parents with higher education as the number of students with parents having higher education was relatively low in the sample considered in this study. Furthermore, since the number of studies conducted in Sri Lanka in this regard is very low, it would be noteworthy to conduct further studies with undergraduates in disciplines other than CS to obtain a better understanding of the overall impact of parental education on the motivational factor for students in the selection of fee-levying HEIs in Sri Lanka.

DECLARATION

Ethics Approval

The consent was waived by the Ethics Committee of the Lincoln University College, Malaysia Sri Lanka Office. Students who volunteered to participate in the survey were given the questionnaire.

They were informed about the purpose of the research and assured that it would only be used for academic purposes. The students' anonymity and the confidentiality of the data provided were strictly maintained. Moreover, questions that would reveal the identity of the student were not included in the questionnaire.

Consent for Publication

The consent of all three authors was obtained to publish this research article.

Availability of Data and Materials

The primary data collected for this study can be made available on request. The details of the secondary data used in the study are mentioned within the research article.

Competing Interests

Not Applicable

Funding

Not Applicable

Author's Contributions

The authors Gangani Chamari Wickramasinghe (PhD Scholar, Department of English, Faculty of Social Science, Arts and Humanities, Lincoln University College, Malaysia), Dr Lubna Ali (Deputy Dean, Department of English, Faculty of Social Science, Arts and Humanities, Lincoln University College, Malaysia) and Dr Rathnayake Mudiyansele Dhanapala (Senior Lecturer, Faculty of Social Sciences and Humanities, Department of English Language Teaching, Rajarata University of Sri Lanka) collectively contributed to the study concept, design, data collection, data analysis and writing of the research article. The submitted manuscript has been approved by all authors.

ACKNOWLEDGEMENT

The authors would like to express their appreciation to all the Vice Chancellors, Department Heads, lecturers, and non-academic staff of the HEIs who participated in the study for their support during the data collection process and to all the students for their cooperation during the survey.

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