FACTORS AFFECTING THAI NGUYEN UNIVERSITY INTERNATIONAL STUDENTS’ ENVIRONMENTAL SPECIALIZATION

Cao Thi Nhung Trang*, Nguyen Thi Hoa

TNU - International School

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ABSTRACT

To ascertain the factors influencing Thai Nguyen University International students' choice of environment major, the research group chose 21 variables to investigate and classified them into four primary research groups: "Faculty Fixed Characteristics", "Faculty Communication Effort", "Students' Self-Characteristics", and "Influential Individuals". Cronbach's Alpha, exploratory factor analysis (EFA), and multivariate linear regression were used in this study. The participants included 134 students majoring in Environment. The results show that 81.5% of students' decision to choose an environmental major is influenced by the above four groups of factors. In which, the decision to choose the environment major of international students increased to 0.419 units when the fixed characteristics of the Faculty increased to 1 unit; increased by 0.306 units when Faculty's communication effort increased by 1 unit; increased to 0.126 units when the student's personal characteristics increased by 1 unit and increased by 0.337 units when the individual of influence increased to 1 unit. As a result, in order to increase the number of students enrolled in the environment major, the School must enhance its work in the following areas: strictly handle the factors that make up the International School's fixed features, reinforce efforts to propagate and facilitate, develop a team of professional admission advisors, and cultivate a friendly relationship between the International School and associated areas.

KEYWORDS

Factor Influence Environment Decision Enrollment

CÁC YẾU TỐ ÁNH HƯỞNG ĐẾN VIỆC CHỌN NGÀNH MÔI TRƯỜNG CỦA SINH VIÊN KHOA QUỐC TẾ ĐẠI HỌC THÁI NGUYỄN

Cao Thị Nhung Trang*, Nguyễn Thị Hoa

Khoa Quốc tế - ĐH Thái Nguyên

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TƯ/ KHÓA

Yếu tố
Ánh hưởng
Môi trường
Quyết định
Tuyển sinh

ĐỂ Xác Định Được Các Yếu Tố Ánh Hưởng Đến Việc Chọn Ngành Môi Trường Của Sinh Viên Khoa Quốc tế, nhóm nghiên cứu đã chọn 21 biến để nghiên cứu và chia làm 4 nhóm giả thuyết nghiên cứu chính: “Đặc điểm cố định của Khoa”, "Nỗ lực giao tiếp của Khoa", "Đặc điểm bản thân sinh viên” và "Các cá nhân có ảnh hưởng" trên 134 sinh viên ngành Môi trường. Phương pháp kiểm định Cronbach’s Alpha, phân tích nhân tố khám phá (EFA) và hồi quy tuyến tính đa biến được sử dụng trong nghiên cứu này. Kết quả cho thấy 81.5% quyết định chọn ngành Môi trường của sinh viên Khoa Quốc tế chịu sự ảnh hưởng bởi 4 nhóm yếu tố trên. Trong đó quyết định chọn ngành Môi trường của sinh viên tăng lên 0,419 đơn vị khi đặc điểm cố định của Khoa tăng lên 1 đơn vị; tăng lên 0,306 đơn vị khi nỗ lực giao tiếp của Khoa tăng lên 1 đơn vị; tăng lên 0,126 đơn vị khi đặc điểm bản thân sinh viên tăng lên 1 đơn vị và tăng lên 0,337 đơn vị khi cá nhân có ảnh hưởng tăng lên 1 đơn vị. Do đó, để nâng cao công tác tuyển sinh ngành Môi trường Khoa cần nâng cao các công tác: Quản lý chất chế các yếu tố tạo nên đặc điểm cố định của Khoa, tăng cường nỗ lực tuyên truyền và quảng bá, xây dựng đội ngũ cán bộ tư vấn tuyển sinh chuyên nghiệp, thiết lập mối quan hệ hữu ích giữa Khoa với các đối tượng hướng dẫn có liên quan.

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* Corresponding author. Email: trangctn@tnu.edu.vn
1. Introduction

Identifying the factors affecting students’ choices of majors does not only help them to orient their future careers but also assist training institutions have effective student recruiting solutions. Joseph Sia Kee Ming [1] proposed a conceptual framework model of factors influencing students' decision to choose a university in Malaysia. The research results have shown that a student's decision to choose a university is influenced by a factor group of fixed university characteristics and the group of factors of communication efforts with students. The model proposed by the author only introduces factors that can affect the decision to choose a university. Russayani Ismail [2] completed a case study of foreign students at Utara University Malaysia on the subject "Factors Influencing the Choice of Educational Destination." The research emphasized the importance of preserving educational quality to ensure long-term competitiveness and seeks to identify factors that may impact foreign students' decision-making when selecting a university. However, this research is only applicable to universities that educate foreign students [2]. MeiTang, WeiPan [3] researched the factors that affect to the choosing university trends of high school students. The research analyzed 4 main factors such as: experiential learning, ability to evaluate career capabilities, benefits and expected outcomes in career development. All the factors affect to the students' career choices from high school students. This research only focuses on orientation of the students’ future careers. Bromley [4], who polled 384 teens, came to the conclusion that both school and family have a direct or indirect influence on young people's career decisions. There is also the influence of siblings, relatives, and friends... This survey just shows the individual groups affecting students’ choices of majors. Similar to Bromley's research, Michael Borchert [5] conducted a poll of 325 high school students at Germantown High School in Wisconsin, USA, and found that the three key groups of factors that impact career decisions are environment, opportunities, and personal traits. The research findings show that personal factors have the most significant impact on high school students’ choice of careers. D.W. Chapman [6] suggested a general model of university selection for students. During the surveying process to test the model, two groups of factors were discovered to have a significant impact on a student's decision to attend a university: family characteristics, individual student and side factors, as well as personal impacts such as fixed university characteristics and the university's attempts to interact with students. According to the findings of Ha's research "Factors Affecting Students' Choice of Ho Chi Minh City Open University”, there are seven factors that influence students' school choices, all of which are interconnected. However, the study findings still have up to 7 groups of factors influencing the decision, making those findings impossible to apply in practice [7]. Tran Van Qui and Cao Hao Thi conducted research on "Factors Influencing High School Students' Decision to Attend University." According to the findings, five factors influence students' decisions to choose universities: future employment opportunities factors, fixed qualities of the university, factors about the student's individual identity; personal factors influence students' decisions, and available information influences their decision to choose universities. When scaled to the population, this model only describes 21.5 percent of study challenges [8]. To identify all factors affecting to students’ choice of majors and their level of influences, we conducted a research on factors affecting the students’ choices of environmental specialization at International School.

2. Materials and methods

The research model was performed according to the figure 1.

This study provided 21 observed variables for four groups of factors: "Faculty Fixed Characteristics Group," "Faculty Communication Effort Group," "Students' Self-Characteristics Group," and "Influential Individuals Group"
Primary data sources were gathered via questionnaires administered to 134 Environmental majors enrolled in years 2, 3, and 4. In terms of ethnicity, 69 male students accounted for 51.5 percent of the 134 students surveyed, while 65 male students accounted for 48.9 percent. The decision to attend a university to take the exam was primarily made in the 12th grade, accounting for 61.9 percent of the time. However, up to 5.2 percent of students chose a school since the 10th grade, and 30.6 percent of students chose a university to take the entrance exam since the 11th grade.

SPSS software was used to clean and process the collected data. The research employed basic approaches such as descriptive statistics and comparative methods. The Likert scale was used to gather the factors, with 5 levels ranging from strongly disagree to fully agree. Factors influencing a student's intention to select a major were measured by the student's rating on those factors on a 5-point scale. To examine data and detect influencing factors, exploratory factor analysis with KMO test (Kaiser - Meyer - Olkin) and Cronbach's Alpha coefficients were used in addition to conventional statistical methods. The linear regression model was also used to assess the impact of factors influencing international students' choice of environmental majors.

The research model used is as follows:

\[ X = \alpha + \beta_1 V_1 + \beta_2 V_2 + \beta_3 V_3 + \beta_4 V_4 \]

Where:
- \( X \): is the decision to select an environment major.
- \( V_1, V_2, V_3, V_4 \): are factor groups.
- \( \beta_1, \beta_2, \beta_3, \beta_4 \): are regression coefficients of the factors.

3. Results and discussion

3.1 Determine the factors that influence the choice of the Environmental major of International students

Factors affecting the choice of environmental students of the International School were assessed on 4 main groups of factors with 21 observed variables including: Group of factors of fixed characteristics of the International Faculty (7 factors), the group of factors of the international faculty's communication effort (3 factors), the group of students' personal characteristics (4 factors), the group of influential individuals (7 factors).
### Table 1. Statistics of factors

| Scale                                      | Observed variables                                                                 | Coding variables | The alpha coefficient | (Corrected Item-Total Correlation) |
|--------------------------------------------|--------------------------------------------------------------------------------------|------------------|-----------------------|-----------------------------------|
| Faculty Fixed Characteristics Group        | 1. The International School is geographically close to home, makes transportation and study easier. | V1               | 0.936                 |                                   |
|                                            | 2. The International School has a diverse and attractive academic profession.         | V1.1             | 0.768                 |                                   |
|                                            | 3. The International School is the training address for credibility and brand.         | V1.2             | 0.799                 |                                   |
|                                            | 4. The International School has advanced teaching facilities and equipment.           | V1.3             | 0.787                 |                                   |
|                                            | 5. The International School collects tuition fees tailored to family economic circumstances. | V1.4             | 0.757                 |                                   |
|                                            | 6. The International School offers excellent scholarships and financial assistance to students. | V1.5             | 0.822                 |                                   |
|                                            | 7. After graduating from the International School, students will have the chance to find the right job based on their training expertise. | V1.6             | 0.812                 |                                   |
|                                            | 8. The group of people has an impact on the decision to attend the International School. | V1.7             | 0.822                 |                                   |
| Faculty Communication Effort Group         | 1. The International School disseminates complete information about the school in the media. | V2               | 0.907                 |                                   |
|                                            | 2. The International Faculty has a strong admissions and career counseling program.   | V2.1             | 0.837                 |                                   |
|                                            | 3. Students have been visiting directly at the School                                 | V2.2             | 0.820                 |                                   |
| Students' Self-Characteristics Group       | 1. Because the entrance benchmark of the International School matches the individual's ability. | V3               | 0.900                 |                                   |
|                                            | 2. Because the International School has a training program tailored to individual interests and aspirations. | V3.1             | 0.793                 |                                   |
|                                            | 3. Because the International School has a training program tailored to the student's own abilities. | V3.2             | 0.807                 |                                   |
|                                            | 4. Because the International School offers a training program that is tailored to an individual's post-graduate work requirements. | V3.3             | 0.794                 |                                   |
|                                            | 5. Based on the opinion of parents.                                                  | V3.4             | 0.724                 |                                   |
|                                            | 6. Based on the opinions of the family's siblings and sisters.                      | V3.5             |                       |                                   |
|                                            | 7. Based on the opinion of teachers, career advice teachers in high schools.         | V3.6             |                       |                                   |
|                                            | 8. Based on the opinions of friends.                                                 | V3.7             |                       |                                   |
|                                            | 9. Based on the recommendations of advisors and admissions officers.                 | V3.8             |                       |                                   |
|                                            | 10. Based on the opinions of students who have been studying at the International School | V3.9            |                       |                                   |
|                                            | 11. Based on the opinion of teachers of the International School.                    | V3.10           |                       |                                   |

Using SPSS software to assess the scale's reliability with Cronbach's Alpha reliability coefficients, the findings showed that the scale meets the standard since the Cronbach's Alpha
coefficients are between 0.900 and 0.947. Furthermore, when considering the correlation coefficient of the total variable (Corrected Item - Total Correlation), the results showed that none of the observed variables approach the total variable correlation coefficient of 0.724 or higher. As a result, it is possible to argue that the scale used to gather data for the research model is of very high quality. The results of testing the reliability of the scale are presented in Table 1.

To evaluate the quality and rank the data, in this study we used the KMO test, if the test result is 0.9 or more (KMO ≥ 0.9), the data will be ranked very well; If KMO ≥ 0.8 it is rated as good; KMO ≥ 0.7 it is fine; KMO ≥ 0.6 it is fairly fine; KMO ≥ 0.5 it is bad; If KMO is less 0.5 it is considered as unacceptable. Based on these criteria, the results of testing data of this study showed that the KMO index value was 0.952 and had a statistical significance level of p <0.001. This result showed that the data used in the study were suitable for exploratory factor analysis in Table 2.

| Table 2. KMO index |
|-------------------|-----------------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | 0.952 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 3282.063 |
| df | 210 |
| Sig. | 0.000 |

Because all observed variables have factor load coefficients greater than 0.5, they are still used in the research model. Furthermore, the findings of factor analysis showed that the observed variables in the scale were not separated into new groups of factors, indicating that the scales are competent and have high reliability. Table 3 summarizes the findings of the factor analysis.

| Table 3. Factor matrix of principal components |
|-----------------------------------------------|
| Observed variables | Component |
| | 1 | 2 | 3 | 4 |
| V1 | | | | |
| V1.1 | 0.775 | 0.273 |
| V1.2 | 0.802 | 0.402 |
| V1.3 | 0.792 | |
| V1.4 | 0.762 | 0.313 |
| V1.5 | 0.862 | |
| V1.6 | 0.869 | |
| V1.7 | 0.876 | |
| V2 | | | | |
| V2.1 | 0.869 | |
| V2.2 | 0.883 | |
| V2.3 | 0.848 | |
| V3 | | | | |
| V3.1 | 0.795 | 0.442 |
| V3.2 | 0.791 | 0.430 |
| V3.3 | 0.877 | |
| V3.4 | 0.844 | |
| V4 | | | | |
| V4.1 | 0.893 | |
| V4.2 | 0.873 | |
| V4.3 | 0.818 | |
| V4.4 | 0.842 | |
| V4.5 | 0.786 | |
| V4.6 | 0.804 | |
| V4.7 | 0.782 | |
The regression analysis results for the coefficient Sig. = 0.00 showed that the regression model is consistent with the data. To discover the multi-collinearity phenomenon, the variable tolerance (Tolerances) and the variance inflation factor (VIF) were used. When a VIF reached 10, it indicated multiplicity, according to the rule. As a result, the variance inflation factor (VIF) of each group of factors in the test model was less than 10, demonstrating that the regression model did not violate the multicollinearity phenomenon and that the independent variables were correlated. This enabled the model to be further evaluated. The determination coefficients R2 and adjusted R2 (Adjusted R square) were used to assess the model's validity. Because R2 increased when independent variables were added to the model, it was safer to use adjusted R2 when determining the model's validity. The greater the adjusted R2 was, the better the model's validity was. The regression findings showed that the independent variables in the model could explain 81.5 percent of the change in the dependent variable, or 81.5 percent of the students' choices to major in Environmental science. As a result, the model's validity can be concluded to be comparatively high.

3.2 Evaluate the degree of impact of various groups of factors influencing international students' choice of an environment major

Determination of the regression model's adequacy is presented in Table 4.

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|---------------------------|---|------|
|       | B                           | Std. Error                | Beta |      |      |
| 1     | Constant                    | -0.706                    | 0.325 | -2.172 | 0.031 |
| V1    | 0.419                       | 0.064                     | 0.309 | 6.586 | 0.000 |
| V2    | 0.306                       | 0.061                     | 0.241 | 5.029 | 0.000 |
| V3    | 0.126                       | 0.055                     | 0.101 | 2.286 | 0.023 |
| V4    | 0.337                       | 0.069                     | 0.226 | 4.892 | 0.000 |

The regression coefficients that indicated the decision to choose the Environment major of the International School students were reduced to 0.706 units by the influence of factors other than factors in the model; the decision to choose the Environment major of international students increased to 0.419 units when the fixed characteristics of the School increased by 1 unit; the decision to choose the Environment major of the international students increased to 0.306 when the communication effort of the School increased by 1 unit; the decision to choose the Environment major of the international students increased to 0.306 units when the student's personal characteristics increased by 1 unit and the decision to choose the Environment major of international students increased to 0.337 units when the individual had influence increased by 1 unit. The obtained regression model showed that all four groups of factors of the research model had influence on the decision of international students to choose the Environment major in descending order as follows: Faculty Fixed Characteristics Group; Influential Individuals Group; Faculty Communication Effort Group; and Students' Self-Characteristics Group.

3.3 Solutions to improve enrollment efficiency

School leaders need to pay close attention to variables that comprise the Faculty's fixed features, such as: the advantage of a local university, making it easier for students to transport and study; improve the efficiency of teaching and learning management on a regular basis because this activity has a significant impact on the school's enrollment results; building training programs that are related to labor market demands, meeting and fulfilling the needs of employers, and continuously investing in infrastructure, machinery, and teaching facilities. The School may
formulate a strategy to capitalize on this as the School's strong suit with the benefit of cutting-edge facilities at Thai Nguyen University. In terms of training quality, modern facilities are becoming more important. Communication plays an important role, especially in the current trend of modern social development. Create a team of admissions counselors who are experts in their fields. Build a mutually respectful relationship between the International School and key stakeholders.

4. Conclusion

According to the study findings, all four groups of factors in the research model impact students at the International School's decision to major in Environment. The following groups' influence levels are ranked in descending order: Fixed Characteristics of the International Faculty, Influential Individuals, Faculty's Communication Effort, and ultimately Student Self-Identity.

As a result, in order to improve enrollment quality, the most important solution is to solely handle the variables that make up the fixed characteristics of the International Faculty, who are particularly interested in improving training quality. The next step is to intensify propaganda, promotion, and communication efforts in order to enhance the professional credentials of the faculty. Create a team of professional enrollment advisors; this is a powerful force. Finally, by forming relationships with high schools and employers, the School's credibility and brand will be strengthened, and this will contribute positively to Admission consulting work.

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