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The Differential Impact of Learning Experiences on International Student Satisfaction and Institutional Recommendation

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ABSTRACT

This research uses i-graduate's International Student Barometer to investigate whether overall satisfaction and institutional recommendation are influenced by student nationality and destination country, while controlling for the covariates of learning experiences. The result of our analysis is the identification of a conceptual framework for the differences between evaluations (reflecting satisfaction with an experience) and behavioral intentions (willingness to recommend that experience to others), and this important frame has consequences for how institutions recruit and retain international students. These results indicate that student nationality, destination country, and learning experience differentially influence both overall satisfaction and institutional recommendation. The study finds that student nationality and destination country significantly influenced both satisfaction and recommendation. While learning experience "teaching" variables ("program organization" and "quality of lectures") mattered most for overall satisfaction, "study" variables ("English language support" and "employability skills") were mainly associated with institutional recommendation. Practical implications for international educators and marketers are discussed, along with pointers for future research.

Keywords: international students, learning experience, learning recommendation, satisfaction surveys, student recruitment

INTRODUCTION

The enrollment of international students is a key target at national and institutional levels for economic, political, cultural, and academic reasons (de Wit, 2016; Roberts & Dunworth, 2012). Although they may be considered "transient visitors," international students form an integral part of their university's fabric (Montgomery, 2010) and, with a purposeful approach to integration and pedagogy (Leask, 2015), can facilitate the global and intercultural competence of domestic students, faculty, and staff (Irina et al., 2017). However, for these and other benefits to be realized, international student recruitment must be an increasing priority. To be successful in this endeavor, institutions must be strategic in incorporating international student perspectives, including what they value, how these values influence satisfaction, and how likely international students are to recommend the institution based on their experiences.

In this article, we explore whether learning experience variables, nationality, and destination country differentially influence students' satisfaction with their overall experience and willingness to recommend their institution to others, using data from the International Student Barometer (ISB; i-graduate, n.d.).

Before presenting the results, we define terms, then discuss international student learning experiences and the relationship between these and student satisfaction. Reflecting on the difference between recommendation and satisfaction then leads to consideration of the connection between institutional recommendation and student learning experiences.

LITERATURE REVIEW

Definitions of Key Terms

For international students, we use the Organisation for Economic Co-operation and Development's (2015) definition, which states, "International students are those who received their prior education in another country and are not residents of their current country of study."

For the present study, we use data from the ISB, which is said to be the world's leading benchmarking tool of international student satisfaction in higher education (Garrett, 2014). Based on the ISB instrument, and for this article, we define learning experiences as those which students experience within academic settings at their respective institutions, including the teaching, studies, services, and facilities used in their educational environment. Additionally, student satisfaction is defined as "a short-term attitude resulting from an evaluation of a student's educational experience" (Elliott & Healy, 2001, p. 2). We define institutional recommendation as students' willingness to recommend their current institution to prospective applicants, based on their experience at that institution.

Conceptual Framework

The difference between evaluations and behavioral intentions forms the framework for this article and acts as the basis for understanding how student learning experiences differentially influence satisfaction and recommendation. The literature on consumer behavior is thus a key starting point.

In a seminal paper, Cronin et al. (2000) studied the relationship between the core constructs of consumer evaluations (quality, value, satisfaction) and consumer behavioral intentions (e.g., recommendation). Their research demonstrated that quality (the relationship between expectations and performance) and value (the relationship between what was received and what was given) lead to satisfaction (whether something met or exceeded expectations). Together these three factors of quality, value, and satisfaction influence behavioral intentions—that is, a conscious plan to perform a specific behavior. Satisfaction, for this model, describes whether a consumer believes that a service evokes positive feelings (Rust & Oliver, 1994), while recommendation describes when consumers will say positive things about a service, and recommend that service (Babakus et al., 1987). Essentially, factors influencing satisfaction can differ from those that influence recommendation (Gajjar, 2013).

In research on the connection between institutional recommendation and satisfaction, Mavondo et al. (2004) suggested that satisfied students are more likely to engage in word-of-mouth recommendation to potential or future students. Similar results were found by Padlee and Reimers (2015). Yet, within the broader research area of customer satisfaction, studies demonstrate that not all satisfied customers recommend what they have purchased (Gounaris et al., 2010; Lobo et al., 2007). Importantly, this means that people can be satisfied with a product but still not be willing to recommend it. Recommendations, as behavioral intentions, are often crucially important when making purchase decisions (Hennig-Thurau et al., 2004; Zhu & Zhang, 2010). As such, they are pivotal for word-of-mouth recommendations in higher education (Arndt, 1967; Westbrook, 1987) and so, in terms of international student recruitment in particular, the distinction merits further consideration.

Cubillo et al. (2006) studied different factors influencing the decision-making processes when international students choose a destination country or an institution. They found five variables determining institutional choice: (a) work (postgraduation career prospects, opportunities to work while at the institution, recognition by future employers, and enhanced language skills); (b) institution (ranking, campus atmosphere, research opportunities, experience and expertise of faculty, quality of education, academic resources, and international contacts); (c) program of study (tuition costs, variety, and quality of courses); (d) host country (cost of living, visa procedures, social-life prospects); and (e) local setting (safety and security, social facilities, and the local environment).

As institutions of higher education face increasing competition to attract international students, factors influencing purchase decisions grow in importance, and understanding the difference between student evaluations and behavioral intentions is crucial. The former are possibly short-term and reflect satisfaction,

quality, and value, while behavioral intentions reflect (amongst other things) willingness to recommend an institution.

Within the conceptual framework distinguishing satisfaction and recommendation, the goal of the present study is to investigate which international student learning experiences predict overall satisfaction and whether these differ from those that predict institutional recommendation, and as a function of student nationality or destination country.

International Student Learning Experiences

While research on conceptual models of student satisfaction has demonstrated relationships between quality, value, satisfaction, loyalty, and word-of-mouth recommendation (Alves & Raposo, 2007; Douglas et al., 2008; Padlee & Reimers, 2015), those models have largely not been applied to international students—despite growth in their numbers on university campuses (Institute of International Education, 2020). Additionally, the limited available literature on student satisfaction and learning focuses largely on domestic students (García-Aracil, 2009; Karemera et al., 2003; Umbach & Porter, 2002). Using the ISB allows examination of what influences satisfaction and institutional recommendation, and to do this both on a large scale and in a global context. Typically, 60,000–85,000 international students in over 30 countries complete the ISB each year. We were given access to an anonymized version of the resulting large-scale dataset. It is important to note that, although the ISB shares with participating institutions their own "results benchmarked against competitor groups, national and international indices" (i-graduate, n.d.), for confidentiality reasons, no individual institution is identified to others, nor named in the dataset made available for the current study.

Improving the experience for all students (including international students) is an important strategic priority at many higher education institutions (Baranova et al., 2011; Shah & Richardson, 2016). Coping with a new academic environment can be challenging for all students, and even more so for international students as they adapt to a new culture, and often to a language that is not their first (Andrade, 2006; Bista & Foster, 2016; Perrucci & Hu, 1995).

A range of factors exert a direct influence on the experience of international students in their academic, living, and social settings, and Jones (2017) grouped these into four categories or contexts: personal, familial, institutional, and national. Elsharnouby (2015), meanwhile, argued that student experiences are "commonly acknowledged" to be either at the core (centering around academic experiences) or supplementary levels, such as the physical environment, library facilities, educational technology, university layout, social environment, and campus climate.

Satisfaction and Student Learning Experiences

In the first comparative study to use ISB data, Ammigan and Jones (2018) investigated over 45,000 undergraduate, degree-seeking international students at

96 institutions in Australia, the United Kingdom, and the United States. Of the four dimensions of university experience studied (arrival, living, learning, and support services), learning was found to influence overall satisfaction the most. In an extension of the previous research, Ammigan (2019) found that overall student satisfaction predicted institutional recommendation and that learning experience was the most significant of the four dimensions for international students' willingness to recommend their institution to prospective applicants. These two studies provide a strong base for closely examining how different aspects of the learning environment influence satisfaction and recommendation. No prior research has used ISB data to determine this differential influence.

In earlier studies, Wiers-Jenssen et al. (2002) and Sahin (2014) found the quality of teaching, among other factors, to be an important determinant of student satisfaction. The relationship between student satisfaction and educational offerings at higher education institutions was also examined by Butt and Rehman (2010), who found that teacher expertise, quality of courses offered, learning environment, and classroom facilities all enhanced satisfaction. Asare-Nuamah (2017) concluded that library services, teacher contact, class size, course content, reading materials, and general administrative services were key to enhancing student experiences.

While these studies support different aspects as being influential in the student experience, the current research is unique in its large sample size, using data from the ISB, and its focus on the differential influence of various dimensions of the student learning experience on satisfaction and institutional recommendation.

METHOD

This study examines whether overall satisfaction and institutional recommendation are influenced by student nationality and destination country while controlling for learning experience variables for international students in 10 participating countries around the world. It was declared exempt from the requirements of human subject protection by the relevant institutional review board since nonidentifiable, pre-existing data was used for analysis.

Instrument

The ISB is administered by i-graduate, a United Kingdom–based company. It seeks to track and compare the decision-making, expectations, perceptions, intentions, and satisfaction of international students from application to graduation (i-graduate, n.d.). Since its inception in 2005, the ISB has gathered feedback from over 3 million students in more than 1,400 institutions across 33 countries (i-graduate, n.d.). The questionnaire measures international students' satisfaction in the arrival, learning, living, and support services dimensions of their experience by asking them to evaluate how satisfied they are with multiple aspects within each of these dimensions (i-graduate, n.d.). Two summary questions capture how international students evaluate their overall experience—

that is, satisfaction ("Overall, how satisfied are you with all aspects at [university name]") and institutional recommendation ("Based on your impressions at this stage of the year, would you recommend your university to other students thinking of applying here?"). The full questionnaire, consisting of 256 closed- and open-ended questions, has been refined through 18 cycles and, according to Brett (2013), is considered the industry gold standard for assessing the international student experience.

Variables

Independent Variables: Student Nationality and Destination Country

The two categorical independent variables—student nationality and destination country—were at 10 levels (or countries) each. Categorical variables consist of separate, indivisible, and distinct groups that take on values that are names or labels (Gravetter & Wallnau, 2013, p. 20). For student nationality (see Tables A1 and A2), the 10 most frequent home country nationalities in the ISB data were included: China, Malaysia, Germany, the United States, India, Singapore, Hong Kong, France, South Korea, and Italy. These students were hosted in one of 10 destination countries: Australia, Canada, Germany, Hong Kong, Ireland, Malaysia, Netherlands, Sweden, United Kingdom, and the United States (see Tables A1 and A3).

Dependent Variables: Overall Satisfaction and Institutional Recommendation

The two continuous dependent variables (see Table A1)—overall satisfaction and institutional recommendation—were both set to Likert scales, with the former being a 4-point scale, where 1 = *very dissatisfied*, 2 = *dissatisfied*, 3 = *satisfied*, and 4 = *very satisfied,* and the latter being a 5-point scale, where 1 = *actively discourage*, 2 = *discourage*, 3 = *neither encourage or discourage*, 4 = *encourage*, and 5 = *actively encourage*. Continuous variables are numeric variables that have an infinite number of possible values that fall between any two observed values (Gravetter & Wallnau, 2013).

Covariate Variables: Learning Experience Variables

A covariate is a continuous variable that is expected to change, vary, or correlate with the outcome variable of a study (Salkind, 2010). The 22 continuous covariate learning experience variables were grouped into three categories (see Table A1): teaching-related (11 in total); studies-related (six in total); and facilities-related (five in total). One variable, "satisfaction with laboratories," was removed from the analysis, as it had over 44% missing values (see Data Analysis for further discussion of this issue).

Participants

Our sample included 32,015 international students from the 10 most frequent home country nationalities in the ISB data. These students were hosted in one of 10 countries and had completed the online ISB questionnaire via email between September and December 2016. To ensure confidentiality, deidentified responses, without institutional identifiers, were made available to the researchers by i-graduate.

Table A2 indicates the distribution of 32,015 international students from the 10 most frequent home country nationalities. Table A3 indicates the distribution of institutions for the 10 most frequent destination countries. Table A4 indicates the demographic makeup of students who participated in this study.

Data Analysis

Testing for Outliers, Homoscedasticity, and Normality

Data analysis was planned in successive steps. The analysis focused on the 10 most frequent home country nationalities as this allowed us to retain most of our learning variables (see discussion below on missing values). This choice reduced the sample from 66,272 to 32,015. Before and after the next data analysis step, we used the generalized extreme studentized deviate test to detect outliers (Rosner, 1983), Bartlett's test for homoscedasticity (Snedecor & Cochran, 1989), and Shapiro-Wilk's test for normality (Shapiro & Wilk, 1965), with none being significant.

Dealing with Missing Values

The 23 learning variables as well as the overall institutional recommendation question were optional questions and, on average, items in our dataset had 18.35% missing values. Therefore, a missing values analysis was performed, and we found satisfaction with laboratories to have over 44% missing values. It was therefore removed from future analysis, reducing the number of learning variables to 22. Little's missing completely at random test (1988) was significant, $X^2(58{,}870, N = 32{,}015) = 74{,}717.39$, $p < .001$. To accommodate for nonrandom missing values, we performed an approximate Bayesian bootstrap hot-deck nearest neighbor imputation method (Andridge & Little, 2010; Demirtas et al., 2007). In this technique, missing values are replaced with observed values that reflect similar response characteristics. We completed subsequent analysis using imputed data derived from this method.

Our Model: Analysis of Covariance

The goal of this research was to determine whether overall satisfaction and institutional recommendation were differentially impacted by international students' home and destination countries and by learning experience variables. As the learning experiences are predicted to co-vary with overall satisfaction, we

chose to run a stepwise analysis of covariance (ANCOVA) model as it offers both simplicity (i.e., as few regressors as possible) and fit (i.e., as many regressors as needed). With this model, variables are included in the model if they meet two significant levels, one for adding (set at .05) and one for removing (set at .10).

RESULTS

Overall Satisfaction and Student Nationality

A one-way stepwise ANCOVA model was conducted to determine the effect of student nationality on overall satisfaction while controlling for learning experience variables. The ANCOVA was significant, $F(23, 31{,}991) = 340.90$, $p < .0001$. In terms of learning experience covariates, 13 of 22 were found to significantly influence overall satisfaction with program organization doing so the most, followed by quality of lectures and English language support. Grading criteria was found to be negatively associated with overall satisfaction, meaning that as satisfaction with grading criteria increased, overall satisfaction decreased (see Table 1). The adjusted R^2 for the goodness of fit indicates that about 20% of the variance in overall satisfaction is explained by our independent and covariate variables. Among the explanatory variables, based on the Type III sum of squares, student nationality was the most influential.

Table 1: ANCOVA Results of Overall Satisfaction as a Function of Student Nationality and Learning Experience Covariates

Source	*df*	*SS*	*MS*	*F*	*Pr > F*
Student nationality	9.00	184.73	20.53	64.06	0.000
Program organization	1.00	77.02	77.02	240.38	0.000
Quality of lectures	1.00	39.84	39.84	124.33	0.000
English language support	1.00	35.57	35.57	111.02	0.000
Expertise of faculty	1.00	20.27	20.27	63.25	0.000
Academic and program content	1.00	18.76	18.76	58.56	0.000
Physical library	1.00	17.15	17.15	53.53	0.000
Learning support	1.00	14.88	14.88	46.44	0.000
Employability skills	1.00	11.13	11.13	34.74	0.000
Quality of classrooms	1.00	9.28	9.28	28.96	0.000
Multicultural study environment	1.00	5.76	5.76	17.97	0.000
Teaching ability of faculty	1.00	5.21	5.21	16.25	0.000
Work experience during studies	1.00	3.60	3.60	11.25	0.001
Assessment of coursework	1.00	3.44	3.44	10.73	0.001
Grading criteria	1.00	1.61	1.61	5.00	0.025

Note. *df* = degrees of freedom; *SS* = sum of squares; *MS* = mean squares; *F* = *F* ratio; *Pr* > *F* = *p* value for *F* statistic.

Students holding nationalities from six different countries, all in Asia, had a significant influence on overall satisfaction (see Figure 1 for mean overall satisfaction by student nationality).

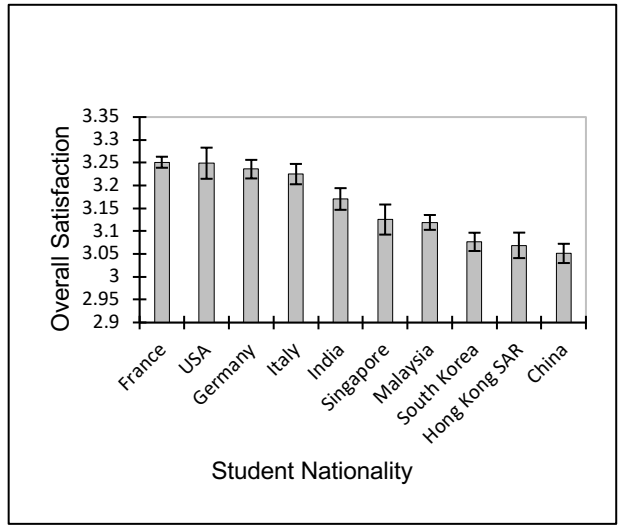

Figure 1: Student Nationality and Overall Satisfaction

Overall Satisfaction and Destination Country

A one-way stepwise ANCOVA model was conducted to determine the effect of destination country on overall satisfaction while controlling for learning experience variables. The ANCOVA was significant, $F(23, 31{,}991) = 308.47$, $p < .0001$. In terms of learning experience covariates, 15 of 22 were found to significantly influence overall satisfaction with program organization doing so the most, followed by English language support and quality of lectures. Grading criteria was found to be negatively associated with overall satisfaction, meaning that as satisfaction with grading criteria increased, overall satisfaction decreased (see Table 2). The adjusted R^2 for the goodness of fit indicates that about 19% of the variance in overall satisfaction is explained by our independent and covariate variables. Among the explanatory variables, based on the Type III sum of squares, program organization was the most influential.

Students enrolled in universities in four of the 10 countries—Ireland, Sweden, United Kingdom, and the Netherlands—significantly influenced overall satisfaction (see Figure 2 for mean overall satisfaction by destination country).

Table 2: ANCOVA Results of Overall Satisfaction as a Function of Destination Country and Learning Experience Covariates

Source	*df*	*SS*	*MS*	*F*	*Pr* > *F*
Program organization	1.00	74.63	74.61	230.35	0.000
Destination country	9.00	67.16	7.46	23.03	0.000
English language support	1.00	43.28	43.28	133.58	0.000
Quality of lectures	1.00	37.21	37.21	114.85	0.000
Expertise of faculty	1.00	28.76	28.76	88.77	0.000
Academic and program content	1.00	17.32	17.32	53.46	0.000
Physical library	1.00	17.08	17.08	52.72	0.000
Learning support	1.00	14.36	14.36	44.33	0.000
Multicultural study environment	1.00	12.31	12.31	38.01	0.000
Quality of classrooms	1.00	12.10	12.10	37.34	0.000
Employability skills	1.00	10.52	10.52	32.46	0.000
Grading criteria	1.00	4.44	4.44	13.69	0.000
Teaching ability of faculty	1.00	3.01	3.01	9.30	0.002
Assessment of coursework	1.00	2.02	2.02	6.23	0.013
English of academic staff	1.00	1.55	1.55	4.79	0.029
Work experience during studies	1.00	1.38	1.38	4.27	0.039

Note. df = degrees of freedom; *SS* = sum of squares; *MS* = mean squares; *F* = *F* ratio; *Pr* > *F* = *p* value for *F* statistic.

Institutional Recommendation and Student Nationality

A one-way stepwise ANCOVA model was conducted to determine the effect of student nationality on institutional recommendation while controlling for learning experience variables. The ANCOVA was significant, $F(24, 31{,}990) = 311.22$, $p < .0001$. In terms of learning experience covariates, 15 of 22 were found to significantly influence overall satisfaction with English language support doing so the most, followed by employability skills and multicultural study environment. Performance feedback and multicultural study environment were found to be negatively associated with institutional recommendation, meaning that as satisfaction with these variables increased, institutional recommendation decreased (see Table 3). The adjusted R^2 for the goodness of fit indicates that about 19% of the variance in overall satisfaction is explained by our independent and covariate variables. Among the explanatory variables, based on the Type III sum of squares, student nationality is the most influential.

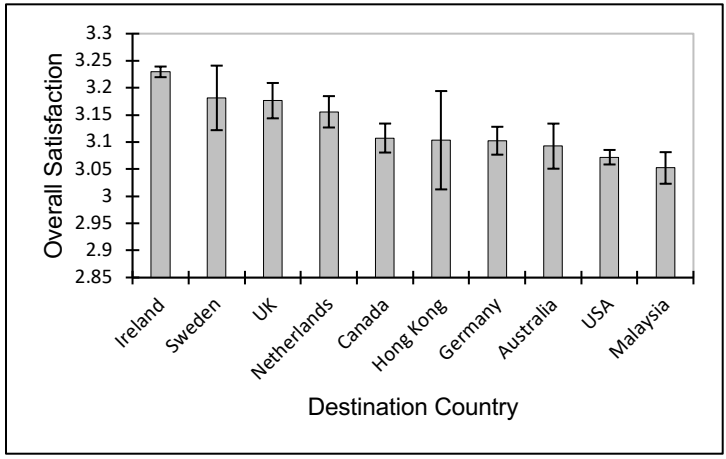

Figure 2: Destination Country and Overall Satisfaction

Table 3: ANCOVA Results of Institutional Recommendation as a Function of Student Nationality and Learning Experience Covariates

Source	*DF*	*SS*	*MS*	*F*	*Pr* > *F*
Student nationality	9.00	410.37	45.60	80.26	0.000
English language support	1.00	193.24	193.24	340.14	0.000
Employability skills	1.00	106.70	106.70	187.82	0.000
Multicultural study environment	1.00	100.90	100.90	177.61	0.000
Academic and program content	1.00	72.59	72.59	127.77	0.000
Program organization	1.00	52.47	52.47	92.37	0.000
Quality of lectures	1.00	35.95	35.95	63.28	0.000
Learning support	1.00	20.97	20.97	36.91	0.000
Expertise of faculty	1.00	20.83	20.83	36.66	0.000
Virtual learning	1.00	16.64	16.64	29.29	0.000
Physical library	1.00	14.72	14.72	25.91	0.000
Assessment of coursework	1.00	11.11	11.11	19.55	0.000
Classroom technology	1.00	9.19	9.19	16.18	0.000
Quality of classrooms	1.00	8.54	8.54	15.04	0.000
Performance feedback	1.00	8.10	8.10	14.26	0.000
Teaching ability of faculty	1.00	6.88	6.88	12.12	0.001

Note. DF = degrees of freedom; *SS* = sum of squares; *MS* = mean squares; *F* = *F* ratio; *Pr* > *F* = *p* value for *F* statistic.

Students holding nationalities from six different countries, all in Asia, had a significant influence on institutional recommendation (see Figure 3 for mean recommendation responses by student nationality).

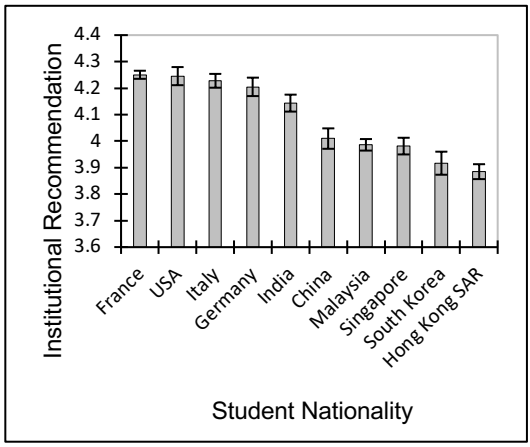

Figure 3: Student Nationality and Institutional Recommendation

Institutional Recommendation and Destination Country

A one-way stepwise ANCOVA model was conducted to determine the effect of destination country on institutional recommendation while controlling for learning experience variables. The ANCOVA was significant, $F(24, 31{,}990) = 294.58$, $p < .0001$. In terms of learning experience covariates, 15 of 22 were found to significantly influence overall satisfaction with English language support doing so the most, followed by employability skills and multicultural study environment. Performance feedback and multicultural study environment were found to be negatively associated with institutional recommendation, meaning that as satisfaction with these variables increased, institutional recommendation decreased (see Table 4). The adjusted R^2 for the goodness of fit indicates that about 18% of the variance in overall satisfaction is explained by our independent and covariate variables. Among the explanatory variables, based on the Type III sum of squares, institution country is the most influential.

Students enrolled in universities in all of the ten countries, excluding Malaysia, Australia, and the United States, significantly influenced institutional recommendation (see Figure 4 for mean recommendation responses by destination country).

Table 4: ANCOVA Results of Institutional Recommendation as a Function of Destination Country and Learning Experience Covariates

Source	*df*	*SS*	*MS*	*F*	*Pr* > *F*
Institution country	9.00	224.53	24.95	43.47	0.000
English language support	1.00	221.06	221.06	385.19	0.000
Employability skills	1.00	95.85	95.85	167.00	0.000
Multicultural study environment	1.00	77.78	77.78	135.53	0.000
Academic and program content	1.00	70.00	69.99	121.95	0.000
Program organization	1.00	52.78	52.78	91.96	0.000
Quality of lectures	1.00	32.40	32.40	56.46	0.000
Expertise of faculty	1.00	29.10	29.10	50.71	0.000
Learning support	1.00	23.71	23.71	41.32	0.000
Physical library	1.00	15.79	15.79	27.50	0.000
Quality of classrooms	1.00	15.34	15.34	26.74	0.000
Performance feedback	1.00	13.43	13.43	23.41	0.000
Virtual learning	1.00	12.58	12.58	21.91	0.000
Classroom technology	1.00	10.77	10.76	18.75	0.000
Assessment of coursework	1.00	8.19	8.18	14.26	0.000
Teaching ability of faculty	1.00	5.93	5.93	10.32	0.001

Note. df = degrees of freedom; *SS* = sum of squares; *MS* = mean squares; *F* = *F* ratio; *Pr* > *F* = *p* value for *F* statistic.

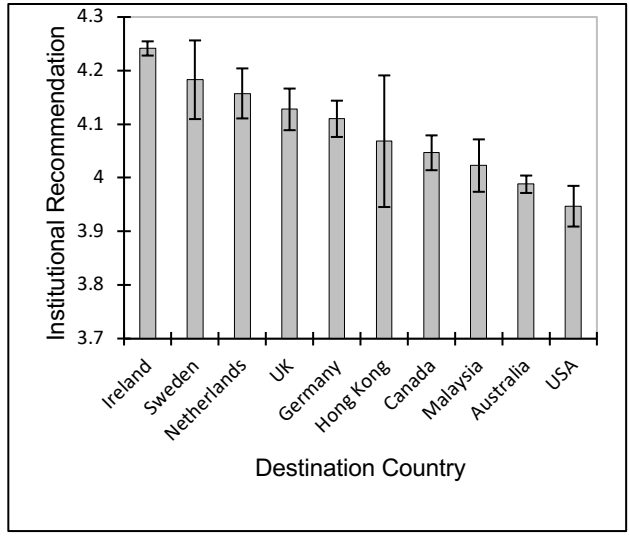

Figure 4: Destination Country and Institutional Recommendation

DISCUSSION

The framing concept for this article is that satisfaction with an experience does not necessarily result in a willingness to recommend it. Findings with our international student sample confirm this and, moreover, that different learning experience variables influence satisfaction and recommendation. Results also show variation by student nationality and destination country. The following discussion explains the findings in more detail.

Overall Satisfaction

When considering overall satisfaction with their institution, international students value teaching-related variables the most of learning experience variables (see Table 2). Indeed, eight of the 14 learning variables influencing overall satisfaction were in this category. Since students spend a good amount of their time in classes while at the university, the influence of teaching-related variables on overall satisfaction is perhaps unsurprising. These findings add detail to previous research (Ammigan & Jones, 2018; Butt & Rehman, 2010; Elsharnouby, 2015; Sahin, 2014; Wiers-Jenssen et al., 2002), which indicated various aspects of teaching as important determinants of student satisfaction.

In terms of student nationality, it was interesting that students from the Asian countries in our sample gave relatively lower satisfaction ratings than others. This echoes previous research in healthcare, which found lower levels of satisfaction among Asian respondents and those of Asian descent, reportedly due to different response tendencies or cultural norms rather than differences in experience (Brédart et al., 2007; Hung et al., 2016; Saha & Hickam, 2003).

Recommendation

For institutional recommendation, learning experience variables described as studies are what international students value the most (see Table 6), particularly English language support and employability skills. The significant predictive power of employability skills on institutional recommendation is consistent with Cubillo et al.'s (2006) findings that career prospects and opportunities to work during a program of study were significant factors in influencing international student decision-making during university selection. It is important to note that English language skills represent a key factor in communication, one of the most important elements of employability, and so these two variables are closely linked.

Two facilities variables, virtual learning and classroom technology, significantly influenced institutional recommendation but failed to influence overall satisfaction. This is in line with our conceptual framework and echoes findings that factors influencing satisfaction can differ from those influencing recommendation (Gajjar, 2013; Ghorbanzade et al., 2019).

Satisfaction Compared with Recommendation

It is worth reflecting on the finding that a multicultural study environment positively predicts overall satisfaction but negatively predicts recommendation. Previous research (Arkoudis et al., 2013; Williams & Johnson, 2011; Yu et al., 2016) has indicated that cross-cultural perspectives and intercultural friendships are highly rewarding experiences for international students, although making friends with local students may be difficult (Hendrickson et al., 2011; Montgomery & McDowell, 2009; Rienties & Nolan, 2014). While students might appreciate the resources, engagement opportunities, and other efforts institutions put in place to ensure a diverse and multicultural setting on campus, it can still be stressful adjusting to new academic, social, and cultural environments (Bastien et al., 2018; Mesidor & Sly, 2016). Cultural differences can present challenges and, reflecting upon these experiences, students might be less inclined to recommend them to others.

Teaching variables predicted overall satisfaction more than studies or facilities variables, but this was not the case for recommendation, where learning variables classed as studies predicted willingness to recommend the institution. Once more, this important difference is in line with our conceptual framework, endorsing research by Cronin et al. (2000) that recommendations are fundamentally different from satisfaction judgments. Student recommendations are influenced by evaluations of quality and value as well as satisfaction. The fact that employability skills influenced institutional recommendation almost twice as much as overall satisfaction, could mean future employment considerations are regarded as important indicators of value (Cronin et al., 2000).

Another possible explanation for the predictive power of employability on satisfaction and recommendation lies in healthcare research. Tung and Chang (2009) demonstrated that the interpersonal skills of healthcare providers are important for overall satisfaction, but to go beyond this to recommendation, it is technical skills that are key. Employability skills might thus be regarded as equivalent to those technical skills, which institutions must provide to go beyond student satisfaction to institutional recommendation.

Implications

The global market for attracting and retaining talented international students has become increasingly competitive. But the unprecedented challenges brought by the COVID-19 pandemic mean the future of international exchange and student mobility is at stake, with substantial disruptions caused by campus closures, travel restrictions, remote learning due to health and safety concerns, and suspensions in visa issuance. It is unlikely that universities will resume their complete schedule of face-to-face classes in the near future and, thus, significant declines in international student numbers are expected. This will undoubtedly intensify the competition in student recruitment, once institutions resume their academic operations and students can travel safely again. It is therefore even more critical that universities remain focused on their marketing and admissions goals

and, at the same time, strategically incorporate student perspectives at all levels of their operations so that innovative learning practices and adequate support services are implemented to enhance students' curricular and co-curricular experiences.

This study's findings—that different learning experiences influence satisfaction and recommendation—offer some pointers to support these recruitment goals. Specifically, the learning environment is crucial for international student satisfaction, whereas longer term issues related to communication skills and future employment are critical in their willingness to recommend. Employment-related successes, such as job placement rates, average salaries, and work-related experiences during studies should, therefore, be an increasing focus of institutional policy, and highlighted to prospective students.

The study also has important implications for how universities recruit, train, and retain faculty who can deliver high-quality, content-rich courses. Courses and curricula suitable for a diverse student population are of increasing importance, and there must be a focus on learning and teaching across cultures in delivering and assessing them (Carroll, 2015; Leask, 2015; Leask & Carroll, 2013). Furthermore, institutional leaders, human resource professionals, educational developers, and those involved in student recruitment efforts, must understand that teaching variables, like "program organization" and "quality of lectures" are fundamentally important for both satisfaction and recommendation. Policy, strategy, and practice should reflect this, with intentional showcasing of the institution's academic strengths when working with prospective students. These may include students' on-program experiences, achievements, and personal stories focusing on the teaching variables that significantly influence satisfaction.

The overwhelming importance of the learning and teaching environment is a vital finding for student retention strategies, requiring a constant drive to assess and improve quality. Previous research by Ammigan and Jones (2018) demonstrated that of the four ISB categories of arrival, living, learning, and support services, learning variables were paramount for student satisfaction, and the present study confirms this. Intentional showcasing of teaching quality, expertise of lecturers, academic content, and course organization will also be valuable for student recruitment.

Finally, from a support services standpoint, institutions should consider placing greater emphasis on those programs and services that help enhance the learning experiences and future employment of international students.

Limitations and Future Research

Every research project has its limitations and while using the ISB results produced a large, global dataset, it is nevertheless a self-report questionnaire. As with all such questionnaires, social desirability bias and positivity bias could have influenced responses (Fisher, 1993; King & Bruner, 2000). In a more qualitative study, techniques such as movement pattern analysis could be used to complement self-reporting (Connors et al., 2016).

The ISB focuses primarily on degree-seeking, on-campus international undergraduate students, so generalizing the findings beyond this group is another limitation. Generalizability is limited further by the fact that approximately 65% of those included in the study were at either Australian or United Kingdom institutions.

Perceptions of value should also be mentioned as a limitation and an area for future research. Spencer-Oatey and Dauber (2019) noted that many questionnaires measure international student satisfaction on Likert scales, arguing that these are problematic since students could be highly satisfied with an experience and yet not value it. Spencer-Oatey and Dauber (2019) overcame this by asking students to evaluate the importance of an experience indicator before evaluating the experience itself, resulting in an intersection between the two. Consideration of Kano et al.'s (1984) importance–satisfaction model, developed to measure customer expectations, might also be worthwhile in future research on student satisfaction, and how institutions could in turn adjust services and resources to enhance the international student experience.

Another limitation is that, in general, fewer people respond to questions regarding recommendations than about their overall satisfaction (Cheng et al., 2003). This study showed the same effect, with around 8% of respondents who had completed all the satisfaction questions failing to answer the single question about institutional recommendation.

CONCLUSION

Using a large dataset from the ISB, this article offers insight into the difference between student evaluations, reflecting satisfaction, and behavioral intentions, representing international students' willingness to recommend an institution. It identifies the different variables influencing each and supports the argument that the learning environment is crucially important for satisfaction, whereas longer term, employment-related issues are fundamentally important for recommendation. The study offers targeted strategic advice for institutional policy and practice, and for enhancing recruitment and retention of international students, while suggesting pointers for further research in this important area.

Note

Appendices for this article can be found on the JIS website at https://www.ojed.org/index.php/jis

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