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The Development of framework for enhancing intake of foreign students in universities of Sindh using Multivariate Analysis: A Paradigm of Physical and Mental stability of students.

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Abstract

This research is envisaging and developing the framework for enhancing intake of foreign students with the help of identification of problems faced by foreign students and with the help of analyzing the self-efficiency of foreigners in public and private universities of Sindh province. Through literature various scholars have identified different problems namely cultural problems (CP), Language Problems (LP), Infrastructure Problems (IP), and Food problems (FP). Through detailed interview different problems have been identified which affect the education of international students. The sample consisted on 335 foreign student's currently getting education in different Higher Education Commission (HEC) recognized public and private universities of Sindh province Pakistan. The data was analyzed through SPSS and smart PLS Professional version for reliability, linear regression, factor analysis and prove the theoretical framework. It was concluded that all these identified problems affect the self-efficiency of students and ultimately, they shared the experiences with newcomers and affect the intake of foreign students.

Keywords: Cultural problems, Foreign Students, Language Problems, Food Problems, Infrastructure, Admission trend.

Introduction

The Sindh Province is very rich in education by imparting various domestic and international students in multicultural institutes and universities. Furthermore, the alumni of these universities are rendering their services in leading companies, industries, factories, hospitals, hotels and educational sectors.

For retaining and sustaining the admission ratio in these universities it is important to maintain the trend line of admission and necessary to develop framework by identification of problems faced by foreign students and by increasing self efficiency of foreign students for chasing the problems and sustain their education instead of dropout.

According to Paige (1990) defines foreign students are staying at other than their own country for getting education, the international students are not only culturally different but they have their own language, attitude, belief, moral, behavior and conduct. By entering in a host country foreign

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students have to face the different adjustments problems in a new environment. Jeremy's, 2010, has identified two categories of problems while pursuing study domestically or abroad. There are two kinds of problems The Routine problems are those problems which are normally faced by every Person in daily life and are easy to solve The Exceptional Problems are those problems which change the mode of life and very difficult to solve. Educational Sectors are contributing in the Economic Development of the Country as human capital based on knowledge and skills where as the person obtained knowledge and skills from educational sectors and ultimately educational sectors are contributing the economic development Michal Paul Teodoro, 12th Edition, 2014.

According to Maliha Nasir, 2012 the cultural adjustment and social adjustment definitely affect the victory in different aspects of life including education. In a longitudinal study Chen, Robin and Li (1997) found that social adjustment of adolescent students contributes to their academic achievement. Gabel, Dolen and Cerdin (2005) found that the capability of adjustment in new cultural and social environment can expect success in international assignments of international management.

According to Higher Education Commission (HEC) Pakistan Higher Education Commission prepared the plan to promote the higher education by encouraging foreign nationals to take admission in domestic universities and institutions of Pakistan. Currently, foreign students join Pakistani universities from ten to fifteen countries for study purpose in various educational institutions.

They select Pakistanas excellent learning institutions and very easy to get admission. Recently, Higher Education Commission with the collaboration of various administrative agencies including Ministry of Education, Ministry of Foreign Affairs, Ministry of Interior and Economic Affairs Division has streamlined the admission procedure for foreign students.

The main objective behind this revision of admission procedure was to enhance the intake and increase the funds. According to National Aliens Registration Authority (NARA), 2016 Pakistan. The foreign students join Pakistani public or private institutes almost from 20 countries i.e Jordan, Palestine, Somalia, Sudan, Saudi Arab, Bangladesh, U.A.E, Oman, China, Iran etc.

whereas, they select field of education as armed forces, nuclear technology, science and technology, medical engineering, Business, Pharmacy & general departments in specialized university accordingly.

Problem Statement

It is evident that intake of foreign students positively affects academic and research environment of host university in particular and economic development in general. However, there has been dearth of research studies, consequently it has been relatively unexplored.

It emerges out that there are many issues or problems that make uncertain the intake of foreign students which is a major issue in universities of Pakistan.

Literature Review

In Pakistan there is little research on international students education but nevertheless few researchers have identified the foreign students problems as same as in the other countries. Shariff (2004) has identified the communication in host country and cultural differences are major problems furthermore the adjustment with local food was also a big problem for foreign students. The weather and infrastructural conditions also cause adjustment problems for international students. Nasir (2011) found that cultural adjustment of international students affects their academic achievement. Dr. Rodrigo et al, 2011 The students blame their external environment for their bad feelings. Some of these hostilities are translated into anger over minor frustrations, fear and mistrust of locals, absenteeism from class, lack of interest, lack of motivation, and, at worst, complete withdrawal. Academic problems may begin at this stage. Baharak & Bin Baki, 2013 Furthermore the results of studies indicated that, the challenges faced by international students have been categorized by following four categories: (1) general living adjustment, such as adjusting to food, living/housing environment and transportation, dealing with financial problems and health care concerns; (2) academic difficulties, such as lack of proficiency in the English language Method of Teaching Problems(3) socio-cultural difficulties, for example, experiencing culture shock, Recreational Problems (4) personal psychological adjustment, such as experiencing homesickness, loneliness, depression, feeling isolation and worthlessness. Banjong, 2015 International students must surmount numerous problems during their studies in foreign lands. Adapting to a new environment is often challenging, and international students are known to face many difficulties as they move to their host countries in pursuit of education. Delphine & Myrna , 2016 International students experience numerous challenges in the course of pursuing their dreams in foreign lands.

Although the U.S. is the option of choice for most international students and although U.S. institutions of learning provide a number of facilities that cater to the needs of international students and other minority groups, international students' problems are not eliminated in the U.S. Despite these challenges, the majority of international students are known to persist to graduation. Today the importance of educational sector cannot be overlooked. Importantly, there is need to manage the educational system of universities for eminence of foreign students, cross cultural adjustments, communication barriers, way of teaching and employ modernized method. The mismanagement of these issues and continuity in these kinds of problems may reduce the intake of foreign students at Jamshoro Education City Sami, 2017.

Research Gap

To the best of the researcher knowledge the research on foreign students in Pakistan is very limited; especially in Sindh it is virtually non-existent. So the 10-year (2005-2015) data will provide unique information of admission trends and impact of problems on foreign student's education and seek to better equip with both public and private universities of Sindh province with empirical evidences.

Research Objectives

To examine the intake of foreign students in public and private universities of Sindh province from 2005-2015

To identify the problems faced by foreign students in public and private universities of Sindh province.

To analyze the impact of problems on self- efficiency of foreign students and the extent to which they affect intake of foreign students.

Hypotheses

H₁: The cultural barrier has significant effect on the self efficiency of foreign students in public & private universities of Sindh province Pakistan.

H₂: The language barrier has significant effect on the self-efficiency of foreign students in public & private universities of Sindh province Pakistan.

H₃: The Infrastructure barrier has significant effect on the self-efficiency of foreign students in public & private universities of Sindh province Pakistan.

H₄: The food barrier has significant effect on the self-efficiency of foreign students in public & private universities of Sindh province Pakistan.

Research Design, Philosophy and Research Method

The research design of this study is Explanatory (Jupp, 2006). Pragmatic Philosophy has been used because of Mixed Method applied in data collection. Triangulation Mixed Method had used because most of the time the observed data (Qualitative) need to be converted in to numerical form in the shape of Likert scale. (Steve- Kelly, 2012). In mixed method we used qualitative and quantitative data.

Sampling Method& Size

Simple random sampling techniques have been used for the collection of the data. The public and private universities of Sindh have almost 1139 foreign students. The sample is calculated as 288 from the Raosoft Sample Size calculator. The number of respondents selected for the research should not be less than 288 (Raosoft, 2004). However we have a considered a sample size of 335 students for the conduction of the research in a more valuable and meaningful way.

Data Collection

Keeping into view the dynamic nature of research topic, the instrument/ method of data collection followed as per pattern of Steve- Kelly, 2012 who in his comprehensive study of the foreign students developed a data collection instrument on the basis of International Students Economic

Impact Model (ISEIM) of the funk, 2001 and incorporated the basic principles given by Johnson, 2003.

Analysis Techniques

The statistical tools including reliability analysis, validity analysis, factor analysis, and regression analysis have been used to meet the hypotheses of this research. The ratio and charts for the foreign admission have been acquired with the help of the Pivot table and chart through Smart PLS and SPSS. Out of total 50 HEC Recognized Public & Private Universities only 22 Universities in Sindh having foreign students located at various geographical location (Source: This Study)

Empirical Model

$$SEFS = \beta_0 + \beta_1 CP + \beta_2 LP + \beta_3 IP + \beta_4 FP + \mu$$

Where;

SEFS = Self efficiency of foreign students

CP = Cultural Problems

LP = Language Problems

IP = Infrastructure Problems

FP = Food Problems

μ = Disturbance term

β_0 = Intercept

$\beta_1 - \beta_4$ = Coefficient of the independent variables

Different authors have been identified the problems faced by international students by combining different problems following free framework was developed.

According to Furnham (1988) Cultural Barrier	According to Lebeir, well & Bond(2008) Language Barrier	According to Khan & Naru (2006) Poor Infrastructure
<ol style="list-style-type: none"> 1. Racial Discrimination 2. Language Difficulties 3. Accommodation Trouble 4. Financial Stress 5. Fear of Rejection 	<ol style="list-style-type: none"> 1. Native Language in Teaching 2. English Language & Communication 3. Misunderstanding 	<ol style="list-style-type: none"> 1. Undeniably Large 2. Complex & Rough 3. Lack of Resources
Baharak & Bin Baki, July 2013 Food Problems	<ol style="list-style-type: none"> 1. Spicy food 2. Prohibit Food 3. Unhygienic Food 	

PROBLEMS IDENTIFIED THROUGH PERSONAL INTERVIEW

Cultural Barriers identified by Personal Interviews	Language Barriers identified by Personal Interviews	Infrastructure Barriers by Personal Interview
<ol style="list-style-type: none"> 1. Feel Irritation 2. Feel Fear of Rejection 3. Local Person Interferences 4. Hooting from Local Persons 	<ol style="list-style-type: none"> 1. Irritated due to Language 2. Teachers are speaking in local language 3. Misunderstanding 	<ol style="list-style-type: none"> 1. Less maintain standard due to infrastructure 2. Poor infrastructure causes disturbance 3. The roads and buildings are not maintained
Food Problems identified Personal Interviews	<ol style="list-style-type: none"> 1. Mismanagement of time 2. Low quality food problem 3. No Clean water & No varieties 	

From personal Interviews 13 problems have been identified from literature and 14 problems have been identified by combining all these problems total 27 problems have been identified among which 11 problems were new. From Personal Interviews 5 factors have been identified for Self-Efficiency. By combining the literature identified problems & personal interviews identified problems draw the framework. The following framework has been drawn:

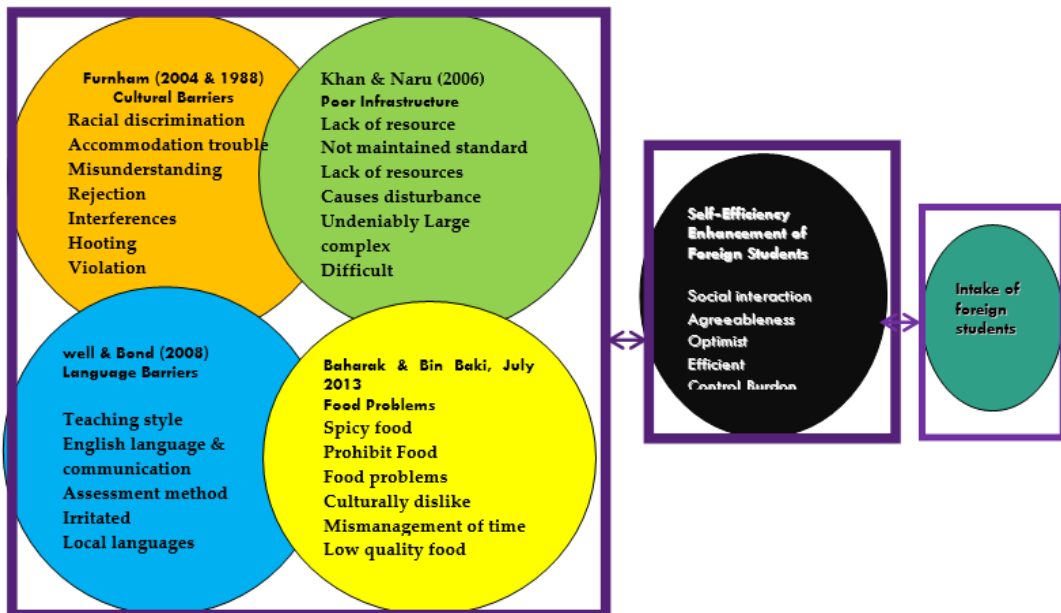


Figure 1 The Conceptual Framework of Intake of Foreign Students

Table 1 Overall trend of foreign student’s admission from 2005-2015 in public and private universities of Sindh province Pakistan

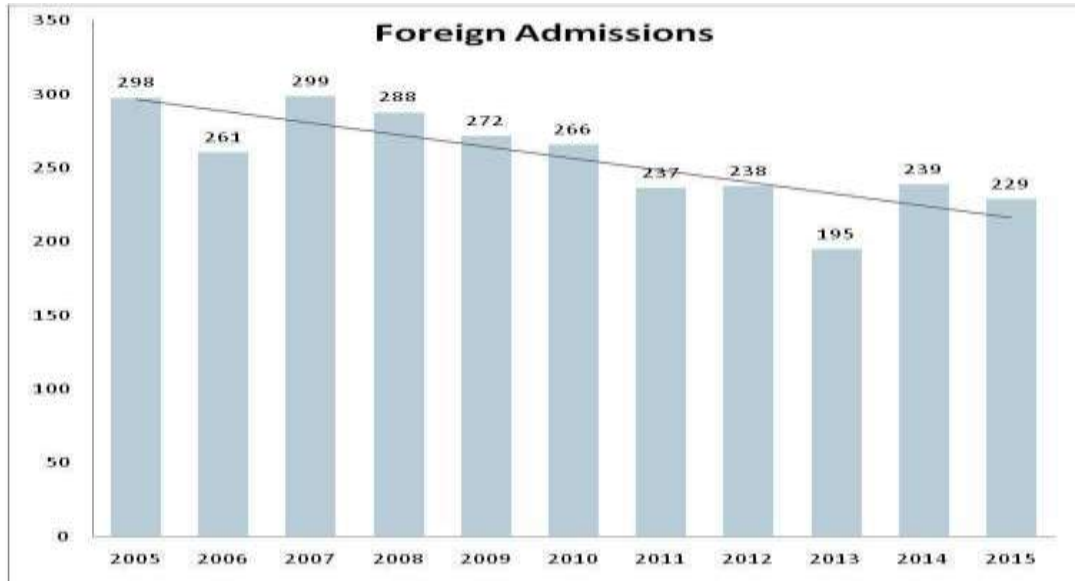


Table 2. Reliability Test of variables

	Cronbach's Alpha	rho_A	Composite Reliability
Cultural	0.785	0.842	0.838
Food	0.787	0.792	0.837
Students' Efficiency	0.824	0.809	0.874
Infrastructure	0.790	0.839	0.846
Language	0.806	0.642	0.821

Above given table reflects the case processing summary of the data for the reliability test. It can be observed that a total of 335 cases have been used for the research analysis of the data. And all the 335 cases have also been used for the reliability analysis of the data. No cases have been excluded from the data to process the reliability.

Table 3 Factor Analysis (Overall Public and Private Universities of Sindh)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.761
Bartlett's Test of Sphericity	Approx. Chi-Square	2923.344
	df	351
	Sig.	.000

Table 4 Total Variance

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.318	15.992	15.992	4.318	15.992	15.992	3.256	12.059	12.059
2	3.018	11.179	27.171	3.018	11.179	27.171	3.206	11.873	23.932
3	2.897	10.728	37.899	2.897	10.728	37.899	3.148	11.661	35.593
4	1.336	8.650	46.549	1.336	8.650	46.549	1.958	10.956	46.549
5	.981	5.449	51.998						
6	.962	4.157	56.155						
7	.932	3.544	59.699						
8	.906	3.357	63.056						
9	.888	3.291	66.347						
10	.764	2.830	69.177						
11	.745	2.761	71.937						
12	.691	2.558	74.495						
13	.683	2.530	77.025						
14	.665	2.462	79.487						
15	.616	2.282	81.769						
16	.590	2.184	83.953						
17	.555	2.057	86.010						
18	.549	2.035	88.045						
19	.513	1.899	89.944						
20	.468	1.734	91.678						
21	.462	1.711	93.389						
22	.421	1.559	94.948						
23	.388	1.435	96.383						
24	.314	1.164	97.547						
25	.284	1.053	98.600						
26	.233	.864	99.464						
27	.145	.536	100.000						

The Kaiser Mayers Olkin measures test of & Bartlett’s test shows the sampling adequacy which reveals the .761 which is adequate and acceptable for further process of data and further analysis. The factor analysis total variance table shows that from all twenty seven factors this analysis reduces the factors and seeds those which have above 1 Eigen value and reduces into four groups however the right side table is shows the variance percentage of factors.

Table 5. Component Matrix

Component Matrix ^a				
	Component			
	CULTURAL	INFRASTRUCTURE	LANGUAGE	FOOD
Cultural change				
Loneliness and fear of rejection	.525			
Interferences	.532			
Hooting				
Charge more money	.543			
Violation in cultural rules	.563			
Accommodation Trouble				
Accommodation affects education				
language change			.603	
Native language lectures			.578	
ejection due to language difference			.571	
misunderstanding			.572	
Assessment			.532	
Undeniably Large perceived infrastructure				
Roads and buildings are not maintained		.507		
Multimedia and accessories are not available		.511		
Security issue		.583		
Broken furniture		.545		
Lack of resources and generator				
Food spots are limited				
Unavailability of clean water				.364
Unavailability of variety in food				.375
Spicy food				.398
Cultural food not available				.302
Unhygienic food				
Below quality than payment				
Food Leads to diseases				
Extraction Method: Principal Component Analysis.				
a. 4 components extracted.				

Above table reveals that under the umbrella of cultural change there were four problems which are highly correlated and the variances are above than 5%, in umbrella of language problems there were five problems which are highly correlated and have variances greater than 5%, in umbrella of infrastructure there were four problems which are highly correlated and have variances greater than 5% and finally under the umbrella of food problems there were four problems which are highly correlated and have variances greater than 5%.

Table 6. Regression Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.772 ^a	.597	.592	.27763
a. Predictors: (Constant), Food, Language, Infrastructure, Cultural				

The above table reflects the Model Summary of the Universities of Sindh. The R of .772 in the model summary reflects there is 77.2 percent of the correlation between the barriers and the Self-Efficiency of Students. It shows the strength of the relationship; the strong relationship can be observed from the value of R close to one. The R-square is said as the coefficient of determination. The coefficient of determination reflects the percentage of dependable variable can be determined with the help of the independent variables. The R-square of .597 reflects the 59.7 of the self efficiency of foreign students is linked with the independent variables and can be predicted from them. However, the remaining 40.3 percent of the value will be predicted from the factors other than the mentioned variables.

Table 7 Coefficients

Coefficients ^a					
Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	.177	.161	1.099	.272
	Cultural	-.446	.030	-14.726	.000
	Language	-.103	.025	-4.107	.000
	Infrastructure	-.177	.024	-7.338	.000
	Food	-.223	.032	-6.972	.000
a. Dependent Variable: Students' Efficiency					

In above table the negative value of Beta reveals that the highest the negative value may decrease the self-efficiency of students, or all values below 0.5 represent all values are significant and hence hypotheses are proved. Whereas negative value of beta of independent variables inversely effects on dependent variable means higher values of problems may decrease the self-efficiency of students which ultimately affects the newcomers admissions.

Conclusion

This research helps universities for increasing the intake ratio of foreign students and also helpful for evaluating the self-efficiency of the foreign students, the results also supports and enumerates the barriers in intake of foreign students and facilitates them to continue their study by mitigating the problems they face. Not only foreign students this study also assists to diagnoses the local student's problems as well along with these problems proposed solutions have been observed to solve the problems and these solutions totally based on internal capability of students to survive and sustain their education by enhancing self-efficiency in education, adjustment and in overcome the problems. The results are not only beneficial for the public and private universities of Sindh but generally it is beneficial for all HEI's and universities. Problem solving is a tool and technique which helps student to create a way in whenever they feel block. Various problems like cultural, language, infrastructure and food can be solved and minimize by time to time and observing the experiences by foreign students. All the hypotheses hence prove that the problems are significantly affect the education. As problems rises the educational interest and admission trend become declined. Insolently, universities management has to formulate the policies for foreign students and management side separately. Whereas, these problems not only acknowledge the management of university but it will also incorporate the demands of foreign students and reduce the problems and affect intake of foreign students ahead.

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