Impact of Intangible Characteristics of Universities on Student Satisfaction

Impacto de las cualidades intangibles de las universidades en la satisfacción del estudiante

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Abstract

The aim of this research was to investigate the impact of the intangible qualities of the universities on student satisfaction. To do this, we have collected data from 7 different major public and private universities of the Kurdistan Region of Iraq. We have used 170 data to proposed further analysis. The partial least square method (PLS) was used to test the hypothesis. The results reveal that career opportunities and a friendly atmosphere are the main two elements that foster the reputation of the universities. The second interesting result of this research is that social activities impact the reputation of universities but not the friendly atmosphere while social activities impact a friendly atmosphere but not the reputation significantly. Finally, we have suggested the implications to the practitioners in the region.

Keywords: University selection, Student satisfaction, partial least square

Resumen

El objetivo de esta investigación fue indagar el impacto de las cualidades intangibles de las universidades en la satisfacción de los estudiantes. Para hacer esto, hemos recopilado datos de 7 diferentes universidades públicas y privadas diferentes de la región de Kurdistán en Irak. Hemos utilizado 170 datos para proponer un análisis adicional. El método del mínimo cuadrado parcial (PLS) se utilizó para probar la hipótesis. Los resultados revelan que las oportunidades profesionales y una atmósfera amigable son los dos elementos principales que fomentan la reputación de las universidades. El segundo resultado interesante de esta investigación es que las actividades sociales impactan la reputación de las universidades, pero no la atmósfera amigable, mientras que las actividades sociales impactan una atmósfera amigable pero no la reputación significativamente. Finalmente, hemos sugerido las implicaciones para los practicantes en la región.

Palabras clave: Selección universitaria, satisfacción del estudiante, mínimo cuadrado parcial

Introduction

Academic profession in Kurdistan region of Iraq has gone through a lot of changes since its liberation from Saddam's Iraqi regime. Various structural changes in the education field shaped the academic profession all over the world over the past few decades (Enders & de Weert, 2009). One such developments is the cut-throat competition among the universities. There are thousands of good higher education institutions and universities around the world. Potential students of higher education institutions all over the world find it difficult to choose a university which can fulfill their educational needs and demands. On one hand, students are compelled to shortlist higher education institutions or universities, for instance, while studying in A-levels in UK (Moogan et al, 1999). On the other hand, universities face tough competition and raised-expectations of all stakeholders, especially the potential customers or students. Due to factors like globalization and increased competition, universities now realize that in

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order to attract, retain and satisfy their customers, or students, they are supposed to work as efficiently as commercial companies do, in any service industry (Cheong & Tam, 1997).

Traditionally, higher education institutes were supposed to produce limited number of scholars who would teach and produce quality research. With the passage of time, more and more people realized the importance of education and joined universities. Private universities came into being and gave rise to a new culture of education. Universities changed their strategies and started targeting the masses, instead of focusing on niche of intellectuals (Wan et al, 2015). Universities no longer operate as public service institutions, but now most of them are for-profit organizations, equipped with business acumen to attract target customers.

Things are not very different for higher education institutions in Kurdistan region of Iraq as well. The dynamic environment and economic factors contributed to transformation of universities, especially the private institutions to operate as commercial companies, trying to maximize their market share (Budur, Rashid & Poturak, 2018). The universities not only face competition from local higher educational institutions, but also from the better-ranked universities abroad. A vast number of students travel to overseas countries to have a good quality of education (Poturak, 2014). It is quite challenging for universities to attract students, to meet their expectations and keep their satisfaction level high, once they have joined the university (Hushyar Sherwani, 2018). Whilst the number of private university students is increasing every year, the universities still strive to enhance their market share by using various strategies that attract prospective students to campus.

The purpose of this study is to determine which dimensions of an educational experience a university should improve in order to significantly increase overall student satisfaction. In this study, student satisfaction is measured along eleven independent variables. The results of this research will help in finding out which variables have most significant impact on overall student satisfaction.

Overview of the higher education sector in Kurdistan

Some of the renowned higher education institution operating privately in Erbil, Sulemani and Duhok cities of Kurdistan region are as follows: Cihan university, Ishik university,

Komar university, American university of Iraq, Human Development university, International university of Erbil, Bayan university and Qalam university. Major public universities in the region include Salahadin University in Erbil, Sulaimani University and Sulaimani polytechnic university in Sulaymaniyah, Koya university in Koya, and Raparin university in Raparin. Some of the public universities have been operating for the past 6 decades. However, private higher education sector is relatively new in Kurdistan. The first private university was founded in the region in year 2002. Most private universities offer an undergraduate degree with duration of three to four years, which is called as bachelor degree. The exception to this duration is degrees in medicine, dentistry, pharmacy and architecture, where longer and more extensive study duration is required. Public universities in Kurdistan usually have annual examination system, whereas private universities have adopted the semester system for bachelor as well as master degrees.

According to Kotler (1997), if the choices available are various and complex, the decision making can be termed as *extensive problem solving*. In the consumer behavior field of study, different types of factors (reputation, image, extra services, customer relationships, etc.) have been defined as influential on the customer preferences (Sahin and Singh, 2017; Budur, 2018; Jaf et al, 2019). Beside the management is another influential factor on the employees to promote organizational effectiveness (Budur and Demir, 2019 a,b) and in turn attract customers for the competitive advantage in the market (Demir and Aydinli, 2016). There are various factors affecting the student's decision-making process when it comes to choosing a university such as cost, facilities on campus, scholarships, social and scientific activities, environment, and the university's reputation or brand name (Budur et al., 2018). These factors eventually lead to student's satisfaction or dissatisfaction with the university. In order to get a greater share of the pie, it is very important for the higher education institutions to examine the source of satisfaction of students with the university they choose. Once the university knows the important factors that impact students' choice of university, they can make improvements in those areas and attract and retain the maximum number of target customers or students.

Literature review

A substantial amount of research has been carried out in order to better comprehend the factors that

affect the decision-making process of a student to pursue higher education. While early work was mainly done in developed countries, for instance, Kotler (1975) and Chapman (1981), focusing on factors influencing the university selection on both student's as well as university's side, respectively. Subsequent research has been contributed by scholars in developing countries as well, for instance, Budur et al (2018) increased the breadth of factors considered by studying the same in Kurdistan region of Iraq.

Past research concluded that even though selection of a university hardly has any impact on final outcomes for the students, as personal study habits and intelligence are more important determinants of success in higher education (Need and De Jong, 2001). However, due to higher education being a highly competitive industry, universities face challenge of attracting new students and students get mind boggled to see so many alternatives. Both parties need increased information to help them succeed in their respective quest.

Student satisfaction

Satisfaction is the perception between expectation and experience with the service or product (Demir and Mukhlis, 2017; Budur et al., 2019c; Torlak et al., 2019). The authors (Demir, 2019a, 2019b) have suggested that the satisfied customers are more inclined to repurchase that service again.

Student satisfaction can be defined as a subsequent short-term attitude of students after educational experience (Elliott & Healy, 2001; Demir, 2017). Hartman and Schmidt (1995) pointed out multi-dimensional nature of student satisfaction. Students select universities that meet their academic, financial and social needs. Moreover, Demir and Guven (2017) suggested that being certified by official authorities such as international standards organization (ISO) had significant and positive impact on the students' satisfaction.

Students are satisfied when a university they select meets or exceeds their expectations. According to Browne et al (1998) student satisfaction is evident from students' actions. They recommend the university to their friends and relatives if they are satisfied with it. Another dimension of student satisfaction is their intention to retain or repurchase the services of the same university if they are given another chance.

Student satisfaction depends on many factors such as clarity of student goals (Hartman & Schmidt,1995), trust in and built by staff, perceived quality or reputation of university (Athiyaman, 1997), career support services such as career counselling (Kotler & Fox, 1995), cost of education (Patton, 2010) and extent of interaction between the students and university staff (Browne et al, 1998). Other factors that lead to students' satisfaction with the choice of university include location, facilities or infrastructure, future career prospects and quality of life and social activities (Veloutsou & Paton, 2004). Moreover, student centeredness, campus climate or atmosphere, and instructional effectiveness also have an influence on overall student satisfaction. Last but not the least, need and merit-based scholarship also play an important role in selection and retention of the students at higher education level (Single Jr., 2004).

Cost and Scholarships

While elite higher education institution is less cost sensitive, as students always get drawn to them irrespective of cost, other universities which are not in top tier do not enjoy such privilege. Therefore, demand for most higher education degrees is quite elastic and poses serious potential problems for the universities (Shurden et al, 2010). This leads to conclusion that cost is an important factor that affects a student's decision-making process regarding university selection or in other words, student overall satisfaction with educational experience. Increasing the cost of higher education can drive the students away from the university and in turn can damage their chances of survival in competitive higher education industry. On the contrary, scholarships and financial aid decrease the overall cost of education and attract more students (Elliot and Healey, 2001).

Reputation in the market, internationality and career support/prospect

University's reputation among masses and its overall ranking substantially influence student's purchase decisions and satisfaction. Usually students rely on word-of-mouth about the university and its services and bad comments decrease their willingness to choose the university (Elliott & Healy, 2001). Scholars have also established significant relationship between university reputation and student choice of university (Abbott & Ali, 2009).

Graduates of highly reputed universities have better career prospect. They find jobs easily and are preferred by the employers as well. Career prospects and support are among significant factors that affect students' decision-making process (Munisamy, Jaafar & Nagaraj, 2014). Internationality of a university is measured by the number of international faculty and international students that a university has. Internationality promotes diversity in the university, and helps students learn about new cultures, develop various thinking and problem-solving techniques and improve decision-making process (Sherry, Thomas, & Chui, 2010). Teachers from different cultural and ethnic backgrounds share various kind of experiences, knowledge and perspectives with the students.

IT Services and Scientific Activities

Computer and IT services such as types of internet, online student portals, online management systems and other e-services improve a student's perception of the university's quality (Gatfield et al., 1990). Elliott and Healy (2001) also confirmed the influence of IT services on satisfaction level of the students. Scientific activities include conferences, workshops, seminars, exhibitions and project-based learning activities organized by the university. Scientific activities not only help universities improve their performance as mentioned by Montilla (2004), but also influence students' university selection and overall student satisfaction (Kotler & Fox, 1995; Budur et al., 2018).

Campus Climate or Atmosphere and Social Activities

University is not simply considered as a place that offers a degree, but it is perceived as a platform where you learn to be a good citizen and a better person. Students are drawn to the universities which have nice, friendly and positive atmosphere (Montilla, 2004). Some studies even concluded that it is one of the most important factors influencing a student's decision of choosing a university (Elliot & Healey, 2001; James et al., 1999). Moreover, if students perceive that the university offers a good social life on campus, they will be more likely to choose it over a university with no entertainment services and tedious and boring social life (Moogan & Baron, 2014).

Hypothesis

Based on the literature above, we have developed hypothesis of the current study as;

H1 Academic staff has significant impact on the cost perceptions
H2 Academic staff has significant impact on the friendly atmosphere
H3 Academic staff has significant impact on the reputation
H4 Career opportunities has significant impact on the cost perceptions
H5 Career opportunities has significant impact on the friendly atmosphere
H6 Career opportunities has significant impact on the reputation
H7 Cost perceptions has significant impact on the reputation
H8 Friendly atmosphere has significant impact on the reputation
H9 IT services has significant impact on the cost perceptions
H10 IT services has significant impact on the friendly atmosphere
H11 IT services has significant impact on the reputation
H12 Reputation has significant impact on the satisfaction
H13 Scientific activities has significant impact on the cost perceptions
H14 Scientific activities has significant impact on the friendly atmosphere
H15 Scientific activities has significant impact on the reputation
H16 Social activities has significant impact on the cost perceptions
H17 Social activities has significant impact on the friendly atmosphere
H18 Social activities has significant impact on the reputation

Methodology

Sampling

The research was studied in Kurdistan Region of Iraq. Therefore, we have gathered data from the major private and public universities of the region. Initially, we have distributed 500 questionnaires to the students who studied at one of the major public or private universities of the region. Besides, only 200 students have filled the survey questionnaire and turned it back. Remaining 300 students haven't responded back. Moreover, we have observed that 30 of the returned data was invalid due to the technical problems such as incomplete and impulsive filling of the questionnaire. Hence, there are 170 data for the further analyses.

Measures

In this study, we have aimed to investigate the impact of intangible qualities of the universities on the student satisfaction. To do this, we have used the questionnaire of Budur, Rashid, and Poturak (2018). The survey contained dimensions such as; academic staff (four items), career opportunities (three items), social activities (three items), scientific activities (three items), IT services (three items), friendly atmosphere (three items), cost perceptions (three items), reputation (five items), student satisfaction (three items).

Procedures

The aim of this research was to investigate the impact of intangible qualities of the universities on the student satisfaction. To do this, we have collected data from major universities of Kurdistan Region of Iraq. Initially, validity and reliability analysis were proposed to prepare data for the analysis. Secondly, Partial least squares method was employed to test the hypothesis.

Demographic information

The study contains 170 sample. Among those, 64 percent were males while 35 percent were females. Participants have been collected from various public and private universities of the region. The university names haven't been mentioned in the study due to the privacy. It has been observed that 22 percent of the students were paying 1000-2000 $ tuition fee to their universities, 29 percent were paying 2001-3000 $, 17 percent were paying 3001-4000 $, 10 percent were paying 4001-5000 $, 7 percent were paying 5001-6000 $, and 14 percent were paying 6000 $ or more to their universities. Further details can be seen on the Table 1.

Table 1. Demographic distribution of the sample

University		Frequency	Percent	Valid Percent	Cumulative Percent
	University 1	48	28.2	32.2	32.2
	University 2	30	17.6	20.1	52.3
	University 3	19	11.2	12.8	65.1
Valid	University 4	7	4.1	4.7	69.8
	University 5	7	4.1	4.7	74.5
	University 6	26	15.3	17.4	91.9
	University 7	12	7.1	8.1	100.0
	Total	149	87.6	100.0	
Missing	System	21	12.4		
Total		170	100.0		
Gender		Frequency	Percent	Valid Percent	Cumulative Percent
	Male	107	62.9	64.8	64.8
Valid	Female	58	34.1	35.2	100.0
	Total	165	97.1	100.0	
Missing	System	5	2.9		
Total		170	100.0		
Fee		Frequency	Percent	Valid Percent	Cumulative Percent
	1000-2000 $	33	19.4	22.4	22.4
	2001-3000 $	44	25.9	29.9	52.4
	3001-4000 $	25	14.7	17.0	69.4
Valid	4001-5000 $	15	8.8	10.2	79.6
	5001-6000 $	10	5.9	6.8	86.4
	6000 + $	20	11.8	13.6	100.0
	Total	147	86.5	100.0	
Missing	System	23	13.5		
Total		170	100.0		

Results and findings

Validity and reliability

Partial least squares method is more convenient than structural equations modeling when sample size is less than 200 (Chin and Newsted, 1999). Barclay et al., (1995) have suggested that 70-samples are enough to perform partial least squares in case there are no formative constructs. In this study, we have no formative constructs in our model. Therefore, 170 sample is enough to perform partial least squares method.

Table 2. Reliability and validity

Construct	Item	Factor Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Career Opportunities	Q1	0.878			
	Q2	0.873	0.851	0.910	0.770
	Q3	0.882			
Cost Perceptions	Q4	0.848			
	Q5	0.853	0.764	0.861	0.674
	Q6	0.757			
	Q7	0.849			
IT Services	Q8	0.874	0.831	0.898	0.746
	Q9	0.869			
	Q10	0.858			
Social Activities	Q11	0.833	0.811	0.888	0.726
	Q12	0.865			
Friendly Atmosphere	Q13	0.820			
	Q14	0.750	0.654	0.803	0.578
	Q15	0.707			
	Q16	0.827			
Scientific Activities	Q17	0.852	0.768	0.866	0.683
	Q18	0.799			
	Q19	0.744			
Reputation	Q20	0.830	0.817	0.880	0.647
	Q21	0.815			
	Q22	0.761			
Satisfaction	Q23	0.918			
	Q24	0.880	0.889	0.931	0.819
	Q25	0.916			
Academic Staff	Q4	0.780			
	Q5	0.839	0.829	0.886	0.661
	Q6	0.741			
	Q7	0.885			

In the model of the current study, there were 25 questions under nine dimensions. We have proposed analysis for internal consistency, reliability, and discriminant validity of the questionnaire. Table 2 represents the results of internal consistency and reliability analysis. Individual item reliability has been tested via factor loading under each dimension. Igbaria, Guimares, and Davis (1995) have suggested the minimum threshold of factor loadings to be 0.5 in order to call them "very significant". The results of the analysis have shown that items' factor loadings under each construct were above 0.5. Hence, it can be concluded that the reliability of each item under concerning construct have been satisfied.

Another test was internal consistency. Fornel and Larker (1981) have suggested 0.7 for each composite reliability in order to be accepted as reliable. It was observed that both composite reliability and Cronbach's Alpha values were above 0.7. However, average variance extracted for each construct have exceeded 0.5. Therefore, we can conclude that internal consistency has been achieved.

Discriminant validity was tested in order to prove that each construct was at appropriate distance comparing to each other. To understand that, we need to make sure that square roots of average variance extracted are above the correlations of a construct with other dimensions. Table 3 shows that the correlation values between variables were below the square root of average variance extracted for concerning dimension. Thus, it can be concluded that there are enough spaces between variables to be considered as a separate dimension.

Table 3. Correlations among constructs

	Academic Staff	Career Opportunities	Cost Perceptions	Friendly Atmosphere	IT Services	Reputation	Satisfaction	Scientific Activities	Social Activities
Academic Staff	**0.813**								
Career Opportunities	0.417	**0.878**							
Cost Perceptions	0.369	0.358	**0.821**						
Friendly Atmosphere	0.514	0.502	0.467	**0.760**					
IT Services	0.612	0.515	0.188	0.425	**0.864**				
Reputation	0.454	0.740	0.399	0.587	0.519	**0.804**			
Satisfaction	0.430	0.550	0.444	0.541	0.453	0.659	**0.905**		
Scientific Activities	0.613	0.488	0.387	0.478	0.568	0.578	0.483	**0.826**	
Social Activities	0.560	0.543	0.229	0.515	0.616	0.578	0.444	0.654	**0.852**

*** Bold numbers are Square Roots of Average Variance Extracted

Testing hypothesis

Partial least squares method has been used to test the hypothesis. To do this, we have employed Smart PLS software. Given in the Table 4, it can be observed that there is some hypothesis that have been accepted while some others were rejected.

Table 4. Results of hypothesis

	Path	Estimates	P Values	Accepted/Rejected
H1	Academic Staff -> Cost Perceptions	0.280	0.002	Accepted
H2	Academic Staff -> Friendly Atmosphere	0.273	0.003	Accepted
H3	Academic Staff -> Reputation	-0.065	0.342	Rejected
H4	Career Opportunities -> Cost Perceptions	0.283	0.004	Accepted
H5	Career Opportunities -> Friendly Atmosphere	0.267	0.001	Accepted
H6	Career _Opportunities -> Reputation	0.493	0.000	Accepted
H7	Cost Perceptions -> Reputation	0.058	0.245	Rejected
H8	Friendly Atmosphere -> Reputation	0.193	0.001	Accepted
H9	IT Services -> Cost Perceptions	-0.207	0.035	Accepted
H10	IT Services -> Friendly Atmosphere	-0.042	0.656	Rejected
H11	IT Services -> Reputation	0.060	0.404	Rejected
H12	Reputation -> Satisfaction	0.657	0.000	Accepted
H13	Scientific Activities -> Cost Perceptions	0.296	0.007	Accepted
H14	Scientific Activities -> Friendly Atmosphere	0.079	0.501	Rejected
H15	Scientific Activities -> Reputation	0.174	0.018	Accepted
H16	Social Activities -> Cost Perceptions	-0.155	0.101	Rejected
H17	Social Activities -> Friendly Atmosphere	0.191	0.034	Accepted
H18	Social Activities -> Reputation	0.083	0.289	Rejected

Adjusted R^2 of friendly atmosphere= 40%
Adjusted R^2 of cost perceptions=   25%
Adjusted R^2 of reputation=   65%
Adjusted R^2 of satisfaction=   43%

It has been revealed from the analyses that academic staff had positive and significant impact on the cost perceptions of the students and friendly atmosphere inside the university while it did not have a significant impact on the reputation directly. Rather, this impact was mediated by friendly atmosphere. Therefore, it can be said that quality academic staff that behaves friendly with the students enhance friendly atmosphere inside the university and that way effects the reputation positively. The results show that H1 and H2 have been accepted and H3 has been rejected.

It has been observed that career opportunities that students possibly might have impacted the cost perceptions of the students, friendly atmosphere inside the university, and reputation positively and significantly. Hence, it can be revealed that career opportunities are one of the most important determinants that foster positive perceptions of the students about the university. According to these results, H4, H5, and H6 have been accepted.

We could not find any significant relations between cost perceptions and reputation. Thus, the students do not evaluate the reputation of a university directly via tuition fee of the university. As friendly atmosphere had significant impact on the reputation, it can be said that the friendly atmosphere is more important than the cost perceptions of the students for the reputation of a university.

It has been observed that IT services impacted cost perceptions significantly and negatively. The result reveals that when the IT services are better, students think that the fee they pay is not expensive for that university. Besides, IT

services did not have any significant impact on the friendly atmosphere and reputation directly. Rather, that impact is mediated by the cost perceptions. Based on these results, H7, H10, and H11 have been rejected while H8 and H9 have been accepted.

The results show that reputation had significant impact on the students' satisfaction. However, it explained 43 percent of the overall variance of the student satisfaction. Therefore, it can be said that if the reputation of a university is high, students are more satisfied of selecting that university. Thus, H12 has been accepted.

Based on the results, it was observed that number of scientific activities such as seminars, workshops, scientific trips…etc. impact the cost perceptions and reputation while didn't have significant impact on the friendly atmosphere. Therefore, it can be revealed that students evaluate their university highly reputed based on the number of the scientific activities organized. Besides, the scientific activities do not enhance friendly atmosphere as social activities do. As a result, H13 and H15 have been accepted while H14 has been rejected.

Finally, it has been observed that social activities had significant and positive impact on the friendly atmosphere of a university while didn't impact the cost perceptions and reputation significantly. Hence, H17 has been accepted while H16 and H18 have been rejected.

Discussion

Based on the results of the current study, we have found that reputation has significant and positive impact on the student satisfaction of university. This result reveal that student is satisfied when his/her university is respected in the market. This result shows similarity with the (Athiyaman, 1997). The author also has suggested that the reputation was one of the significant determinants for the student satisfaction.

Secondly, we could not find any significant relation between cost perceptions and satisfaction of the students. These results are controversial with the study of (Patton, 2010). They have suggested that the cost of university had significant impact on the student satisfaction. The reason here might be that the tuition fees are not high for the private and public university students. There are other priorities for them comparing to the cost.

The results show that career opportunities are the most important determinant of reputation of a university. The results show similarity with (Kotler & Fox, 1995), who suggested that the career support services such as career counselling has significant impact on the reputation and student satisfaction.

We have found that the quality of academic staff and their relation with the students impact the reputation of the university over friendly atmosphere. These results show similarity with the studies of (Browne et al, 1998).

Further, we have found that the social and scientific activities have significant impact on the friendly atmosphere, reputation, and cost perceptions of a university. However, social activities are not significantly related with the cost perceptions and reputation but friendly atmosphere while scientific activities are not significantly related with the friendly atmosphere but the reputation and cost perceptions of a university. These results show partial similarity with the study of (Veloutsou & Paton, 2004). They suggested that social activities increase quality of life in the campus and consequently effect the student satisfaction.

Conclusions

The aim of this research was to investigate the impact of intangible qualities of a university on the student satisfaction. As intangible qualities, we have selected academic staff, social activities, scientific activities, career opportunities, IT services, reputation, and cost perceptions.

The results reveal that the reputation of a university is one of the biggest determinants on the student satisfaction. This construct explained 43 percent of overall variance on the student satisfaction. However, friendly atmosphere was very important for the reputation of a university comparing to cost perceptions. Besides, cost perception didn't have significant impact on the reputation of a university. Based on these results, administration of universities is suggested to increase friendly atmosphere where there is no discriminations and all students are equally evaluated. Secondly, they need to create the career opportunities for the students as internships, part-time and/or full-time employment at highly reputed firms. Third, they need to organize scientific activities for the students such as projects Olympiads, workshops, seminars, conferences in order to increase the practical knowledge of students.

In order to increase the friendly atmosphere, we have found that career opportunities and social activities play important role. As the friendly atmosphere play important role in reputation, the administration of universities is suggested to organize social activities such as cultural and sports competitions, festivals…etc. in order to keep staff and student together in a friendly atmosphere.

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