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International Students' Perceptions of their Learning Environment in Graduate Programs at One Normal University in China

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Abstract

This study was an investigation of the international students' perceptions of their learning environment in graduate programs at one normal university in China. The study used both quantitative and qualitative research methods. The sample comprised 91 international students, 51 Master and 40 doctoral from three schools: Education, Life Sciences and Chemistry. A structured questionnaire, the Dundee Ready Education Environment Measure (DREEM) served as the main instrument for quantitative data collection. The semi-structured interview was used to gather qualitative data. Data was analyzed using the Statistical Package for Social Sciences (SPSS) version 20.0. International students had positive perceptions about the learning environment. International students' majors and length of stay in China influenced perceptions about the learning environment. It is recommended that the curriculum be reviewed to offer more specialized courses.

Keywords: International students, perceptions, learning environment, graduate programs

1. Introduction

The purpose of this study was to evaluate international students' perceptions of their learning environment in graduate programs at one normal university in China. The study was guided by three research questions. First, what are the international students' perceptions of their learning environment in graduate programs? Second, are there any differences in international students' perceptions based on the number of years they have stayed in China? Thirdly, how do international students perceive their learning environment based on their majors? Higgins et al (2005) describe the learning environment as the diverse physical settings, cultures and contexts in which students learn; the term includes the culture of the class or school and presiding ethos and characteristics including how students interact with and treat one another, and the ways in which teachers can organize an educational environment. The learning environment encompasses a range of elements including teachers and teaching process, societal, edifying, and psychosomatic essentials and the physical environs, a warm, helpful and exigent learning environment is usually considered an indispensable pre-requisite for finest erudition. Numerous approaches have been adopted to assess the students' perception on their learning environment (Seabrook, 2004;Sobral, 2004;Audinet al 2003; Roff et al, 1997).Studies have shown that the learning environment has an important influence on the teaching- learning process in that it affects students' learning outcomes, motivation, behavior, sense of well-being and success (Bakhshialiabad et al., 2015; Audinet al, 2003;Genn, 2001; Pimparyonet al, 2000).Jonassen& Land (2002) emphasize that higher education is expected to create a high quality learning environment.

Statistics from the Ministry of Education of the Peoples' Republic of China (2016) point out that the total number of foreign students as of 2015 was 397,635 up by 5.46% from the 2014 total of 377,054. This shows that the number of students choosing China as their study destination is increasing. In order for China to attract more international students, there is need to evaluate these students perceptions of their learning environment. Even though such studies are very important, few investigations of a similar nature have been carried out during this era of internationalization of higher education in China. According to Harden(2001), the evaluation of the educational environment is vital for providing high quality, student-centered curriculum. Assessment of the educational environment is a significant part of program evaluation (Roff, 2005). Besides this, Aghamolaei and Fazel (2010) enlighten that the perceptions of students about the learning environment can be a basis for the application of the amendments and, therefore, optimize the educational environment.

2.Methodology

Both qualitative and quantitative research methods were used. The sample consisted of 91 international students all from the English taught graduate programs: 51 master and 40 doctoral (55 males and 36 females). They were from the 2014, 2015 and 2016academic years. Purposive sampling was used to select the participating schools. Simple random sampling was then used to choose respondents within each cluster. The study was carried out at one normal university located in Jilin province, China. The university was a recipient of the project 211, which was initiated by the Ministry of Education, China. The number 211 has two logical parts, "21" and "1" where 21 denotes the century and 1, the 100 institutions (China's University and College Admission System [CUAS], University list of Project 211, n.d.).

The Dundee Ready Education Environment Measure (DREEM) questionnaire and semi-structured interviews were used for data collection. The English version of the Dundee Ready Education Environment Measure (DREEM) questionnaire was used to collect quantitative data, semi structured interviews were used to collect qualitative data. Since 1997, this instrument (DREEM) has been translated in many languages and used in several educational settings (Education, Medicine, Dentistry, Chiropractic) around the world (Riga et al, 2015; Kossioni et al, 2011; Roff, 2005). The DREEM questionnaire consists of 50 items measuring the specific aspects of the educational environment as five sub-scales based on students' perception, which include Students' perception of Learning (SPoL), Students' Perception of Teaching (SPoT), Students' Academic Self-perception (SASP), Students' Perception of Atmosphere of Learning (SPoA) and Students' Social Self-perception (SSSP). Each is scored 0-4 on a five-point Likert scale (4= strongly agree, 3= agree, 2= neutral, 1= disagree, and 0= strongly disagree). There were nine negative items (numbers 4, 8, 9, 17, 25, 35, 39, 48, and 50) which need to be scored reversely. The overall DREEM score is 200. The maximum scores of each sub scales are 48 for SPoL, 44 for SPoT, 32 for SASP, 48 for SPoA and 28 for SSSP respectively. Items with a mean score of 3 or more are true positive points. Items with a mean of 2.0 or less should be examined as problem areas; Items with a mean between 2.0 and 3.0 are aspects of the educational environment that could be enhanced(Bakhshialiabad et al, 2015).

A set of DREEM questionnaires containing 50 items was administered to find out international students' perceptions of their current learning environment in graduate programs. Participants were asked to indicate their extent of agreement (Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree).

Quantitative data was analyzed by using SPSS version 21.0. Students' responses were compared using mean scores, One-way ANOVA and Paired Samples t-test. Based on the findings and results from questionnaires, five participants were purposively selected to participate in semi-structured interviews to collect more information about the areas of weaknesses that were identified. All interviews lasted approximately 30 minutes and were recorded on a voice recorder. The interviews took place in the respondents' rooms of residence. The transcriptions from the recordings were coded andsubjected to thematic analysis.

3.Results and Discussion

3.1 International Students' Perceptions of their Learning Environment

In this study, the overall DREEM mean score for the participants was 136.77out of a possible maximum of 200. This is within the range 101-150; indicating a more positive than negative perception about the learning environment. Therefore, it was found that the international students had more positive than negative perceptions about their current learning environment in their graduate programs. This finding is similar to what Bakhshialiabad et al (2015) found that student' perceptions of their learning environment were more positive than negative. It was also consistent with the findings of Brown, et al, (2011) in that the overall scores of their study indicated that students had positive perceptions about their learning environment.

From the findings and analysis of each sub-scale, the mean scores for Students' Perception of Learning (SPoL) =32.67out of 48 and that of their perception of teaching (SPoT) =30.12out of 44 showed that they were moving in the right direction. The mean score of 22.19out of 32 for Students' Academic Self-perception (SASP) showed that their feelings are more on the positive side than the negative. The mean score of students' Perceptions on Atmosphere of learning (SPoA) 33.54out of 48 pointed out a more positive atmosphere was perceived while students' Social Self-Perception (SSSP) with a mean score of 18.25out of 28 meant their social self-perceptions were not too bad.

The following positive areas were identified: encouragement to participate in class (3.04), teachers are knowledgeable (3.38), confidence about passing this year (3.27), relaxed atmosphere during teaching (3.15), teaching helps to develop competence (3.01), social life is good (3.02), teachers are well prepared for their

teaching sessions (3.02), pleasant accommodation (3.26) and students feeling able to ask the questions they want (3.11). Two problem areas were singled out as: plagiarism (1.79) and teaching overemphasizing theoretical learning (1.80).

Data collection and analysis in this study was sequential in nature. After analyzing the quantitative data, semi-structured interviews were conducted to understand more deeply about the problem areas that had been identified. In regard to plagiarism, one respondent said she did not know what it was. While pursuing her undergraduate degree, she was not required to write any academic paper. She only sat for written exams in the middle and at the end of the semester. The other interviewees said that students plagiarized because they did not know the appropriate way of citation. They did not have the required skills/knowledge. Language barrier was also another reason given for plagiarism. One interviewee admitted that; *"my English proficiency level is low. Sometimes I have wonderful ideas but I do not know how to put them across clearly in English. In such circumstances, I usually lift words from texts directly to my paper (without acknowledging the source) and hence I end up plagiarizing."*

Concerning teaching putting more emphasis on theoretical learning, it was only interviewees from the school Education who considered this a problem. Interviewees from the School of Life Sciences and Chemistry were not in agreement. According to them, their lessons were more practical than theoretical in orientation.

3.2Students' Perceptions of the Learning Environment based on the number of Years they have lived in China

In order to find out the students' perceptions on their learning environment according to the years they have lived in China, students were divided into three groups; students who had lived in China: for less than one year, from one to three years and from three to five years. One way ANOVA was conducted to test the differences between and among the groups.

Table 1. ANOVA results for Students' Perceptions of Learning Environment according to the years they have lived in China

	Sum of Squares	*df*	Mean Square	F	Sig.
Between Groups	2416.199	2	1208.100	4.649	0.012
Within Groups	22865.955	88	259.840		
	25282.154	90			

As shown in Table 1, there were significant differences in the perceptions of students of their learning environment according to the years they have lived in China [F (2, 88) = 4.649, p = 0.012].Post hoc test (Tukey's HSD) was carried out to find out where the differences lay. The results are shown in the table below.

Table 2: Results of Tukey (HSD) for Students' Perceptions of Learning Environment among three groups based on Years of staying in China

Year of staying in China (I)	Year of staying in China (J)	Mean Difference (I-J)	*P*
Below 1 year	1-3 years	-8.591	0.108
	3-5 years	5.091	1
1-3 years	Below 1 year	8.591	0.108
	3-5 years	13.682*	0.035
3-5 years	Below 1 year	-5.091	1
	1-3 years	-13.682*	0.035

*. The mean difference is significant at the 0.05 level

There were significant differences between the international students' perceptions who had stayed in China for

less than one year and that of students who had stayed for between three to five years ($p<0.05$). Therefore, the more the number of year students stayed in China, the more positive they perceived on their learning environment.

3.3 International Students' Perceptions of the Learning Environment based on their Current Majors

One way Analysis of Variance (ANOVA) was used to find out whether there were significant differences in the perceptions of students' about the learning environment based on their current majors.

Table 3: ANOVA Results for Students' Perceptions of the Learning Environment based on their Current Majors

	Sum of Squares	*df*	Mean Square	F	Sig.
Between Groups	2964.267	2	1482.133	5.844	0.004
Within Groups	22317.887	88	253.612		
Total	25282.154	90			

There was a significant difference in the perceptions of students of the learning environment based on their current majors[F (3, 87) = 4.867, p = 0.004]. Students' perceptions on their current learning environment significantly varied based on their majors. Post hoc analysis (Tukey HSD) was conducted.

Table 4: Results of Tukey (HSD) Students' Perceptions of Learning Environment among three groups of their current majors

Current Major (I)	**Current Major (J)**	**Mean Difference (I-J)**	***P***
Life science	Chemistry	8.541	0.261
	Education	12.489*	0.003
Chemistry	Life science	8.541	0.261
	Education	3.948	1
Education	Life science	-12.489*	0.003
	Chemistry	-3.948	1

*. The mean difference is significant at the 0.05 level

The Tukey post hoc test indicated that there were significant differences in the perceptions of international students majoring in Chemistry and Education ($p<0.01$). Similarly, a significant difference was found between Life Sciences and Chemistry ($p<0.01$). However, there was no significant difference between Life Sciences and Education ($p>0.01$). According to the results, students majoring in Education and Life Science had more positive perceptions compared to those majoring in Chemistry.

4. Conclusions

According to the findings and results of the study, the students held positive perceptions about the learning environment. The students' length of stay in China and majors influenced perceptions about the learning environment. In order to improve the learning environment, respondents recommended the following. First, that the current curriculum be reviewed to offer more specialized courses. The one being offered is too general. Secondly, the number of courses compulsory for doctoral students should be reduced to enable them focus more on research. Lastly, the equipment and chemical bottles in the laboratory need to be labeled in both English and Chinese language.

5. Limitations

The study was a small scale survey and hence the findings cannot be generalized to all international students in China. A similar study should be carried out in other universities across China (which have international students) to establish whether international students hold the same perceptions about the academic learning environment.

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