

STUDENT TEACHERS' PERCEPTIONS ON THE LEARNING ENVIRONMENT AND THEIR APPROACHES TO LEARNING

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Abstract

The primary purpose of this study was to investigate the perceptions of student teachers learning environments in University 1, University 2, and University 3 and the approaches they mostly used to learn. Moreover, this study had also examined differences in perceptions and employment of learning approaches by gender, education level, and university and also the relationship between these two variables. A total of 720 student teachers from University 1, University 2, and University 3 excluding first year students and students who joined from COE participated in this study. Dundee Ready Education Environment Measure (DREEM) developed by Roff et.al. in 1997 and Revised Approaches to Studying Inventory (RASI) by Richardson (2005) were used as instruments. DREEM was used with six subscales and composed of 55 items. RASI involves three subscales with 52 items. In this study, there was no significant difference on student teachers' perceptions on learning environment by gender but there were significant differences by education level and by university. In identifying student groups with respect to their dominant learning approaches, five groups of students were found out. Significant differences were found by educational level and by university but not by gender. The correlation result showed that perceptions of student teachers on their learning environment were positively correlated with deep approach and strategic approach, and negatively correlated with surface approach. The results of regression analysis revealed that the perceptions on learning environment were significant predictors of those three learning approaches. According to the results, it could be assumed that student teachers who have good perceptions on their learning environment have the higher possibility to employ deep and strategic approaches, whilst student teachers who have low perceptions on learning environment are more likely to use surface approach.

Keywords: perception, learning environment, learning approaches

Introduction

Importance of the Study

Since education is the foundation of a country and teachers have an important role to educate young citizens, teachers should be proficient in performing their tasks. Pre-service teachers need to be trained well and their professional attitudes, and aptitudes need to be developed with the help of teacher trainers. In training young adults to become qualified, effective and skillful teachers, the training processes and environments are extremely important.

Learning can only be occurred successfully when the learning environment meets the learners' needs and motivates them to learn actively. The universities/colleges have to modify their learning environments to meet the needs of their students. Many studies have shown that the educational environment affects students' achievement, happiness, motivation and success. The main components of a learning environment are curriculum, teaching, assessment, student-faculty interaction and institutional climate (rules and procedures) (Biggs, 1999, p. 25). The quality of the learning environment is indicative of the effectiveness of an education program. Although almost every teacher, whether in higher education or basic education, may try to give the most qualified and convenient learning environment to their students, it is necessary to examine if the learning environment is actually compatible with the students'

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expectations. Therefore, the first section of this research is investigation into student teachers' perceptions of learning environments in Universities of Education.

The second section is focused on learning approaches student teachers are employing during their learning. Every university and institution aim to educate their students to be life-long learners and to be experts in their respective fields. To attain these goals, deep-level learning and understanding should be promoted as well as versatile expertise in students (Biggs, 1999; Dochy, Segers, and Buehl, 1999). Students are expected to fully understand their subject matters and to develop critical and creative thinking during their university studies. One way to determine whether students succeed in this development is to see students' approaches to learning during their studies. Approaches to learning are the ways of learning, such as the deep approach which is characterized by attempts to understand the meaning of the learning material, and the surface approach which is characterized by attempts to memorize the text (Marton and Säljö, 1976). Another approach to learning is strategic approach which is characterized by attempts to obtain the highest grades (Ramsden, 1979).

Different students may use different approaches although the course is same and these approaches might depend on their perceptions of the course (Richardson, 2009, p. 13). The ways students learn are likely to depend on the context, content and perceived demands of the learning tasks (Richardson, 2000. p. 32). It is also said that those approaches which students are employing to study are influenced by the characteristics of the learning environment. This research is to investigate the students' perceptions of the learning environments in three universities of education and which kind of study approaches they use mostly and whether these two variables are associated.

Purposes of the Study

The purpose of the study is to investigate the perceptions of student teachers on the quality of learning environments in University 1, University 2, and University 3 and the approaches they mostly used to learn. The specific objectives of this study are:

- to explore the differences in student teachers' perceptions of the learning environment based on gender, educational level, and university
- to examine the differences in student teachers' approaches to learning by gender, educational level, and university
- to investigate the relationship between student teachers' perceptions on the learning environment and their approaches to learning
- to inquire the impact of student teachers' perceptions on learning environment on their approaches to learning

Definitions of Key Terms

Perception: Perception is the action of seeing and perceiving through the sensory organs. It can be in the form of image, imagination, thinking, opinion, idea or impression (Mok Soon Sang, 2003).

Learning environment: Learning environment refers to the diverse physical locations, contexts, and cultures in which students learn (The Glossary of Education Reform, 2013).

Approaches to learning: Student approaches to learning is a theory that students will take a different approach to how they study, depending upon the perceived objectives of the course they are studying. (FERENCE Marton and Roger Säljö, 1976)

Sample of the Study Method

A total of 720 student teachers from University 1, University 2, and University 3 participated in this study. 240 student teachers were selected as participants from each university_ 60 students (30 males and 30 females) from each education level excluding first year students and students who join from education college.

Research Instruments

The Dundee Ready Education Environment Measure (DREEM) developed by Roff et al. in 1997 and Revised Approaches to Studying Inventory (RASI) developed by the Centre for Research on Learning and Instruction in the University of Edinburgh in 1997 were used to explore their perceptions on the quality of learning environment and to evaluate students' approaches to learning.

DREEM originally included five subscales: perception on learning (PoL), perception on teachers (PoT), academic self-perception (ASP), perception on atmosphere (PoA), and social self-perception (SSP). But according to the suggestions of professors, another subscale, perception on staff (PoS), was included. PoL includes 12 items, PoT, 11 items, PoS, 5 items, ASP, 8 items, PoA involves 12 items and SSP consists of 7 items. Each of these items was scored on a four-point scale. Reverse coding is considered for items 8, 12, 15, 16, 21, 23, 44, 50. The reliability coefficient of the whole scale of DREEM was 0.912. RASI has 52 items which focus on three approaches_ deep approach, surface approach and strategic approach. There are 20 items which reflect deep approach, and for strategic and surface approaches, 16 items per each. All the items are scored on four-point Likert scale. The Cronbach's alpha of RASI was 0.847.

Data Analysis and Findings

Student Teachers' Perceptions on the Learning Environment

To explore the perceptions of student teachers on learning environment, descriptive analysis was conducted.

Table 1 Descriptive Analysis for Student Teachers' Perceptions on the Learning Environment

Perceptions on Learning Environment	N	Minimum	Maximum	Mean	SD
	720	57	159	110.26	14.812

According to Table 1, these results showed that student teachers' perceptions on the learning environment were moderate level.

Comparison of Student Teachers' Perceptions on Learning Environment by Gender

To investigate whether there was any difference in student teachers' perceptions on learning environment based on gender; independent sample *t*-test was conducted.

Table 2 Descriptive Analysis for Student Teachers' Perceptions on Learning Environment by Gender

Perception on learning environment	Gender	N	Mean	SD	df	t	p
	Male	360	111.25	14.904	718	1.792	.074
	Female	360	109.28	14.674			

Table 2 showed that there was no significant difference in perceptions by gender. It could be interpreted that the male and female student teachers had similar general perception on the environment.

Comparison of Student Teachers' Perceptions on Learning Environment by Education Level

Students' perceptions could be also different according to their length of time they had been in a particular environment. To inquire the difference in perceptions on learning environment existed among education level, one-way analysis of variances (ANOVA) was used.

Table 3 Mean Comparison for Student Teachers' Perceptions on Learning Environment by Education Level

Perception on Learning Environment	Education Level	N	Mean	SD	F	p
	Second Year	180	116.06	12.852		
	Third Year	180	110.41	14.377		
	Fourth Year	180	109.27	13.497		
	Fifth Year	180	105.32	16.368		
					17.221***	.000

Note: *** $p < 0.001$.

According to Table 3, it could be seen that there was a significant difference in perception on learning environment by education level. The result revealed that the general perception of second year student teachers on learning environment was the highest and that of fifth year student teachers was the lowest. To confirm the results, Post-Hoc Test by Tukey HSD method was carried out. The result was as follows.

Table 4 Results of Tukey HSD for Student Teachers' Perceptions on Learning Environment by Education Level

Perceptions on Learning Environment	(I) Year	(J) Year	Mean Difference (I-J)	p	
	Second Year	Third Year		5.650**	.001
		Fourth Year		6.789***	.000
		Fifth Year		10.733***	.000
	Third Year	Fifth Year		5.083**	.004
	Fourth Year	Fifth Year		3.944*	.046

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Comparison of Student Teachers' Perceptions on Learning Environment by University

Table 5 Mean Comparison for Student Teachers' Perceptions on Learning Environment by University

There could be different in perceptions of student teachers based on their university. To examine the fact, one-way analysis of variances (ANOVA) was used.

Perceptions on learning environment	University	N	Mean	SD	F	p
	Uni 1	240	115.54	14.269		
	Uni 2	240	108.81	14.465		
	Uni 3	240	106.44	14.226		
					26.106***	.000

Note: *** $p < 0.001$.

Since a significant difference was found out, Tukey HSD was conducted to get more detailed results.

Table 6 Results of Tukey HSD for Student Teachers’ Perceptions on Learning Environment by University

Perceptions on learning environment	(I) Uni	(J) Uni	Mean Difference (I-J)	<i>p</i>
	Uni 1	Uni 2	6.733***	.000
		Uni 3	9.104***	.000

Note: *** $p < 0.001$.

Student Teachers’ Approaches to Learning

In this study, the researcher identified the dominant learning approach of each student based on their highest score among approaches to learning. Since there were three types of learning approaches, basically there had to be three groups of students with respect to each approach. However, there could be some combinations of two approaches_ deep and strategic approach, and surface and strategic approach, whilst the combination of deep and surface is nearly impossible (Entwistle, McCune, and Tait, 2013). Table 7 showed that the majority of the selected sample employed strategic approach (68.89%) mostly with an intention to achieve high scores and best results and 14.17% of student teachers used surface approach, an approach which was associated with lack of purpose and unrelated memorizing.

Table 7 Numbers and Percentages of Participants for Dominant Learning Approaches

Groups by Dominant Approaches	Number	Percentage
Deep Approach	89	12.36%
Strategic Approach	496	68.89%
Surface Approach	102	14.17%
Deep-Strategic Approach	19	2.64%
Surface-Strategic Approach	14	1.94%
Total	720	100%

Comparison of Dominant Learning Approach Among Student Teachers by Gender

Table 8 Numbers and Percentages of Participants for Dominant Learning Approach Among Student Teachers by Gender

Group	Gender		Total	χ^2	<i>p</i>
	Male	Female			
Deep Approach	47(6.53%)	42(5.83%)	89(12.36%)	1.242	.871
Strategic Approach	243(33.75%)	253(35.14%)	496(68.89%)		
Surface Approach	51(7.08%)	51(7.08%)	102(14.17%)		
Deep-Strategic Approach	11(1.53%)	8(1.11%)	19(2.64%)		
Surface-Strategic Approach	8(1.11%)	6(0.83%)	14(1.94%)		

The numbers and percentages of participants for dominant learning approach among student teachers by gender were described and whether the dominant learning approach was significantly associated with gender was ensured by conducting Chi-square test in Table 8.

There was no significant association between the dominant learning approach and gender ($\chi^2=1.242$, $df=4$, $N=720$).

Comparison of Dominant Learning Approach Among Student Teachers by Education Level

To investigate whether the dominant learning approach among student teachers was different by education level, analyses were again conducted by comparing their scores.

Table 9 Numbers and Percentages of Participants for Dominant Learning Approach Among Student Teachers by Education Level

Group	Education Level				Total	χ^2	p
	2 nd Year	3 rd Year	4 th Year	5 th Year			
Deep Approach	15 (2.08%)	27 (3.75%)	10 (1.39%)	37 (5.14%)	89 (12.36%)	40.861***	.000
Strategic Approach	143 (19.86%)	112 (15.56%)	139 (19.31%)	102 (14.17%)	496 (68.89%)		
Surface Approach	17 (2.36%)	32 (4.44%)	22 (3.06%)	31 (4.31%)	102 (14.17%)		
Deep-Strategic Approach	5 (0.69%)	4 (0.56%)	5 (0.69%)	5 (0.69%)	19 (2.64%)		
Surface-Strategic Approach	0	5 (0.69%)	4 (0.56%)	5 (0.69%)	14 (1.95%)		

Note: *** $p < 0.001$.

To investigate the significant association between dominant learning approach and education level, Chi-square test was also computed. It was seen in Table 9 that in deep approach, the numbers and percentages of fifth year student teachers were the highest and those of fourth year student teachers were the lowest. It could be interpreted that fifth-year student teachers preferred to use teachers' advices and suggestions in their self-studying without being too dependent on teachers. In strategic approach, it was found that second year and fourth year student teachers were more enthusiastic in organized studying and trying to achieve higher scores. In surface approach, third year students were the highest and second year student teachers, the lowest. In the rests of the groups, there was no much difference. Besides, by Chi-square test, there was a significant association between learning approach and education level ($\chi^2=40.861$, $df=12$, $N=720$, $p<0.001$). Cramer's V which indicated the strength of association between two variables was .138 and thus the effect size could be considered to be small to medium according to Cohen (1988).

Comparison of Dominant Learning Approach Among Student Teachers by University

The numbers and percentages of participants for dominant learning approach by university were presented in the Table 10. Besides, to determine the association between learning approach and university, Chi-square analysis was also conducted. According to Chi-square test results, there was significant association between dominant learning approach and university ($\chi^2= 35.451$, $df= 8$, $N= 720$). Cramer's V was .157 and the effect size was considered to be small to medium according to Cohen (1988).

Table 10 Numbers and Percentages of Participants for Dominant Learning Approach Among Student Teachers by University

Group	University			Total	χ^2	p
	Uni 1	Uni 2	Uni 3			
Deep Approach	25 (3.47%)	40 (5.56%)	24 (3.33%)	89 (12.36%)	35.451***	.000
Strategic Approach	185 (25.69%)	135 (18.75%)	176 (24.44%)	496 (68.89%)		
Surface Approach	18 (2.5%)	50 (6.94%)	34 (4.72%)	102 (14.17%)		
Deep-Strategic Approach	9 (1.25%)	8 (1.11%)	2 (0.28%)	19 (2.64%)		
Surface- Strategic Approach	3 (0.42%)	7 (0.97%)	4 (0.56%)	14 (1.94%)		

Note: *** p< 0.001.

Relationship Between Student Teachers’ Perceptions on Learning Environment and Their Approaches to Learning

The result showed the student teachers’ perceptions on learning environment were positively correlated with the deep approach (r=0.464, p<0.01) and the strategic approach (r=.588, p<0.01) but negatively correlated with the surface approach (r= -0.207, p<0.01).

Table 11 Correlations for Student Teachers’ Perceptions for Learning Environment and Their Approaches to Learning

Variables	Perceptions on Learning Environment	Deep Approach	Strategic Approach	Surface Approach
Perceptions on Learning Environment	1	.464***	.588***	-.207***
Deep Approach		1	.665***	.140***
Strategic Approach			1	.086*
Surface Approach				1

Note: * p< 0.05, ***p< 0.001.

Predicting Learning Approaches from Perceptions on Learning Environment

Table 12 Regression Analysis for Employment of Deep Approach by Student Teachers’ Perceptions on Learning Environment

Variables	Unstandardized Coefficient (B)	Standardized Coefficient (β)	R	R ²	Adjusted R ²	t	p
Constant	19.974		.455	.207	.206	17.199***	.000
P	.143	.455				13.704***	.000

Note: *** p< 0.001.

The produced regression equation for the relationship between perception on learning environment and employment of deep approach was:

Employment of DA = 19.974+.143P

Note: DA = Deep Approach

P = Perception on Learning Environment

The result revealed that students' employment of deep approach could be predicted by their perception on learning environment with the variance level of 20%. The adjusted R value is .207. It could be assumed that if students have higher level of perception on learning environment, they are likely to employ deep approach.

Table 13 Regression Analysis for Employment of Strategic Approach by Student Teachers' Perceptions on Learning Environment

Variables	Unstandardized Coefficient (B)	Standardized Coefficient (β)	R	R ²	Adjusted R ²	t	p
Constant	10.943		.568	.323	.322	9.805***	.000
P	.186	.568				18.505***	.000

Note: *** p < 0.001.

According to Table 13, the produced regression equation for the relationship between perception on learning environment and employment of strategic approach was:

$$\text{Employment of STA} = 10.943 + .186P$$

Note: STA = Strategic Approach

P = Perception on Learning Environment

The result showed that student teachers' perception on learning environment has impact on their employment of strategic approach. It was able to account for 32% of variance. The adjusted R square value was .323.

Table 14 Regression Analysis for Employment of Surface Approach by Student Teachers' Perceptions on Learning Environment

Variables	Unstandardized Coefficient(B)	Standardized Coefficient (β)	R	R ²	Adjusted R ²	t	p
Constant	33.591		.205	.042	.041	22.892***	.000
P	-.074	-.205				-5.625***	.000

Note: *** p < 0.001.

According to the table 16, the produced regression equation for predicting the impact of perceptions on student teachers' employment of surface approach was:

$$\text{Employment of SUA} = 33.591 - .074P$$

Note: SUA = Surface Approach

P = Perception on Learning Environment

The result showed that student teachers' perception on their learning environment was significant predictor of student teachers' employment of surface approach and it was negatively significant. It could be interpreted that student teachers who usually had low perception on their learning environment were more likely to use surface approach in which the emphasis was on the memorization of the context without grasping the essence and obtaining scores with least efforts.

Discussion, Suggestions, and Recommendation

The result showed that student teachers' perceptions on the learning environment was in moderate level but not very satisfactory. It could be concluded that the students perceived the

learning environment in an acceptable situation; however, ways to improve the quality of learning environment should be found out. It could be summarized that the quality of learning environments was necessary to be optimized.

In the study of comparison of perceptions on learning environment among student teachers by gender, the result showed that there was no significant difference in perceptions by gender. It could generally be concluded that there was no discrimination or bias in the environment. All student teachers, regardless of gender, were treated equally and obtained equal opportunities. Since the lack of bias was a positive fact, the teachers need to maintain this situation.

In comparing the student teachers' perceptions on learning environment with respect to their education level, it was discovered that perceptions of second year students were significantly higher than the others. The third year and fourth year student teachers had no significantly different perception. Amongst all of them, perceptions of fifth year students were found to be lowest. It could be considered that since they had been well adjusted with the environment and used to the situation; they became less interested in this environment and became independent. It could be seen that students' perceptions on their learning environment decreased year by year of higher education level. Teacher trainers should provide a more interactive and enjoyable classroom environment, accompanied with an opportunity to express their own thoughts and concepts and make them more indulged in learning.

To explore whether there were differences among universities, one-way analysis of variances (ANOVA) was used and the results revealed that there was a significant difference in perceptions on learning environment by university. The mean score of University 1 was the highest and that of University 3 was the lowest. Since the environment of a university was different from one another, teacher trainers were suggested to help student teachers' attitudes toward their school environments and motivation to learn by creating more enjoyable learning environments.

In the study of learning approaches which student teachers employ, it was revealed that the majority of student teachers of the selected sample employed strategic approach (68.89%) mostly with an intention to achieve high scores and best results. In comparing the dominant learning approaches of student teachers by gender, there was no significant association between the dominant learning approach and gender. In investigating the student teachers' dominant learning approach based on their education level, it was found out that in deep approach, the numbers and percentages of fifth year student teachers were the highest, in strategic approach, second year and fourth year student teachers and in surface approach numbers and percentages of third year students were the highest. In the rest of the groups, there was no much difference among student groups by their educational level. Again, in examining Chi-square test, there was a significant association between learning approach and education level.

After that, in comparison of dominant learning approach of student teachers with respect to university, there were indeed differences in numbers of student teachers employing each approach and according to Chi-square test results, there was significant association between dominant learning approach and university ($\chi^2 = 35.451$, $df = 8$, $N = 720$). Teachers should create conditions to encourage students' use of deep approach and strategic approach. Assessments should also emphasize on expressing their understanding and own concepts rather than their memorization.

Moreover, in comparing the perceptions on learning environments based on groups of dominant learning approach, there was a significant difference. The perception of strategic approach dominating group was the highest, followed by deep-strategic group whilst surface approach group had the lowest mean score of perception on learning environment. Students who employed the surface approach most could be assumed that they were not motivated by the environment to learn deeply and enthusiastically, and with their low perceptions and opinions, they study only to pass the exam without paying attention to the essence of the materials they were being taught.

In identifying the relationship between the student teachers' perceptions on learning environment and learning approaches, there were significant correlations among each factor and variable and it also indicated that student teachers whose perceptions on learning environment were good generally employed deep and strategic approaches. It could also be interpreted that students who used surface approach were found to perceive their learning environment in a pessimistic way due to the negative correlation. To investigate the predictive power of perception on learning environment to each learning approach, multiple regression analysis was conducted.

The result revealed that student teachers' perception on their learning environment was a significant predictor of student teachers' employment of each approach; positively in deep and strategic approaches and negatively in surface approach. It could be interpreted that student teachers who usually had low perception on their learning environment were more likely to use surface approach in which the emphasis was on the memorization of the context without grasping the essence and obtaining scores with least efforts. Emphasis on the reasons of students having low perceptions on learning environment should be given and authorities should try to find ways to make all learners participated in school activities.

Conclusion

The purpose of the study was to investigate the perceptions of student teachers on the learning environment and which approaches they use in learning and whether these two variables are correlated. According to the findings, it has been found out that students' perceptions on a learning environment can greatly affect the way students learn. How a student approaches to his studies has a reasonable effect on the learning outcomes which is an indicator of the effectiveness of an education program. Therefore, it is extremely important for teachers and policy makers, or authorities to design a learning environment which would meet students' expectations and needs, which would provide various teaching styles, strengthen rapport between teachers and students, promote positive feedback, and create a more relaxed, secure and non-threatening learning environment which encourages students to enjoy in learning and adopt the more desirable deep approach and strategic approach to learning and dispense with the undesirable superficial surface approach.

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References

- Biggs, J. (1999). *Teaching for quality learning at university: What the student does?* Buckingham: Society for Research into Higher Education: Open University Press.
- Dochy, F., Segers, M., & Buehl, M. M. (1999). The relation between assessment practices and outcomes of studies: The case of research on prior learning. *Review of Educational Research, 69*(2), 145-186.
- Entwistle, N., McCune, V., & Tait, H. (2013). Approaches and study skills inventory for students (ASSIST) (incorporating the revised approaches to studying inventory- RASI): Report of the development and use of the inventories.
- Marton, F., & Saljo, R. (1976). Symposium: Learning processes and strategies II: Outcome as a function of the learner's conception of the task. *British Journal of Educational Psychology, 46*, 115-127.
- Mook Soon Sang (2003). An Education Course for K.P.L.I (Theme 2): Student Department, Teaching-Learning Process & Evaluation. Subang Jaya Selangor, Malaysia: Kumpulan dudiman Sdn. Bhd.
- Ramsden, P. (1979). Student learning and perceptions of the academic environment. *Higher Education, 8*, 411-427.
- Richardson, J. E. (2000). *Researching student learning: Approaches to studying in campus-based and distance education*. Buckingham: SRHE and Open University Press.
- Richardson, J. E. (2009). Face-to-face versus online tutoring support in humanities courses in distance education. *Arts and Humanities in Higher Education, 8*, 69-85.
- Roff, S., McAleer, S., Harden, R. M., Al-Qahtani, M., Ahmed, A. U., & Deza, H. (1997). Development and validation of the Dundee ready education environment measure (DREEM). *Medical Teacher, 19*(4), 295-299.
- The Glossary of Education Reform (2013). Retrieved August 7, 2018 from <https://www.edglossary.org/learning-environment>