

A STUDY OF LEARNING ENVIRONMENT AND STUDENT ACHIEVEMENT IN BASIC EDUCATION HIGH SCHOOLS

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Abstract

The aim of the study was to investigate the learning environment and student achievement from teachers' perceptions in Basic Education High Schools, Chaung Sone Township, Mon State. Quantitative and qualitative methods were used in this study. A total of 227 teachers were selected as participants from six Basic Education High Schools, using purposive sampling method. Questionnaires for teachers' perceptions on principals' contribution to learning environment was used for this study. The reliability coefficient (Cronbach's α) of the whole scale of learning environment was 0.94. Descriptive statistics analysis and independent samples t Test were conducted to analyze the data in this study. In this study, learning environment is defined as an environment which includes physical learning environment, emotional learning environment and social learning environment. It was identified by the mean values of the teachers' response on the questionnaire items regarding physical learning environment, emotional learning environment and social learning environment. In this study, schools were classified into two groups according to their matriculation pass rates of three years (2013-2016). The average pass rate of three years (2013-2016) in Chaung Sone Township was 48.06%. The above average group included schools above 48.06% and below average group contained schools below 48.06%. According to the findings, principals' contribution to physical learning environment, emotional learning environment and social learning environment was moderately high level in Chaung Sone Township.

Key Terms: Learning Environment, Physical Learning Environment, Emotional Learning Environment, Social Learning Environment, Student Achievement.

Introduction

In today's world, education systems must constantly evolve in order to effectively respond to the rapidly changing demands of the societies they serve. The success and failure of the student depends greatly on the quality of school environment so it is necessary to create an enjoyable and productive learning to the students. Schools receive inputs from the external environment in the form of human and material resources, process them and empty into the society as finished products and services. Students are important not only to their schools and families, but also to their communities, to their future workplaces and families, and to the world around them. Students process a very keen and active spirit. With their observant eyes, they pick up all they see and hear. With their ears, they are taking note of all things. The curiosity to learn about all they see is an all-powerful drive for them. All of them are eager to acquire skills and knowledge of the world (Ministry of Education, 1998). The success or the failure of the student depends greatly on the quality of school environment so it is necessary to create an enjoyable and productive learning environment to the student. The physical and social dimensions of learning environments affect the quality of learning processes. They deserve to inherit a safer, fairer, and healthier world. There is no task more important than safeguarding their environment. The physical school environment is an essential component of a health-promoting school and is complemented by creating an environment for social and emotional well-being. A systematic process for promoting student's social and emotional development is the common essential element among schools that can reduce in problem behavior. Social and emotional learning (SEL) can be especially powerful when grounded in theory and empirical evidence, and when

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adult stakeholders in children's education are actively involved in cultivating and modeling their own social and emotional competencies (Brackett et al. 2009).

Importance of the Research

The quality of the physical environment significantly affects student achievement (Earthman, 2002). The classroom environment affects academic achievement of the student significantly (Padhi, 1991). There was a positive relationship between good school environment and effective teaching and learning activities (Durosaro, 1998). It is necessary to investigate the influence of learning environment on student achievement in Myanmar. For this reason, this research was intended to study learning environment and student achievement in Basic Education High Schools, Chaung Sone Township, Mon State.

Aims of the Study

Main Aim

To study the learning environment and student achievement in Basic Education High Schools, Chaung Sone Township, Mon State

Specific Aims

1. To study the extent of teachers' perceptions on principals' contribution to learning environment in Basic Education High Schools
2. To study the extent of teachers' perceptions on principals' contribution to learning environment in Basic Education High Schools grouped by student achievement and school size
3. To study the differences of teachers' perceptions on principals' contribution to learning environment according to school related factors and principals' personal factors

Research Questions

1. To what extent do the teachers perceive on principals' contribution to learning environment in Basic Education High Schools, Chaung Sone Township, Mon State?
2. To what extent do the teachers perceive on principals' contribution to learning environment in Basic Education High Schools grouped by student achievement and school size?
3. Are there any significant differences in teachers' perceptions on principals' contribution to learning environment according to school related factors and principals' personal factors?

Limitations of the Study

Due to time constraint, this study is geographically limited to Chaung Sone Township, Mon State. The respondents in the study were all teachers from Basic Education High Schools in Chaung Sone Township, Mon State. Principals, students and parents were not included in this study. Furthermore, student achievement was only intended to the average pass rate in matriculation examination Grade-10 for three years of each school. If the individual achievement was considered as the student achievement, it could get more valid findings. The findings of this study applied to Chaung Sone Township only and could not be generalized to any other Townships

Theoretical Framework

The learning environment is generally a complex one and can be understood on the basis of the physical learning environment, and social and emotional learning environment.

Physical Learning Environment

Students learn better when physical settings are clean, well maintained, bright and secure; individuals respect themselves and others; and the emotional climate supports positive, respectful and meaningful relationships. When students feel welcome, accepted, valued and safe, they will challenge themselves academically and their readiness for learning is significantly enhanced.

Higgins (2005) described the effect of the physical school environment on learning.

- The school built environment
 - Temperature and air quality
 - Noise
 - Light
 - Other school build features
- The physical environment of the classroom
 - Furniture and equipment
 - Arrangement and layout
 - Display and storage
 - ICT

According to WHO, UNICEF, UNESCO, EDC, World Bank, PCD and EI (2003), a school's environment can enhance social and emotional well-being and learning when it:

- is warm, friendly and rewards learning
- promotes cooperation rather than competition
- facilitates supportive, open communications
- views the provision of creative opportunities as important
- prevents physical punishment, bullying, harassment and violence, by encouraging the development of procedures and policies that do not support physical punishment and that promote non-violent interaction on the playground, in class and among staff and students.
- promotes the rights of boys and girls through equal opportunities and democratic procedures.

Definitions of Key Terms

- (a) **Learning environment** is a space with information resources, experienced individuals and interactive atmospheres where learners can develop their knowledge, skills and values (Juceviciene & Tautkeviciene, 2002).
- (b) **The physical learning environment** includes all physical aspects such as classrooms, teaching materials and learning facilities, both inside and outside the classroom (Fraser, 1994).
- (c) **The emotional learning environment** refers to students learning and performing more successfully when they feel secure, happy, and excited about the subject matter (Boekaerts, 1993).

- (d) **The social learning environment** refers to improvement of perceptions on student/teacher relations, working in teams, communication skills (Higgins et al., 2005).
- (e) **Student achievement** refers to students' scoring at or above the minimum level of proficiency as defined by standardized test. It is a measure of knowledge gained in formal education usually indicated by test scores, grade, grade points average and degrees (Bennet, 2001).

Methodology

Research Methodology

Both quantitative and qualitative research methods were used to collect the required data in this study. Quantitative measurements were used to measure teachers' perception on principal's contribution to learning environment. Data were collected through questionnaire survey in quantitative study and open-ended questions were used in qualitative study.

Sample

In this study, purposive sampling method was used. There are six Basic Education High Schools in Chaung Sone Township. The target population was all teachers from high schools in Chaung Sone Township, Mon State. The total of 239 teachers in six High Schools of Chaung Sone Township, 227 teachers were participated as respondents in this study. In this study, schools were classified into two groups according to their matriculation pass rates of three years (2013-2016). The average pass rate of three years (2013-2016) in Chaung Sone Township Mon State was 48.06%. The above average group included schools above 48.06% and below average group contained schools below 48.06%.

Instrumentation

One set of questionnaires was used in this study. This questionnaire is about learning environment which is divided into three components: physical learning environment, emotional learning environment and social learning environment. Learning environment questionnaire used in this study was based on principal's contribution to physical learning environment, emotional learning environment and social learning environment of the schools. This questionnaire included demographic data, principal's contribution to physical learning environment, emotional learning environment and social learning environment. Personal factors composed of principal's demographic data: gender, service and qualification. School size was composed of demographic data.

This questionnaire was to study teacher's perception on their principal's contribution to physical learning environment, emotional learning environment and social learning environment. The item concerned with the principal's contribution to learning environment and composed of three parts. It contains 30 items for physical learning environment, 18 items for social learning environment and 12 items for emotional learning environment. All the 60 items included in this questionnaire were rated in four-point Likert scale ranging from 1 = strongly disagree, 2 = disagree, 3 = agree and 4 = strongly agree. The opened-ended questions were consisted in this questionnaire.

Procedure

In the third week of January, 2017, the modified questionnaires were distributed to the selected schools. All questionnaires were collected after two weeks and were completely answered. After the questionnaires have been returned, the data were processed and analyzed using the Statistical Package for the Social Sciences (SPSS) software version 20. Descriptive analysis and independent sample *t* Test were conducted to analyze the data. Descriptive analysis

was used to compute means and standard deviations. Independent samples *t* Test was used to compare means and to find out whether there is any difference between teachers' perceptions on learning environment in above group and below average group, school size and principal's demographic data.

Findings

Quantitative Research Findings

The analysis of data collected from the perceptions of teachers upon principals' contribution to learning environment in Chaung Sone Township, Mon State will discuss as research findings.

Table 1 Mean Values and Standard Deviations of Principal's Contribution to Learning Environment

No	Variables	Mean Score	SD	Remark
1	Physical Learning Environment	3.17	0.46	Moderately high
2	Emotional Learning Environment	3.05	0.51	Moderately high
3	Social Learning Environment	3.14	0.48	Moderately high

Scoring direction: 1.00-1.49= low 2.50-3.49=moderately high
1.50-2.49=moderately low 3.50-4.00= high

According to Table 1, the mean values of principal's contribution to physical learning environment, emotional learning environment were 3.17, 3.05 and 3.14 respectively.

Table 2 Mean Values and Standard Deviations of Teacher's Perceptions for Principal's Contribution to Learning Environment in Each School

No.	Schools	N	Physical Learning Environment	Emotional Learning Environment	Social Learning Environment
			Mean (SD)	Mean (SD)	Mean (SD)
1	A	37	2.61(0.26)	2.61(0.33)	2.76(0.32)
2	B	36	3.62(0.28)	3.45(0.39)	3.61(0.32)
3	C	48	3.07(0.35)	2.80(0.40)	2.89(0.45)
4	D	36	3.20(0.39)	3.07(0.37)	3.09(0.37)
5	E	25	3.67(0.23)	3.51(0.41)	3.64(0.35)
6	F	45	3.05(0.27)	3.09(0.55)	3.09(0.35)

Scoring direction: 1.00-1.49= low 2.50-3.49=moderately high
1.50-2.49=moderately low 3.50-4.00= high

According to Table 2, the mean values of principal's contribution to physical learning environment, emotion learning environment and social learning environment in school E was highest in all schools and the mean values of principal's contribution to physical learning environment, emotion learning environment and social learning environment in school A was lowest in all schools. Therefore, the condition of principal's contribution to physical learning environment, emotion learning environment and social learning environment in school E was better than any other condition to physical learning environment, emotional learning environment and social learning environment in school.

Table 3 Mean Values and Standard Deviations of Principals' Contribution to Learning Environment Grouped by Student Achievement (N=227)

No.	Variables	Student Achievement Group	Mean	SD	Remark
1	Physical Learning Environment	Above Average Group	3.19	0.51	moderately high
		Below Average Group	3.13	0.34	moderately high
2	Emotional Learning Environment	Above Average Group	3.02	0.54	moderately high
		Below Average Group	3.08	0.47	moderately high
3	Social Learning environment	Above Average Group	3.16	0.54	moderately high
		Below Average Group	3.09	0.36	moderately high

Scoring direction: 1.00-1.49= low 2.50-3.49=moderately high
1.50-2.49=moderately low 3.50-4.00= high

According to Table 3, it can be found that principals' contribution to physical learning environment, emotional learning environment and social learning environment in above average group and below average group were moderately high level.

Table 4 Independent Samples *t*-Test Results for Principals' contribution to Learning Environment Grouped by School Size Based on Teachers' Perceptions

Variable	School Size	Mean (SD)	<i>t</i>	<i>df</i>	<i>p</i>
Physical Learning Environment	1-1000 group	3.02(0.48)	-4.07	196	0.000***
	1001 and above group	3.28(0.41)			

* $p < .05$, ** $p < .01$, *** $p < .001$ at significant level and ns = not significant

According to Table 4, there was a significant difference between principals' contribution to physical learning environment in 1-1000 group and 1001 and above group school size ($t = -4.07$, $df = 196$, $p < 0.001$).

Table 5 Independent Samples *t* Test Results for Principals' Contribution to Learning Environment Grouped by Principals' Gender Based on Teachers' Perceptions (N=227)

Variables	Gender	Mean (SD)	<i>t</i>	<i>df</i>	<i>p</i>
Emotional Learning Environment	Male	2.92 (0.41)	-2.85	195.69	0.005*
	Female	3.12(0.56)			
Social Learning Environment	Male	2.98(0.43)	-3.91	184.82	0.000***
	Female	3.23(0.49)			

* $p < .05$, ** $p < .01$, *** $p < .001$ at significant level and ns = not significant

According to Table 5, there was a significant difference between principals' contribution to emotional learning environment in male and female principals ($t = -2.85$, $df = 195.69$, $p < 0.05$). According to Table 7, there was a significant difference between principals' contribution to social learning environment in male and female principals ($t = -3.91$, $df = 184.82$, $p < 0.001$).

Table 6 Independent Samples *t*-Test Results for Principals' contribution to Learning Environment Grouped by Principals' Services Based on Teachers' Perceptions (N=227)

Variable	Service(years)	Mean(SD)	<i>t</i>	<i>df</i>	<i>p</i>
Social Learning Environment	1-2	3.29(0.53)	4.0	172.7	0.000**
	3 and above	3.02(0.40)	0	0	*

* $p < .05$, ** $p < .01$, *** $p < .001$ at significant level and ns = not significant

According to Table 6, there was a significant difference between principals' contribution to social learning environment in 1-2 years services group and 3 and above group ($t=4.00$, $df=172.70$, $p<0.001$).

Table 7 Independent Samples *t* Test Results for Principals' Contribution to Learning Environment Grouped by Principals' Qualification Based on Teachers' Perceptions (N=227)

Variables	Qualification	Mean (SD)	<i>t</i>	<i>df</i>	<i>p</i>
Physical Learning Environment	BA/BEd	3.28(0.39)	2.17	196	0.031*
	BSc/BEd	3.12(0.48)			
Emotional Learning Environment	BA/BEd	3.24(0.54)	3.49	206	0.001***
	BSc/BEd	2.97(0.48)			
Social Learning Environment	BA/BEd	3.29(0.43)	3.03	213	0.000***
	BSc/BEd	3.08(0.49)			

* $p<0.05$, ** $p<0.01$, *** $p<0.001$ at significant level and ns = not significant

According to Table 7, there was a significant difference between principals' contribution to physical learning environment in BA/BEd group and BSc/BEd group ($t=2.17$, $df=196$, $p<0.05$). According to Table 9, there was a significant difference between principals' contribution to emotional learning environment in BA/BEd group and BSc/BEd group ($t=3.49$, $df=206$, $p<0.001$). According to Table 9, there was a significant difference between principals' contribution to social learning environment in BA/BEd group and BSc/BEd group ($t=3.03$, $df=213$, $p<0.001$).

Qualitative Research Findings

The teachers' responses of open-ended questions were presented as qualitative findings. The responses were classified as two groups according to student achievement.

(1) Describing the principal's contribution for making physical school environment clean and pleasant.

Teachers responded that their principal

- make their schools free from waste and rubbish. (N-36 in above average group and N-22 in below average group)
- grow vegetable, plants and trees. (N-92 in above average group and N-51 in below average group)
- polish and paint school buildings and walls. (N-76 in above average group and N-47 in below average group)
- secure school compound with a fence. (N-52 in above average group and N-17 in below average group)
- make favourable playground. (N-9 in above average group and N-2 in below average group)

(2) Describing the principal's contribution to students' social development in school.

Teachers responded that their principal

- create opportunities for students to take part in the ceremonies and festival held at school (N-19 in above average group)

- organize intra-sports competition, concerts, important talk competitions and debate, essay on Independent day, Union day and National day. (N-38 in above average group and N-17 in below average group)
- improve social skill during assembly. (N-64 in above average group and N-21 in below average group)
- make good relationship with others and respect each other. (N-22 in above average group and N-12 in below average group)
- do not give support. (N-6 in above average group)

(3) Describing the principal's contribution on students' feeling in school.

Teachers responded that their principal

- provide orphaned child, economic and little sediment students opportunities to get suggestions and help from their teachers (N-96 in above average group and N-44 in below average group)
- encourage students to meet guardian and co-guardian groups to express their feeling. (N-11 in above average group and N-10 in below average group)
- encourage students to show their feeling with eassy, poem and dramatic. (N-4 in above average group and N-3 in below average group)
- does not allow to express students' feeling. (N-7 in above average group and N-2 in below average group)
- discuss students' feeling at life skill time. (N-8 in above average group)

(4) Describing students' cooperation in teaching-learning process of teachers in school.

Teachers responded that they

- teach with teaching aids, images, pictures and real materials. (N-50 in above average group and N-50 in below average group)
- participate in practical teaching. (N-22 in above average group and N-23 in below average group)
- create some teaching ways themselves. (N-21 in above average group and N-7 below average group)
- arrange multi-media classroom, language lab, overhead projectors, tape, video and TV/VCD. (N-4 in above average group and N-2 in below average group)

(5) Describing the supports and encouragements that the School Board of Trustees, community and parents support to make learning environment improvement.

Teachers responded that School board of Trustees, community and parents

- give credit to outstanding students. (N-45 in above average group and N-22 in below average group)
- help school environment to be clean, safe and green. (N-5 in above average group)
- supply the electricity. (N-15 in above average group and N-2 in below average group)
- give necessary help for having enough water for daily use. (N-6 in above average group and N-7 in below average group)
- help to solve the difficulties of the school with teacher. (N-27 in above average group and N-14 in below average group)

- support nutrition, books, tools, furniture and money. (N-73 in above average group and N-32 in below average group)

Conclusion and Discussion

Learning environment plays a major role in improving learning in schools and is identified as a major determinant of student learning. Students spend a large portion of their moments in schools. Therefore, they deserve to have safe and happy schools. To help students feel good about themselves and secure in their environments, maintaining a sense of community is fundamentally important both in the individual classroom and in the school as a whole (Erlauer, 2003).

Principals' contribution to learning environment in Chaung Sone Township, Mon State was in moderately high level according to findings. Principals' contribution to learning environment in above average group was a little higher than principals' contribution to learning environment in below average group.

Principals' contribution to learning environment in Chaung Sone Township, Mon State was in moderately high level according to school size. Principals' contribution to learning environment in 1001 and above group school size was higher than principals' contribution to learning environment in 1-1000 group school size.

Principals' contribution to learning environment in Chaung Sone Township, Mon State was in moderately high level according to male and female principals. Female principals' contribution to learning environment was higher than male principals' contribution to learning environment.

Principals' contribution to learning environment in Chaung Sone Township, Mon State was in moderately high level according to 1-2 years services group and 3 and above group. 1-2 years services group principals' contribution to learning environment was higher than 3 and above group principals' contribution to learning environment.

Principals' contribution to learning environment in Chaung Sone Township, Mon State was in moderately high level according to BA/BEd group and BSc/BEd group. BA/BEd group principals' contribution to learning environment was higher than BSc/BEd group principals' contribution to learning environment.

Recommendations.

Daniel (2014) emphasized that the principal is expected to set an atmosphere of order, high expectation for the staff and students, encourage collegial and collaborative leadership and building commitment among the schools and the staff towards attainment of the school goals. Since the school is considered a second home for the students, the principal should develop a rapport and understand the feelings of the students take and these feeling into consideration and provide a school environment in which the child safe and confident.

Based on the analyses of the study, the following suggestions and recommendations were drawn to be effective learning environment that effects student achievement.

- The physical environment should be safe and have adequate space for students to work, relax, play and talk together in small group.
- Principals should arrange the lessons by using overhead projectors, tape, Video and TV/VCD.
- Principals should do experiments in well-facilitated science laboratory.

- Principals should display students' work on notice-board.
- Principals should provide conducive learning environment where learners are free to consult them when they need.
- Principals should provide adequate learning facilities that are able to arouse interest in the learners and to motivate them to work hard.
- Principals should develop a rapport and understand the feelings and needs of their students.
- Parents should cooperate with teachers for the welfare of their children.

Need for Further Research

It is only admitted that this study was to investigate learning environment and student achievement in Chaungzon Township, Mon State. Therefore, the need for further inquiry is obviously necessary. Further research should be made in other Townships. Studies on learning environment and academic achievement may be extended to the other educational levels. An important suggestion for further research is that studies on learning environment may be investigate not only physical learning environment, emotional learning and social learning environment but also intellectual learning environment. Moreover, further research should be conducted about the other influencing that impact on student achievement.

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