



RESEARCH PAPER

DREEM Inventory: Investigating Learning Environment of Pre-Service Teacher Education Programs

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ABSTRACT

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Keeping in view the significance of learning environment of the academic institutions, this study was designed to explore the perceptions of students regarding the learning environment in the departments of teacher education of general universities in Punjab, Pakistan. The population of the study was comprised of students enrolled in 8th Semester of bachelor programs. Cluster sampling technique was applied to select the sample N=218. A standardized tool Dundee Ready Education Environment Measure (DREEM) was administered to explore the perceptions of students. The questionnaire comprised of 50 items. It was found that students have clear insight in view of academic self-perception and effective learning environment in teacher education institutes. The study recommends future research with mixed method designs and involving different academic disciplines and stakeholders addressing the learning environment that will contribute in creating awareness about learning environment in academic institutes.

Introduction

Let's Formal Education systems are known for the environment they offer to the learners. Academic learning environment has significant effects on the cognitive and affective development of the learners (Arzuman, Yusoff,& Chit, 2010). There are numerous elements conducive learning environments have in common. These elements may include the curriculum, teachers, teaching

environment, classroom arrangement and physical facilities, peers, socialization, socio-psychological, socioeconomic and technological aspects. Generally, a conducive environment is characterized by being supportive and challenging for learning of the learners. Many studies are carried out to explore the learners' perceptions of the learning environment (Audin et al., 2003; Roff et al., 1997; Seabrook, 2004; Sobral, 2004).

Research on exploring specific learning environments are conducted with the prime objective of improving the learning environment. Theory of coherence focuses on studying the impact of the needs of the learners and factors of the learning environment on academic achievement and student development. The theory mainly discusses the relationship between a learner and learning environment (Stern,1970). It is pertinent to mention that studying the interaction among students in formal education; researchers have considered the classroom climate dynamics. The theory that is suited to study the groups within the classroom, is developed by Getzels and Thelen in 1960. It describes the classrooms as a social system and it is proposed that group behavior can be predicted from addressing the needs of an individual, the climate of classrooms and institutional expectations. Walberg (2005) indicated that there are numerous factors that influence the attitude of students and achievements in classrooms. It was found that classroom and school environment factors impact strongly on student outcomes, while keeping the other factors controlled (Radovan & Makovec, 2015).

Similarly, Salomon (1995) focuses on the environmental factors that influence learning and stressed for studying isolated processes and individuals to make this phenomenon more understandable. He also focused on conditions to the study of the psychosocial and cultural context in wider disciplinary fields. It is apparent, therefore, that teachers need to create positive learning environment to motivate their students to be active learners (Khine, Fraser, Afari, & Kyaw, 2018). There is direct relationship between the educational program effectiveness and quality of learning environment in classrooms. Moreover, it is noted that the educational environment positively correlates with academic satisfaction and success (Al-Ayed & Sheik, 2008). The basis for implementing modifications is the students' perceptions about educational setting and results in optimizing the educational environment.

Moreover, learning environment is used in different contexts and perspectives. It, as a term, carried variety of meanings and contexts. Research studies relevant to the learning environment have identified factors that contemplate varied elements of a classroom, for instance, students' ethics, beliefs, behavior and discipline in classroom - in short - everything that serves to understand classrooms and its dynamics. It is important to mention that understanding of the concept in classrooms also depends upon the perspective of the research that covers the aspects of educational, psychological, anthropological and sociological methodology (Radovan & Makovec, 2015). It is recognized that wherever learning occurs is perceived as due to learning environment by the

students at all levels of education (Fraser, 2002). Hiemstra (1991) provided an exceptional broad meaning to the learning environments in adult education. He declared it as a setting which portrays psychological, social and cultural settings. According to Hiemstra (1991) this is the physical environment elements, psychological elements or emotional conditions, and social or cultural influences affecting the physical, cognitive and affective development of an adult engaged in an educational institute is recognized as learning environment.

Most of the studies that report positive correlation between students' perceptions of the educational environment and meaningful learning, usually also study the impacts on students' learning outcomes and nature of students learning experiences. It influences what, why and how students learn (Harden, 2001). According to Al-Hazimiet al. (2004) evaluation and adjustment of the educational environment is possible in classrooms. It is noted, therefore, the most important stakeholder required to assess learning environment are students. Literature reported many studies of the students' perceptions of learning environment carried out at all educational levels (Aghamolaei & Fazel 2010; Arzuman, Yusoff, & Chit, 2010; Genn, 2001; Veerapen & McAleer, 2010). Because of the recent requirement of teacher education to address enhanced quality, assessments procedures and activity centered classrooms. These are the reasons that we are witnessing an ever-increasing research interest in this field (Executive Council, 1998; Lizio, Wilson & Simons, 2002; Veerapen & McAleer, 2010).

In Pakistan, departments of teacher education established in most of the universities cater the needs of teacher education market. Majority of the graduates of teacher education departments are required to serve in primary, secondary and higher secondary schools. It is, therefore, required to meet the personal development challenge of every individual in teacher education classrooms. The educational environment is a complex structure of numerous elements. Technological interventions have added to this complexity in variety of elements required for positive learning environment. Educational institutions around the globe have to introduce radical changes to cope with different advancements in the field (Higgins, Hall, Wall, Woolner & McCaughy, 2005).

Therefore, the policy guiding documents like National Education Policy and National Professional Standards for Teachers in Pakistan (2009) also address the learning environment as a prime factor contributing in students' learning. The professional standards ask teachers to create compassionate, secure and respectful learning environment along with encouraging positive social interaction and an active engagement in learning. The positive learning environment also plays a pivotal role in self-motivation of the learner in teacher education programs, researches to explore the learning environment elements and perception of learners who are going to be future teachers is the need of the hour. It is the sole responsibility of teacher education departments to enhance the capacities of the future teachers to know, understand and create learning environments at their

workplace. Keeping in view that today's students of teacher education departments are going to become view the future teachers, the importance of learning environment at the teacher education departments becomes even more cherished.

Theoretical Framework of the Study

The DREEM inventory was developed by Roff, et al. (1997) and widely used by the researchers in investigating learning environment across various cultures and in various contexts. The inventory was developed for a professional college learning environment and carrying five dimensions to explore the perceptions of the students. In the field of medical education, students' perceptions were explored in most of the studies by using DREEM inventory. The school of nursing in many countries also used DREEM inventory to explore then students' perceptions of learning environment in nursing schools. The DREEM inventory has been used in other professional fields e.g. agriculture (Atapattu, Kumari, Pushpakumara, & Mudalige, 2016), teacher education and early childhood education (Riga, Kossoini, & Lyrakos, 2015).

This study is also based on DREEM inventory with the main objective of investigating the learning environment of departments of education imparting pre-service teacher education to prospective teachers.

Research Methodology

The research undertaken is quantitative in nature and carried out by administering a standardized questionnaire; Dundee Ready Education Environment Measure (DREEM). The tool was consisted of five dimensions that include students' academic self-perception (SASP), students' perception of learning (SPL), students' perception of teachers (SPT), students' perception of atmosphere (SPA) and students' social self-perception (SSSP). The questionnaire comprised of 50 items on five-point Likert scale. Population was students enrolled in regular and accredited teacher education bachelor program i.e., BS (Education) and B.Ed (4 Year) programs in public sector universities of Punjab. Each department / university was considered a cluster and simple random sampling technique was used to select the clusters. Four departments from public universities were selected randomly. All the students enrolled in the final semester i.e. 8th semester in those departments were taken as the sample. The students of final semester were focused because of their almost four years' stay at the department. They had been experiencing the learning environment for the last four years and in a better position to give their opinion about the environment they had been living in for such a long period. Data of enrolled students from 8th semester of the selected programs was taken from administrative offices of the teacher education departments. The principal researcher herself visited the selected departments and collected the data. All the students available on that particular day were distributed the questionnaire and 218 valid responses were received by the researchers which were analyzed to draw conclusions. Like most of the studies

regarding learning environment, conclusions were based on descriptive statistics. T-test was applied to find the difference of means between female and male students of departments of teacher education.

Results

The results inferred from the data collected regarding students' perceptions of learning environment in departments of teacher education of public sector universities of Punjab

Table 1
Students' Academic Self-Perception

Themes	Mean	SD
Learning strategies awareness	3.7	1.2
Confident about my success	4.0	1.3
Well-prepared for my profession	3.5	1.2
My previous learning helps me to learn more	3.8	1.4
memorize all I need	3.6	1.3
Empathetic in my profession	3.6	1.5
Focus is on development of my problem-solving skills	3.6	1.2
Professional learning	3.7	1.4
Theory practice gap	3.7	1.2

Table 1 shows mean values reflect an agreement of students that their confidence about success, helpful previous learning, professional learning content, ability to bridge the theory practice gap, awareness for learning strategies, ease in memorization and empathetic development play an important part in effective learning environment. Though majority of the students agreed yet they are not very much clear that their well preparedness for profession is a result if effective learning environment.

Table 2
Students' Perception of Learning

Themes	Mean	SD
Participation is encouraged	3.3	1.0
Learning environment is stimulating	3.5	0.9
Student centered	3.9	1.0
Developing competence	3.9	1.0
Well focused learning	3.3	1.0
Boosting morale	4.0	1.1
Well managed time	3.4	1.0
Factual learning	4.1	1.0
Clarity in learning objectives	3.6	1.0
Active learning	4.0	1.1
long term learning	3.6	1.0

Only teaching is the focus	3.4	1.3
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Table 2 shows that higher mean values claimed an agreement of students that the factual learning in classrooms of teacher education departments play an important role in the effective learning environment of teacher education department. They also claimed that learning environment boost morale of the students and provide active learning opportunities to them along with clarity in learning objectives to develop competencies and it is student centered that have emphasis on long term learning. While slightly lower means reflect that students are unclear about learning environment at teacher education departments is stimulating for learning, time is well-managed, only teaching is the focus and participation is encouraged in classrooms of teacher education departments in Punjab.

Table 3
Students' Perception of Teachers

Themes	Mean	SD
Passionate	3.1	1.2
Knowledgeable	3.2	1.3
Authoritarian	3.3	1.2
Discourage participation	3.3	1.3
Effective communication skills	3.4	1.1
Prompt feedback	2.5	1.2
Contextualize learning	3.4	1.4
Constructive criticism	3.3	1.2
Clarity in teaching	3.3	1.4
Burn out behaviors in classrooms	3.3	1.3
Well prepared and planned	3.2	1.5
Students irritate teachers	2.1	1.2

Slightly lower mean values reflect that students are undecided about following factors to play a role in learning environment i.e., teachers contextualize learning and effective communication skills. Moreover, they are undecided about constructive criticism, clarity in teaching, burn out behaviors in classrooms, authoritarian way of teaching and teachers discourage participation in classrooms for effective learning environment. It is also reflected that students remain undecided about the passion of the teachers and their knowledge to create effective learning environment in the classrooms of teacher education departments. Mean scores also depict students' disagreement that teachers provide prompt feedback to contribute in effective learning environment and student cause irritation to the teachers.

Table 4
Students' Perception of Atmosphere

Themes	Mean	SD
atmosphere is relaxed during consultations	2.8	1.5
well managed course	3.1	1.7
Cheating is an academic problem	2.8	1.6

during lectures the atmosphere is relaxed.	2.6	1.3
interpersonal skills development opportunities	3.1	1.6
socially comfortable teaching sessions	2.9	1.3
during tutorials atmosphere is relaxed	2.8	1.5
Teaching experience is disappointing	2.7	1.3
able to concentrate well	2.4	1.1
stress in practicum outweighs the enjoyment	2.4	1.2
as a learner motivation	2.7	1.1
Questioning opportunities	2.3	0.8

Lower mean values reflect that majority of the students are undecided that in effective learning environment course is well managed, opportunities to develop interpersonal skills, teaching sessions are socially comfortable, the environment is relaxed during tutorials and consultation sessions, teaching experience is disappointing, environment motivates learner, and environment is relaxed during lectures. While students reflected disagreement that effective learning environment has provided me opportunity to ask question that I want and it helps learner to concentrate well.

**Table 5
Students' Social Self-Perception**

Themes	Mean	SD
support system for stressed students	3.2	1.3
Very tired to enjoy course.	3.1	1.2
On teaching practicum rarely bored	3.0	1.4
courses accompany good friends	2.9	1.2
social life is great	3.2	1.4
feel lonely. Is seldom	2.9	1.3
Stay at campus is pleasant.	3.4	1.4

Table 5 reflects that mean values show that students are slightly agreed that their stay at campus is pleasant. Furthermore, the students reflected that they are undecided about good support system is food for students in stress, social life is good., too tired to enjoy course, rarely bored on teaching practicum, good friends in this course and they seldom feel lonely at campus.

**Table 6
Overall Mean Value of DREEM**

Themes (Students Perception)	Mean	SD
learning (SPL)	3.75	1.09
teachers (SPT)	3.32	1.34
academic self-perception (SASP)	3.70	1.31
atmosphere (SPA)	2.71	1.33
social self-perceptions(SSSP)	3.09	1.30

Table 6 reflects that students show an agreement towards the role and understanding of student perception of learning and their academic self-

perception in contributing towards effective learning environment in classrooms of teacher education departments. Furthermore, mean scores represent that students are unclear about the role of teachers and social self-perception in creating effective learning environment. While the mean score of 2.7 shows the disagreement of students perception of atmosphere to create effective learning environment.

Table 7

Mean Differences of Students' Perceptions on Gender Basis

Indicator	Variable	N	Mean	df	Sig.	Cohen's d
Students perception of learning (SPL)	Females	175	44.08	216	.00	.62
	Males	43	48.93			
Students perception of teachers (SPT)	Females	175	38.60	216	.000	.77
	Males	43	28.63			
Students' academic self-perception (SASP)	Females	175	28.46	216	.000	.94
	Males	43	34.63			
Students perception of atmosphere (SPA)	Females	175	30.72	216	.000	.80
	Males	43	40.05			
Students social self-perceptions (SSSP)	Females	175	22.05	216	.093	.2
	Males	43	20.28			

Table 7 reflects that significant value (p-value) for students' perception of learning (SPL), students' perception of teachers (SPT), students' academic self-perception (SASP), students' perception of atmosphere (SPA) is .00 i.e., $p < .05$ representing a significant difference between males and females about perception of effective learning environment while $p = .093$, $p > .05$ for students' social self-perceptions and it reflects that there is no significant difference among the perception of females and males. Table further reflects that Cohen's d effect size for students' social self-perceptions (SSSP) is .2 representing a small effect between the two means while Cohen's d effect size is .6 and .7 for students' perception of learning (SPL) and students' perception of teachers (SPT) representing a medium effect between the two means. Further table 7 also reflects that Cohen's d effect size is .8 and .9 for students' perception of atmosphere (SPA) and students' academic self-perception (SASP) representing a large effect size between the two means.

Discussion

The study contributes to the understanding of students' perception of learning environment in teacher education departments. The study is substantial in the field of teacher education because of the concern of quality address and meeting the teacher education market needs in the field of teacher education. Quality of learning largely depends, among other factors, on learning environment of the educational institute. Many studies reported that effective learning environment is the need to achieve the educational objectives of formal education system (Church, Elliot, & Gable, 2001; Telli, Cakiroglu, & Brok, 2006). The findings of the study are in line with the findings of study carried out by Owens and Barnes (1982), Rehman, Ghias & Fatima (2018) and Barcelo (2016) who found the highest

mean score on perception of learning and academic self-perception. The finding of the study that there is significant difference among male and female perception of learning environment are similar to the findings of the study by Follett, Andberg, and Hendel (1982). Corresponding to the findings of the study it is suggested that social and psychological contexts may be explored rigorously in future researches

Conclusions and Recommendations

Quality of learning largely depends, among other factors, on learning environment of the educational institutions. Effective learning environments are the need to achieve the educational objectives of formal education system. This study explored the effective learning environment, from students' perspective, at four teacher education departments in public sector universities of Punjab. The study concluded that students' perceptions of learning and academic self-perception are thought to be positive in the learning environment they are offered at their respective departments. While social self-perception and perception of atmosphere claimed less prevalent in learning environment in teacher education departments. This study also concluded that there is a significant difference of perception of learning environment among male and female students. The study recommends exploration of perception of teachers and other stake holders for effective learning environment. Classroom management practices, instructional practices, educational technology, teachers' characteristics role in learning environment may be studied in future researches.

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