

Role of Classroom Culture in Academic Learning of Students at University Level

Tamoor Zulfiquar (Principal Author)
Dr. Shazia Zamir, Assistant Professor (Correspondence Author)
Department of Education
National University of Modern Languages, Islamabad

Abstract

The present study was descriptive in nature and major objectives of the study were to find out the role of class composition, role of Teachers' knowledge and personality, role of teaching methods and aids used during lectures, role of classroom surrounding environment and role of curriculum on academic learning of the pupils at university level. All university level students in Islamabad were included in the population of the study. Random Sampling technique was used to choose the universities whereas the convenient sampling technique was used to choose the students from each university. Five universities from Islamabad were randomly selected as sample out of total 18 universities whereas 50 students were selected conveniently from each university. A comprehensive questionnaire was developed by researchers. The responses were scored on 5-points scale: SPSS software is used to generate the percentages, frequencies and mean of each variable. Reliability of questionnaire was also assessed through SPSS software which scored as 0.78. Results revealed that all students at university level declared that a classroom culture including classroom environment, classroom composition and seating arrangements, classroom location, teacher's ability and personality, teaching methods, curriculum, AV-Aids and other facilities etc. have a significant role in their academic learning.

Introduction

Education is about far more than the marks received by the pupils. It is about understanding right from wrong and having the knowledge the human being need to keep moving in today's society. It helps to develop nations' perspective on the world around and pushes them to think both creatively and conceptually about many different subjects. Without education, sensory information would simply be lost. Education allows us to process the information we receive on a daily basis and make conclusions and inferences based on what we already know.

It is generally assumed that better facilities, learning environment and learning material will affect the quality of education in all educational institutions, but evidence concerning this assumption is often not considered or even known. In this article, the author reviews some important studies examining the role of different classroom cultures on science teaching which include all necessary facilities, learning material and classroom environment.

Learning takes place through experiences influencing psychological functions which lead to differences in behaviors. There are five elements in learning which are learner, learning, learnt, teacher, and learning environment. Taking these five elements in terms of influencing learning shows that last two elements do not affect learning directly but they have an indirect effect since they influence other elements. Thus, elements influencing learning can be approached in three different groups which are factors regarding the learner, factors regarding the learning material, and factors regarding the learning method (Bacanli, 2005). These define the quantity and quality of learning by interacting with each other. While factors regarding the learner can be compiled as level of readiness for learning, age, intelligence, motivation level, interests and skills, characteristics, cognitive styles, and learning styles; perceptual distinguish-ability, semantic connotation, and conceptual grouping are related to learning material. On the other hand, structure of the subject to be learnt, the duration of time allocated for learning, feedback, and active participation are the factors associated with learning method (Senemoğlu, 2005).

Teachers' role, teachers' style and personality, teaching and instructional style, teachers' behavior, students' participation, students' behavior, sitting arrangement for male and female students are major areas which were declared as most influencing areas in a classroom which effects the teaching learning process of pupils. A classroom cultures including classroom environment, classroom location, teachers' ability and personality, teaching methods, students' participation, curriculum, AV-Aids and other facilities, sitting arrangements for male and female students, space in classroom etc. Different experiences in the classroom effects their social and academic learning in different ways. According to Adelman & Taylor (2004) key concepts related to classroom cultures includes social system organization, staff and student morale, social attitudes, curriculum and instructional practices, communicated expectations, competition, the "fit" between key learner and classroom variables, system maintenance, growth and change, orderliness and safety etc. Later on Rudolph Moss (1979) groups such concepts into three major dimensions and those are; relationship, personal

development and system maintenance and change.

So the present research focuses those major factors of a classroom culture that can directly affect the learning process in a classroom. For better understanding those factors of an overall classroom culture can be divided in to five following five groups:

- i. Class Composition and Structure
- ii. Teachers' Knowledge and Personality
- iii. Teaching Methods and Aids used during lectures
- iv. Classroom Surrounding Environment
- v. Curriculum taught by faculty

Literature Review

In every society, children will inherit social roles now occupied by adults and education systems have the major job of preparing children for this eventual responsibility. Therefore, around the world, nations want to improve education. Some want to strengthen basic academic skills; others want to focus on critical thinking. Some want to promote citizenship or character; others want to protect children against the dangers of drugs, violence and alcohol. Some want parents to play a larger role; others feel the entire community should be involved and some want to facilitate the teaching learning process by providing more comfortable and peaceful environment. Different classroom environments, audio-video aids, infrastructure, surrounding environment, teaching methodologies, teachers behavior, students' participation in classroom, other physical and psychological conditions form a collective culture in a classroom which effect teaching learning process inside the classrooms (Elias, 2003).

Optimal learning environment includes plenty of space for classroom arrangements, supplies and density. There are several different teaching skills and methods but as a whole, a teacher's pedagogy must watch the space of the environment. The visual environment consists of personal display, lighting and colors. These three components have psychological effects on students that apply to the classroom. Poor classroom acoustic created a negative learning environment for students (Allen & Hessick, 2011).

Ten strategies defined by Southern Regional Education Board (2011) for creating a classroom culture of high expectations are also considerable in this regard that they have lot of components which affect the classroom culture in a positive way and improve the teaching learning process in a classroom. These strategies are:

- Help all teachers to develop, communicate and implement classroom motivation and management plan.
- Develop instructional plans that facilitate bell-to-bell teaching.
- Create classroom organization and arrangement that spurs productivity.
- Establish high expectations.
- Communicate expectations to students and parents.
- The students as workers implement instructional activities that actively engage students.
- Keep students on target.
- Encourage frequent and relevant feedback that works.
- Establish grading practices that communicate high expectations and decrease frustration.
- Deal with severe behavior.

"Teaching and learning are two sides of a coin. The most accepted criterion for measuring good teaching is the amount of student learning that occurs. There are consistently high correlation between students' rating of the "amount learning" in course and their overall rating of the teacher and the course" (Sajjad, 2009).

All those factors make an overall classroom culture which either improves or restricts a student's ability to learn and feel safe and comfortable as a member of the class. Classrooms that encourage emotional wellbeing create an atmosphere for both learning and emotional development of pupils.

A classroom cultures including classroom environment, classroom location, teachers' ability, personality, teaching methods, students' participation, curriculum, AV-Aids and other facilities, sitting arrangements for male, female students, space in classroom etc. Different experiences in the classroom effects their social and academic learning in different ways. According to Adelman & Taylor (2004) key concepts related to classroom climates includes social system organization, staff and student morale, social attitudes, curriculum and instructional practices, communicated expectations, competition, the "fit" between key learner and classroom variables, system maintenance, growth and change, orderliness and safety etc. Later on Rudolph Moss (1979) groups such concepts into three major dimensions and those are; relationship, personal development and system maintenance and change.

Classroom climate is a perceived quality of the setting. It emerge in a somewhat fluid state form the

complex transaction of many immediate environment factors (e.g., physical, material, organizational, operational and social variables). Both the climate of the classroom and the school refers the influence of a school's culture, which is a stable quality emerging from underlying, institutionalized values and belief systems, norms, ideologies, rituals and traditions. Classroom climates and culture both are shaped by the school's surroundings and embedded political, social, cultural and economic context i.e., home neighborhood, city, state, country (Adelman & Taylor, 2004).

To recognize and address cultural variations in the classrooms a research is conducted in response to faculty requests of University of Carnegie Mellon, Pennsylvania for information and advice concerning teaching in an increasingly multi-cultural setting, and it is organized around issues raised by faculty themselves in 2005 and in a series of discussions conducted over the past several years. Teachers' role, teachers' style and personality, teaching and instructional style, teachers' behavior, students' participation, students' behavior, sitting arrangement for male and female students are major areas which were declared as most influencing areas in a classroom which effects the teaching learning process of pupils.

A classroom becomes more heterogeneous when two or more grades are mixed. This opens the scope for direct negative spillovers due to the presence of more or less able peers. Classroom composition can also significantly affect teacher inputs. (Leuven & Marté, 2011)

In 2008, Australian council for Educational Research (ACER) conducted a research on topic of "Managing classroom behavior" in NSW Institute of Teachers, which states that "There is no doubt that well-ordered classrooms and schools facilitate effective teaching and that good behavior management skills are necessary for teachers to perform the core task of improving student learning outcomes".

For creating an effective learning environment in a classroom, furnishing, adjacencies, functional space, psychological and physiological support, and structural aspect pay a vital role and enhance the teaching learning process in different ways" (Fisher, 2005).

The ability of teachers to organize different classrooms and manage the behavior of the pupils is critical to positive educational outcomes. Comprehensive teacher preparation and professional development in effective classroom organization and behavior management is therefore needed to improve outcomes for pupils in general and specific education (Reschly & Oliver, 2007).

The type of classroom environment that a teacher creates and encourages can either increase or decrease a student's ability to learn and feel comfortable as a member of the class. The classroom environment should do as much as to foster cooperation and acceptance as the teaching methods that the teacher uses (Bucholz & Sheffler, 2009).

The physical School environment encompasses the school building and all its contents including infrastructure, furniture, physical structure and use and presence of biological and chemical agents; the site on which a school is located and the surrounding environment including the air, water and materials which students may come into contact, as well as nearby land uses, roadways and other hazards (Wargo, 2010).

The classroom is seen neither as a space nor an activity, but as a convergence of a number of crucial elements which combine in multiple, dynamic, context-specific relationships. What is captured in this particular description is what came into focus through the lens of our particular research methodology, our questions, and the classrooms we observed. We would expect that studies of other classroom culture may identify different elements combining in different ways. That is, while some consistency between classrooms is always to be expected, there will also be individual variation between different classrooms and in the same classroom over time: we cannot claim that these factors will generalize to every classroom. A rational model is given by Burns A. & John S. in 2011 whose elements are not combined but as a whole those elements make a true picture of a classroom culture. This model attempts to capture the dynamic relationships between different elements which converge in classrooms and create an overall classroom culture (Burns & John, 2011).

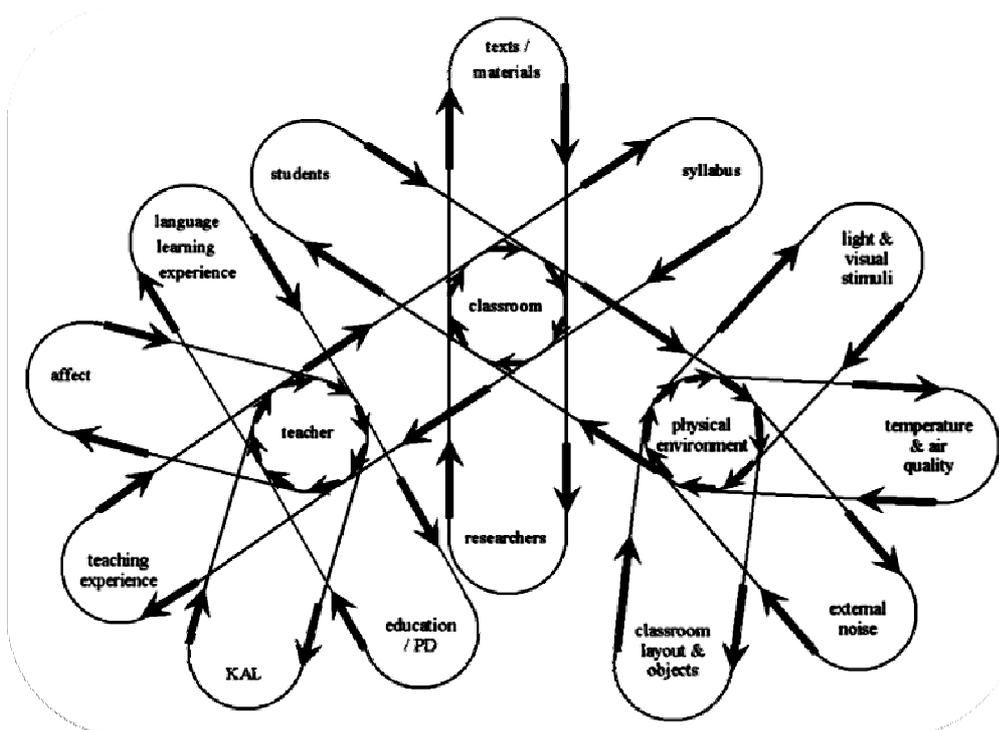


Figure 1: Classroom as a complex adaptive system: A rational Model by; Burns A. & John S. 2011

which can affect the social and academic learning in any classroom:

- Class Composition
- Teachers' Personality
- Knowledge and ability of Teacher
- Teaching Methods and Aids
- Surrounding Environment
- Curriculum

Classroom Composition

Researchers and designers of learning environments often debate whether the learner should adapt to the learning environment or whether the learning environment should adapt to them. Arguably this is the wrong question. A better question is: how does the environment shape the learner and, in turn, how does the learner influence the learning environment? In other words: what is the transactional relationship of the learning environment? This involves understanding the motivations of the learner with respect to the time and place in which s/he acquires knowledge (Lave and Wenger, 1991). The learning environment in this context is composed of the learner, other students and teachers and the physical environment.

Twenty-first century learning environments are envisioned as places where the learner is engaged in self-directed and co-operative learning activities, and the physical environment is planned so that it can be routinely re-organized to mediate learning (Partnership for 21st Century Skills, 2002). Therefore, 20th century constructivist concepts which view the learner as active and the learning environment as passive should be replaced with a new perspective. Practice theory recognizes that the learner and the learning environment are active (Goldring, 1997).

In the constructivist setting, students learn from their own discoveries, whereas with practice theory learners are transformed and shaped by their transactions alongside others and their physical settings. The physical arrangement of the classroom has the potential to encourage desirable behavior or contribute to students' misbehavior (Daniels, 1998).

Additionally, unlike other factors that also impact on behaviour (e.g., individual student characteristics, social dynamics), seating arrangement is one factor that is typically under teacher control. Classroom arrangement significantly impacts on student behaviour, and there is evidence to suggest that it impacts on achievement as well (Pace and Price, 2005). Moore and Glynn (1984), for example, found that a student's location in the classroom is related to the number of questions received from the teacher; this may influence the student's opportunity to respond and thus to learn. Also, Granstrom (1996), perhaps not surprisingly, found that students at the back of the classroom tend to interact with each other

more frequently than those seated at the front, potentially adversely impacting their attention to the task at hand. Because proximity and orientation influence communication, it is possible that desk configuration impacts on the nature and extent of student interaction. Thus it is important for teachers to have the knowledge necessary to make informed decisions about whether rows, clusters, semi-circles or some other arrangement will best meet the instructional needs of their students. This may be especially critical in inclusive settings that serve students with disabilities and those without disabilities concurrently, due to the wide range of behavioral and academic characteristics represented.

Teachers' Personality

Kritsonis (2007) suggested that to increase academic achievement, the fundamental tasks of most educational institutions is to establish, define, and organize the curriculum. Kritsonis (2007) pointed out that there is more to learn, more to teach, and more to put in the curriculum than there is time available. Deciding what takes precedent poses a challenge for teachers while planning their lessons. Educators must find a way to meet the needs of students and prepare them for graduation from high school (Bard, Gardener, & Wieland, 2005). Bard, Gardener, and Wieland (2005) stated that the cost associated with these tasks has been an ongoing concern for policymakers at both the state and federal levels.

A study by Richardson and Arker (2010) suggested that personality styles need to be recognized to meet individual students' needs. Understanding personality profiles allows educators to be proactive in determining a better fit for each student (Richardson & Arker, 2010). Richardson and Arker (2010) also suggested that overall productivity can be enhanced by bringing together individuals with similarities. Davis (2006) and McCombs and Miller (2006) emphasized that good relationships between students and teachers often lead to increased student performance. They implied that examining the relationship between the student and teacher would provide a good predictor of the learners' motivation to achieve academically.

A concern facing education is the variety of personality styles that could either negatively or positively impact academic excellence in secondary students. A study was done by Cooper and Benis (1967) looking at teacher personality, teacher behavior and their effects upon pupil achievement. The students' grades, using a non-standardized score were used to reflect achievement. The personality assessment that was used was a forced-choice scale. Levin's (2006) study made reference to assessing teacher personality and the effects on academic achievement, but the focus of that study was on the leadership component and its effects on student learning.

Moscoso and Slagado (2004) examined negative types of personalities, which they refer to as the dark side and its effect on job performance. The study showed that there were seven types of personality styles that negatively impacted job performance—shyness, suspiciousness, sadness, pessimism, suffering, eccentricity, and riskiness. However, Moscoso and Slagado (2004) did not study the effects of a person's personality on another person's job performance.

Knowledge and Ability of Teacher

Teacher quality is a key determinant of student learning, little is known about which specific observable characteristics of teachers can account for this impact (e.g., Rockoff 2004; Rivkin, Hanushek, and Kain 2005; Aaronson, Barrow, and Sander 2007). In particular, there is little evidence that those characteristics most often used in hiring and salary decisions, namely teachers' education and experience, are crucial for teacher quality. Virtually the only attribute that has been shown to be more frequently significantly correlated with student achievement is teachers' academic skills measured by scores on achievement tests (Wayne and Youngs 2003; Eide, Goldhaber, and Brewer 2004; Hanushek and Rivkin 2006). The problem with the latter evidence, however, is that issues of omitted variables and non-random selection are very hard to address when estimating causal effects of teacher characteristics.

However, identifying the causal effects of teacher characteristics on student achievement econometrically is a difficult task. Problems of unobserved student and teacher characteristics and of non-random selection into classrooms are likely to bias the estimates available in the literature. If such omitted variables and selection processes are correlated with the achievement of both teachers and students – as is quite likely in such cases as teacher motivation and pedagogical skills, student effort and ability, parental choice of schools and classrooms, and student placements into classrooms – the available conventional estimates will not capture the true effect of teacher knowledge on student outcomes. Teacher subject knowledge should be clearly on the agenda of educational administrators and policy-makers. Attention to teacher subject knowledge seems to be in order in hiring policies, teacher training practices, and compensation schemes. However, additional knowledge about the relative cost of improving teacher knowledge – both of different means of improving teacher knowledge and compared to other means of improving student achievement – is needed before policy priorities can be established.

Teaching Methods and Aids

The primary purpose of teaching at any level of education is to bring a fundamental change in the learner (Tebabal & Kahssay, 2011). To facilitate the process of knowledge transmission, teachers should apply appropriate teaching methods that best suit specific objectives and level exit outcomes. In the traditional epoch, many teaching practitioners widely applied teacher-centered methods to impart knowledge to learners comparative to student-centered methods. Until today, questions about the effectiveness of teaching methods on student learning have consistently raised considerable interest in the thematic field of educational research (Hightower et al., 2011). Moreover, research on teaching and learning constantly endeavor to examine the extent to which different teaching methods enhance growth in student learning.

Quite remarkably, regular poor academic performance by the majority students is fundamentally linked to application of ineffective teaching methods by teachers to impart knowledge to learners (Adunola, 2011). Substantial research on the effectiveness of teaching methods indicates that the quality of teaching is often reflected by the achievements of learners. According to Ayeni (2011), teaching is a process that involves bringing about desirable changes in learners so as to achieve specific outcomes. In order for the method used for teaching to be effective, Adunola (2011) maintains that teachers need to be conversant with numerous teaching strategies that take recognition of the magnitude of complexity of the concepts to be covered. According to Ayeni (2011), teaching is a continuous process that involves bringing about desirable changes in learners through use of appropriate methods. Adunola (2011) indicated that in order to bring desirable changes in students, teaching methods used by educators should be best for the subject matter. Furthermore, Bharadwaj & Pal (2011) sustained that teaching methods work effectively mainly if they suit learners' needs since every learner interprets and responds to questions in a unique way (Chang, 2010). As such, alignment of teaching methods with students' needs and preferred learning influence students' academic attainments (Zeeb, 2004).

1. Teacher-Centered Methods

Under this method, students simply obtain information from the teacher without building their engagement level with the subject being taught (Boud & Feletti, 1999). The approach is least practical, more theoretical and memorizing (Teo & Wong, 2000). It does not apply activity based learning to encourage students to learn real life problems based on applied knowledge. Since the teacher controls the transmission and sharing of knowledge, the lecturer may attempt to maximize the delivery of information while minimizing time and effort. As a result, both interest and understanding of students may get lost. To address such shortfalls, Zakaria, Chin & Daud (2010) specified that teaching should not merely focus on dispensing rules, definitions and procedures for students to memorize, but should also actively engage students as primary participants.

2. Student-Centered Method

With the advent of the concept of discovery learning, many scholars today widely adopt more student-centered methods to enhance active learning (Greitzer, 2002). Most teachers today apply the student-centered approach to promote interest, analytical research, critical thinking and enjoyment among students (Hesson & Shad, 2007). The teaching method is regarded more effective since it does not centralize the flow of knowledge from the lecturer to the student (Lindquist, 1995). The approach also motivates goal-orientated behavior among students, hence the method is very effective in improving student achievement (Slavin, 1996).

3. Teacher-Student Interactive Method

This teaching method applies the strategies used by both teacher-centered and student-centered approaches. The subject information produced by the learners is remembered better than the same information presented to the learners by the lecturer (Jacoby, 1978; McDaniel, Friedman & Bourne, 1978; and Slamecka & Graf, 1978). The method encourages the students to search for relevant knowledge rather than the lecturer monopolizing the transmission of information to the learners. As such, research evidence on teaching approaches maintains that this teaching method is effective in improving students' academic performance (Damodharan & Rengarajan, 1999).

Surrounding Environment

The effect of the surrounding physical conditions of teaching spaces (which includes seating, furnishings, spatial density, privacy, noise and acoustics, climate and thermal control, air quality, windowless classrooms, vandalism and play-yards, light and color) on students' engagement, attainment, attendance and wellbeing (Keep, G 2002; Higgins et al 2005; Lackney & Jacobs, 2004; Gump 1987; McGuffey 1982; Earthman

2004; Sundstrom 1987; McNamara & Waugh 1993; and Weinstein 1979).

Some interesting contentions about the physical aspects of learning spaces include:

- Temperature, heating and air quality are the most important individual elements for student achievement (Earthman, 2004: 11–16).
- Chronic noise exposure impairs cognitive functioning, with numbers of studies finding noise-related reading problems, deficiencies in pre-reading skills, and more general cognitive deficits. (Higgins et al, 2004:18).
- Colour remains the topic of some of the most optimistic claims about morale and efficiency' (Sundstrom, 1987:751). According to some research, the choice of the best use of colors is dependent on the age of children (brighter for younger students, more subdued for adolescents), as well as differences between males and females (males – bright colors, females – softer). Much research findings about color is conflicting, and remains hotly debated (Higgins et al, 2004: 21–22).
- Using visual displays in classrooms breeds success because 'students are provided with specific examples of how success is obtained' (Culp, B 2006:14).

Curriculum

Every successful concept and project in life requires a proper framework and planning. This relates to all processes, including education. Whenever we embark on any new plan or procedure, we need to make sure that we have all the plans drawn up. What is on offer, what are the resources that we have, what are the steps, which we need to take and what are the goals that we need to achieve are some elements that need to be looked upon. A similar set of constraints when applied to education in an educational institution gives birth to curriculum. A curriculum is a set of courses, including their content, offered at a school or university. The curriculum often contains a detailed list of subjects and the elements of teaching them. John Franklin Bobbitt (1918) explained that the Curriculum as the course of deeds and experiences through which children grow up into adults and get going for success in the society.

A curriculum is more than putting together a set of academically required subjects. It must consider all aspects of the student life, the learning needs of students, the time available for the sessions and the teachers' idea, capability and workload. Curriculum has a deep impact on social and academic learning of the students at all levels of education. At a higher stage of education, an unprecedented autonomy is provided to the students. The students can opt for a more focused curriculum, based on their choice of subjects. A student will graduate, post-graduate or attain a doctorate based on the choice of his subjects and the mode of his study, both or either one determined by him. The curriculum here is reduced to just a framework that is very flexible yet very important. The curriculum chosen by the student will go on to determine the shape of his career. A curriculum prepares an individual with the knowledge to be successful, confident and responsible citizens.

Methodology

Nature of the Study

The present study was descriptive in nature which includes qualitative measurements.

Population Selection

All university level students in Islamabad, Pakistan were included in the population of the study.

Sampling Technique

Random Sampling technique was used to choose the universities whereas the convenient sampling technique was used to choose the students from each university.

Sample Selection

Five universities from Islamabad, Pakistan were randomly selected as sample out of total 18 universities whereas 50 students were selected conveniently from each university.

Tools(s) for Data Collection

Students have to face different classroom cultures including classroom environment, location, teacher's ability and personality, teaching methods, curriculum, AV-Aids and other facilities etc. Different experiences in the classroom effects their performance in different ways. A comprehensive questionnaire was developed by researcher according to the objectives and classroom culture of Pakistan at university level, to find out the role of different variables of classroom cultures on academic learning of pupils. This instrument also helped in identifying the key areas in which the students are mostly satisfied or dissatisfied regarding their academic learning.

Validity & Reliability

Pilot testing of the questionnaire was conducted in education department of NUML in order to check its validity. The certification was also made by two research experts and an English language expert for satisfactory results. Reliability of questionnaire was also assessed through SPSS software which scored as 0.78.

Scoring

The responses were scored on 5-points scale: always find it true, often find it true, some time find it true, rarely find it true and never find it true. The scoring is unidirectional. The high score on the 5 scales indicate high degree of five dimensions: classroom composition and structure, teachers' knowledge and personality, teaching methods and aids, surrounding environment and curriculum. SPSS software is used to generate the percentages on frequencies and mean of each variable.

Data Analysis

Classroom Composition

Table 1

Separate sitting areas for male and female students make them easy and relax during lecture

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 78 | 65 | 37 | 16 | 4 | 200 |
| Percentage | 39.0 | 32.5 | 18.5 | 8.0 | 2.0 | 100 |

Table 2

More than two windows and one door in a classroom disturb the teaching learning process

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|------|-----|-------|
| Frequency | 72 | 65 | 30 | 26 | 7 | 200 |
| Percentage | 36.0 | 32.5 | 15.0 | 13.0 | 3.5 | 100 |

Table 3

For the better delivery of lecture the distance between students and teacher must be less than 10 feet in a classroom

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 84 | 71 | 37 | 8 | 0 | 200 |
| Percentage | 42.0 | 35.5 | 18.5 | 4.0 | 0.0 | 100 |

Table 4

Easy chairs, heating cooling system, lecture attendant, sound system etc. are necessary for an effective teaching learning process

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|-----|-----|-----|-------|
| Frequency | 148 | 39 | 7 | 3 | 3 | 200 |
| Percentage | 74.0 | 19.5 | 3.5 | 1.5 | 1.5 | 100 |

Table 5

More free space in a classroom, psychologically disturb the students and teacher

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|-----|-----|-----|-------|
| Frequency | 107 | 51 | 12 | 15 | 15 | 200 |
| Percentage | 53.5 | 25.5 | 6.0 | 7.5 | 7.5 | 100 |

Table 6

Decorated classroom with different charts etc. can play a role in social and academic learning.

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 50 | 112 | 35 | 3 | 0 | 200 |
| Percentage | 25.0 | 56.0 | 17.5 | 1.5 | 0.0 | 100 |

TEACHERS' PERSONALITY AND ABILITY

Table 7

Teacher's high command over the subject makes the learning process more effective. Teacher's high command over the subject makes the learning process more effective

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|-----|-----|-----|-------|
| Frequency | 128 | 37 | 10 | 12 | 13 | 200 |
| Percentage | 64.0 | 18.5 | 5.0 | 6.0 | 6.5 | 100 |

Table 8

Teachers' personality can pay a key role in academic and social learning of students

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|-----|-----|-----|-------|
| Frequency | 125 | 68 | 5 | 2 | 0 | 200 |
| Percentage | 62.5 | 34.0 | 2.5 | 1.0 | 0.0 | 100 |

Table 9

Students can participate more effectively during lecture of a teacher having friendly personality

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|-----|-----|-----|-------|
| Frequency | 106 | 94 | 0 | 0 | 0 | 200 |
| Percentage | 53.0 | 47.0 | 0.0 | 0.0 | 0.0 | 100 |

Table 10

More frankness of a teacher can pay negative effect on academic learning of students

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 54 | 78 | 51 | 7 | 10 | 200 |
| Percentage | 27.0 | 39.0 | 25.5 | 3.5 | 5.0 | 100 |

Table 11

Any type of punishment affect negatively at university level studies

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|------|-----|-------|
| Frequency | 86 | 54 | 34 | 21 | 5 | 200 |
| Percentage | 43.0 | 27.0 | 17.0 | 10.5 | 2.5 | 100 |

Table 12

Teachers' insulting behavior in classroom affect badly on learning process of students

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|-----|-----|-----|-------|
| Frequency | 145 | 35 | 5 | 5 | 10 | 200 |
| Percentage | 72.5 | 17.5 | 2.5 | 2.5 | 5.0 | 100 |

TEACHING METHODS AND AIDS

Table 13

Multimedia and projectors are essential for the better learning of students

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 130 | 30 | 35 | 5 | 0 | 200 |
| Percentage | 65.0 | 15.0 | 17.5 | 2.5 | 0.0 | 100 |

Table 14

White board is more effective aid for lectures than any other

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|------|-----|-------|
| Frequency | 92 | 56 | 27 | 22 | 3 | 200 |
| Percentage | 46.0 | 28.0 | 13.5 | 11.0 | 1.5 | 100 |

Table 15

Difference of teaching styles between different teachers, disturbs academic learning of students

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|------|-----|-------|
| Frequency | 89 | 54 | 27 | 25 | 5 | 200 |
| Percentage | 44.5 | 27.0 | 13.5 | 12.5 | 2.5 | 100 |

Table 16

Use of more teaching aids in lecture, make it more effective then lecture delivered without aids

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|-----|-----|-----|-------|
| Frequency | 102 | 83 | 10 | 1 | 4 | 200 |
| Percentage | 51.0 | 41.5 | 5.0 | 0.5 | 2.0 | 100 |

Table 17

Change of teaching method according to the unit/chapter/topic is necessary at higher level

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 55 | 83 | 42 | 10 | 10 | 200 |
| Percentage | 27.5 | 41.5 | 21.0 | 5.0 | 5.0 | 100 |

Table 18

Practical work base activities and assignments are essential for effective academic learning

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|-----|-----|-----|-------|
| Frequency | 107 | 67 | 8 | 16 | 2 | 200 |
| Percentage | 53.5 | 33.5 | 4.0 | 8.0 | 1.0 | 100 |

SURROUNDING ENVIRONMENT

Table 19

Location of a classroom can affect the teaching learning process

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|-----|-----|-----|-------|
| Frequency | 99 | 73 | 7 | 18 | 3 | 200 |
| Percentage | 49.5 | 36.5 | 3.5 | 9.0 | 1.5 | 100 |

Table 20

Extensive change of teaching venue disturbs students and effect negatively

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 58 | 82 | 50 | 10 | 0 | 200 |
| Percentage | 29.0 | 41.0 | 25.0 | 5.0 | 0.0 | 100 |

Table 21

All slots in only one selected classroom make the students boring

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 71 | 66 | 47 | 16 | 0 | 200 |
| Percentage | 35.5 | 33.0 | 23.5 | 8.0 | 0.0 | 100 |

Table 22

Classroom near or in-front of administrative offices is psychologically disturbs the students

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 77 | 61 | 41 | 12 | 8 | 200 |
| Percentage | 38.5 | 30.5 | 20.5 | 6.0 | 4.5 | 100 |

Table 23

Any extracurricular activity, development or maintenance work, near classroom, disturbs teaching learning process

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 101 | 51 | 34 | 9 | 5 | 200 |
| Percentage | 50.5 | 25.5 | 17.0 | 4.5 | 2.5 | 100 |

Table 24

More visible outside area from a classroom can divert the attention of students

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 68 | 76 | 26 | 16 | 14 | 200 |
| Percentage | 34.0 | 38.0 | 13.0 | 8.0 | 7.0 | 100 |

Curriculum

Table 25

Books are not necessary for better academic learning at higher level studies

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|------|-----|-------|
| Frequency | 71 | 50 | 34 | 39 | 6 | 200 |
| Percentage | 35.5 | 25.0 | 17.0 | 19.5 | 3.0 | 100 |

Table 26

Social learning of students can easily be improved through curriculum at higher level

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 85 | 60 | 35 | 18 | 2 | 200 |
| Percentage | 42.5 | 30.0 | 17.5 | 9.0 | 1.0 | 100 |

Table 27

Social learning of students can easily be improved through curriculum at higher level

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 70 | 82 | 33 | 6 | 9 | 200 |
| Percentage | 35.0 | 41.0 | 16.5 | 3.0 | 4.5 | 100 |

Table 28

Learning material, which is not according to the mental level of students, cannot acquire the interest and as well as effective participation of students

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|-----|-----|-------|
| Frequency | 85 | 63 | 36 | 9 | 7 | 200 |
| Percentage | 42.5 | 31.5 | 18.0 | 4.5 | 3.5 | 100 |

Table 29

Practical work base activities, assignments and projects are not wastage of time in a classroom

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|------|------|-----|-------|
| Frequency | 85 | 42 | 37 | 32 | 4 | 200 |
| Percentage | 42.5 | 21.0 | 18.5 | 16.0 | 2.0 | 100 |

Table 30

Social issues and religious believes, included in curriculum can pay a positive role in any teaching learning process.

| Scale | AT | OT | ST | R | N | TOTAL |
|------------|------|------|-----|-----|-----|-------|
| Frequency | 92 | 63 | 22 | 14 | 9 | 200 |
| Percentage | 24.5 | 16.8 | 5.9 | 3.7 | 2.4 | 100 |

Table 31

Mean Value

| S. NO. | VARIABLE | MEAN | REMARKS |
|--------|---------------------------------|------|------------|
| 1 | Classroom Composition | 1.55 | Often True |
| 2 | Teachers' Personality & Ability | 1.72 | Often True |
| 4 | Teaching Methods and Aids | 1.86 | Often True |
| 5 | Surrounding Environment | 1.99 | Often True |
| 6 | Curriculum | 2.06 | Often True |

Results revealed that all students at university level declared that a classroom culture including classroom environment, classroom composition and seating arrangements, classroom location, teacher's ability and personality, teaching methods, curriculum, AV-Aids and other facilities etc. have a significant role in their academic learning.

Discussion & Conclusion

The students often found it true in classrooms that separate sitting areas for male and female make them more easy and relax during a lecture. More than two windows and one door in a classroom disturb the teaching learning process. The distance between students and teacher more than 10 feet in a class room pay a negative role. Easy chairs, heating cooling system, lecture attendant, sound system etc. are necessary for an effective teaching learning process. More free space in a classroom, psychologically disturb the students and teacher. Decorated classroom with different charts etc. can pay a role in social and academic learning. The study congruent with the study of Daniels (1998) and Moore and Glynn (1984). Daniels also found that the physical arrangement of the classroom has the potential to encourage desirable behavior or contribute to students' misbehavior.

The students also found it true in classrooms that teacher's high command over the subject makes the learning process more effective. Teacher's high command over the subject makes the learning process more effective. Teachers' personality can pay a key role in academic and social learning of students. Students can participate more effectively during lecture of a teacher having friendly personality. These finding of the research congruent with the researches made by Rockoff (2004), Rivkin, Hanushek, Kain (2005), Aaronson, Barrow and Sander (2007). More frankness of a teacher can pays negative effect on academic learning of students. Any type of punishment affect negatively at university level studies. Teachers' insulting behavior in classroom affect badly on learning process of students.

According to the majority of respondents multimedia and projectors are essential for the better academic learning but white board is more an effective aid for lectures than any other. Difference of teaching styles between different teachers, disturbs academic learning of students. Use of more teaching aids in lecture, make it more effective then lecture delivered without aids. Change of teaching method according to the unit/chapter/topic is necessary at higher level. Practical work base activities and assignments are essential for effective academic learning. Location of a classroom can affect the teaching learning process. Congruently according to the Adunola (2011) quite remarkably, regular poor academic performance by the majority students is fundamentally linked to application of ineffective teaching methods by teachers to impact knowledge to learners. Adunola (2011) indicated that in order to bring desirable changes in students, teaching methods used by educators should be best for the subject matter.

The study also revealed that extensive change of teaching venue disturbs students and effect negatively. All slots in only one selected classroom make the students boring. Classroom near or in-front of administrative offices is psychologically disturbs the students. Any co-curricular activity, development or maintenance work, near classroom, disturbs teaching learning process. More visible outside area from a classroom can divert the attention of students. These findings of the present studies congruent with the results of some researches in past done by different researcher including Culp (2006), Earthman (2004) and Higgins (2004).

According to the majority of respondents books are not necessary for better academic learning at higher level studies. Social learning of students can easily be improved through curriculum at higher level. Social learning of students can easily be improved through curriculum at higher level. Learning material, which is not according to the mental level of students, cannot acquire the interest and as well as effective participation of students. Practical work base activities, assignments and projects are not wastage of time in a classroom. Social issues and religious believes, included in curriculum can pay a positive role in any teaching learning process. This result congruent with the study of John Franklin Bobbitt (1918) who found that the curriculum is the course of deeds and experiences through which children grow up into adults and get going for success in the society.

Recommendations

- i. In classrooms, environments conducive to active pursuit of learning may be created so the students can adopt their own learning style.
- ii. Teachers training programs may arranged to make them well aware of the diverse classroom cultures and environments.
- iii. Following steps are strongly recommended that may be taken in order to pupils' academic learning more effective in a classroom:
 - Separate sitting areas for male and female
 - Not more than two windows and one door in a classroom
 - A seating arrangement where students and teacher must be less than 10 feet
 - Provision of easy chairs, heating cooling system, lecture attendant, sound system etc.
 - Less space in a classroom, psychologically
 - Decorated classroom with different charts etc.
 - Teacher's high command over the subject
 - Teachers' pleasant personality
 - Teaching method which must includes students' participate
 - Insult-free behavior of teachers in classroom
 - Use of multimedia and projectors
 - Effective use of white board
 - Change of teaching method according to the unit/chapter/topic
 - Assignment of practical work base activities
 - Prohibition of co-curricular activity, development or maintenance work near classroom
 - Identification of referenced books
 - Provision of learning material according to the mental level of students
 - Practical work base activities, assignments and projects

References:

1. Adelman, H. S. & Taylor L. (2004). *Classroom climate*: Encyclopedia of School Psychology. Thousand Oaks, CA: Sage.
2. Adunola, O. (2011). *The Impact of Teachers' Teaching Methods on the Academic Performance of Primary School Pupils*: Ego Booster Books, Ogun State, Nigeria.
3. Allen, B. & Hessick, K. (2011). *A classroom environment: A silent curriculum*: Psychology and Child Development Department, College of Liberal Arts, California Polytechnic State University, San Luis Obispo.
4. Ayeni, A.J. (2011). *Teacher's professional development and quality assurance in Nigerian Secondary Schools*: World Journal of Education, 1(2):143-149.
5. Bernaus, M., Wilson, A., & Gardner, R., (2009). *Teachers' motivation, classroom strategy use, students' motivation and second language achievement*: Catalonia, Spain.
6. Ben, W. B. & Payton, S. F. (2009). *Curriculum and teaching innovation Transforming classroom practice and Personalization*: UK.
7. Boud, D. & Feletti, G. (1999). *The challenge of problem-based learning: (2nd Ed.)*, London, Kogan Page.
8. Burns, A. (2011). *Classrooms as Complex Adaptive Systems: A Relational Model*: Aston University, Birmingham, UK, and University of New South Wales, Australia & John S. Knox, Department of Linguistics, Macquarie University, Sydney, Australia, June 201,1Volume 15, Number 1. (Retrieved from <http://www.tesl-ej.org> on 10-10-2014 at 03:30 pm.)

9. Bucholz, J. L., & Sheffler, J. L. (2009). *Creating a Warm and Inclusive Classroom Environment: Planning for All Children to Feel Welcome*: Electronic Journal for Inclusive Education, 2 (4).
10. Cooper, J., & Bemis, K. (1967). *Teacher personality, teacher behavior and their effects upon pupil achievement*: ERIC Database.
11. Culp, B., (2005). *Management of the Physical Environment in the Classroom and Gymnasium: It's not That Different*: Teaching Elementary Physical Education, vol. 17, no. 5, pp.13–15.
12. Damodharan, V. S. & Rengarajan .V (1999). *Innovative Methods of Teaching*: National Research Council, Educational Journal Publication.
13. Davis, H. (2006). *Exploring the contexts of relationship quality between middle school students and teachers*: Elementary School Journal, 106(3), 193–224.
14. Demir, S., Kilinc. M. and Dogan. A. (2012). *The Effect of Curriculum for Developing Efficient Studying Skills on Academic Achievements and Studying Skills of Learners*: International Electronic Journal of Elementary Education, 2012, 4(3), 427-440.
(Retrieved from <http://www.iejee.com/> on 11-11-2014 at 03:35 pm)
15. Earthman, G.I. (2004). *Prioritization of 31 Criteria for School Building Adequacy*: American Civil Liberties Union Foundation of Maryland.
(Retrieved from: <http://www.aclumd.org/aTop%20Issues/Education%20Reform/EarthmanFinal10504.pdf> on 27/09/07 at 01:00 pm)
16. Eberly Center for Teaching Excellence Inter cultural Communication Center, Pennsylvania (2005). *Recognizing and addressing Cultural Variations in the Classrooms*: University of Carnegie Mellon, Pennsylvania.
17. Elias, M. J. (2003). *Academic and social emotional learning*: International Bureau of Education.
(Retrieved from: <http://www.ibe.unesco.org> on 11-10-2014 at 02:45 pm.)
18. Fisher K., (2005). Director, *identifying effective learning environments: Learning Futures*: Rubida Research Pty Ltd.
19. Garcia, P., Kupczynski, L. and Holland, G., (2011). *Impact of Teacher Personality Styles on Academic Excellence of Secondary Students*: National Forum of Teacher Education Journal Volume 21, Number 3, 2011
(Retrieved From <http://www.nationalforum.com/> on 10-11-2014 at 09:00 pm)
20. Ganyaupfu, E. (2013). *Teaching Methods and Students' Academic Performance*: International Journal of Humanities and Social Science Invention ISSN (Online): www.ijhssi.org Volume 2 Issue 9th September. 2013, PP.29-35
21. Granstrom, K. (1996). *Private communication between students in the classroom in relation to different classroom features*: Educational Psychology, 16, 4, 349–364.
22. Greitzer, F.A. (2002). *Cognitive Approach to Student-Centered E-Learning, Human Factors and Society*: 46th Annual Meeting, Sept 30 – Oct 4.
(Retrieved from http://availabletechnologies.pnnl.gov/media/33_97200670001.pdf on 10-11- 2014 at 02:00 pm)
23. Hattie, J. (2002). *Classroom com position and peer effects*: International Journal of Educational Research 37 (2002) 449–481 School of Education, University of Auckland, Private Bag 92019, Auckland, New Zealand
(Retrieved from <https://www.deepdyve.com/lp/> on 10-11-2014 at 08:45 pm)

24. Hesson, M. & Shad, K.F. (2007). *A student-centered learning model*. American Journal of Applied Sciences, 628-636.
25. Higgins, S., Hall, E. & others (2005). *The Impact of School Environments: A literature review: The Centre for Learning and Teaching, School of Education, Communication and Language Science, University of Newcastle*. (Retrieved from <http://www.cfbt.com/PDF/91085.pdf> on 30/04/2014 at 06:45 pm)
26. Higgins, S., Hall, E. & others, (2005). *The Impact of School Environments: A literature review: The Centre for Learning and Teaching, School of Education, Communication and Language Science, University of Newcastle*. (Retrieved from: <http://www.cfbt.com/PDF/91085.pdf> on 27-09-2014 at 02:30 pm)
27. Iqbal, A., Rauf, M., Imdadullah & Zeb, A. (2012). *Implementations Gap in Educational Policies of Pakistan - Critical Analysis of Problems and Way Forward*: International Journal of Humanities and social Science, Vol. 2, No. 21. (Retrieved from: <http://www.ijhssnet.com/journal/index/1379> on 14-09-2014 at 09:45 pm).
28. Jacoby, L. L. (1978). *On interpreting the effects of repetition: Solving a problem versus remembering a solution*: Journal of Verbal Learning and Verbal Behavior, 17:649-667.
29. John, W. (2010). *The Physical School Environment*: World Health Organization (WHO). Yale University, New Haven Connecticut.
30. Keep, G. (2002). *Buildings that teach, The Educational Facilities Planner*: Vol .37, no. 2. Accessed online on 15/05/07 at (Retrieved from: <http://sbw.cefpifoundation.org/pdf/BuildingsTeach.pdf> on 07-11-2014 at 06:00 pm)
31. Kritsonis, W. (2007). *PhD on schooling (4th Edition)*: Retrieved from <http://www.asmsuexponent.com/montana-state-university/william-kritsonis-phd-schooling>
32. Lackney, J.A. & Jacobs, P. (2002). *Teachers as Place makers: Investigating Teachers' Use of the Physical Learning Environment in Instructional Design*: US Department of Education, Educational Resources Information Centre (ERIC) ED463645, 2002. (Retrieved from: <http://schoolstudio.engr.wisc.edu> on 27/09/14 at 04:50 pm)
33. Lave, J. & Wenger, E. (1991). *Situated Learning*, Cambridge University Press, New York.
34. Leuven, E. & Marté, R. (2011). *Classroom Grade Composition and Pupil Achievement*: Discussion Paper No. 5922. P.O. Box 7240 53072 Bonn, Germany.
35. Lippman, C. (2010). *Can the physical environment have an impact on the learning environment?* ISSN 2072-7925, CELE Exchange 2010/13. (Retrieved from <http://www.oecd.org/education/> on 11-11-2014 at 03:15 pm)
36. Metzler, J. and Woessmann, L. (June 2010). *The Impact of Teacher Subject Knowledge on Student Achievement: Evidence from Within-Teacher Within-Student Variation*: Institute for the Study of Labor. (Retrieved from <http://ftp.iza.org/> on 10-11-2014 at 09:15 pm)
37. Moscoso, S. & Salgado, J. (2004). *Dark side personality styles as predictors of task, contextual, and job performance*: International Journal of Selection and Assessment, 12(4), 356-362.
38. Pace, D. & Price, M. (2005). *Instructional techniques to facilitate inclusive education, including Children with Special Needs*: (pp. 115–131). Westport, CT: Greenwood Press.
39. Reschly, R., (2007). *Effective Classroom Management: Teacher Preparation and professional development*: Vanderbilt University, [Nashville, Tennessee](http://www.vanderbilt.edu/peppercenter/).

40. Research Digest, (2008). *Series of periodic digests produced by the Australian Council for Educational Research: (ACE R) for the NSW Institute of Teachers.*
41. Richardson, R. & Arker, E. (2010). *Personalities in the classroom: Making the most of them.* Kappa Delta Pi, 46(2).
42. Sajjad, S. (2011). *Effective teaching methods at higher education level:* Department of Special Education, University of Karachi, Pakistan.
43. Slavin, R.E. (1996). *Research for the future- Research on cooperative learning and achievement: What we know, what we need to know:* Contemporary Educational Psychology, 21(4): 43-69.
44. Smithee, M., Sidney, I., Greenblatt, S. & Eland, A. (2004). *US Classroom Culture:* NAFSA - Association of International Educators, United States.
45. Southern Regional Education Board (2004). *Ten Strategies for Creating a Classroom Culture of High Expectations:* 592 10th St. N.W. Atlanta, GA 30318 (404) 875-9211 (Retrieved from: www.sreb.org)
46. Sundstrom, (1987). *Work Environments: Offices and Factories:* D & I Altman (Eds.) Handbook of Environmental Psychology, Wiley p.751.
47. Tebabal, A. & Kahssay, G. (2011). *The effects of student-centered approach in improving students' graphical interpretation skills and conceptual understanding of kinematical motion:* Lat. Am. J. Phy. Edu, 5(2): 374-381.
48. Teo, R. & Wong, A. (2000). *Does Problem Based Learning Create A Better Student: A Reflection?* Paper presented at the 2nd Asia Pacific Conference on Problem Based Learning: Education Across Disciplines, December 4-7, Singapore.
49. Weinstein, C.S. (1979). *The Physical Environment of the School: A Review of the Research:* Review of Educational Research, vol. 49, no. 4.
50. Zakaria, E., Chin, C.L. & Daud, Y. (2010). *The effect of cooperative learning on student mathematics achievements and attitude towards mathematics:* Journal of Social Sciences, 6(2): 272-275. (Retrieved from: <http://dx.doi.org/10.3844/jssp.2010.272.275> on 12-11-2014 at 02:30 pm)

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:

<http://www.iiste.org>

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: <http://www.iiste.org/journals/> All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Academic conference: <http://www.iiste.org/conference/upcoming-conferences-call-for-paper/>

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

