



SMART CLASSROOM TEACHING TO PROMOTE SELF-CONCEPT AND SELF-EFFICACY AMONG 6th GRADE STUDENTS

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Abstract

The present study examined the effect of smart classroom teaching to develop self-efficacy and self-concept among students of 6th grade. The sample of the study was consisting of randomly selected 100 students of 6th grade from five C.B.S.E. schools of Mohali. Two groups were prepared- experimental group and control group, where experimental group was taught in smart classroom and the control group was taught by the conventional method of teaching-learning. T-test was employed to ascertain the mean difference between boys and girls of 6th grade. The boys of 6th grade exhibited higher mean scores on self-concept and self-efficacy than the girls. Although when taught through smart classroom, the girls showed higher mean scores on self-concept.

Keywords: Self-concept, Self-efficacy, Smart Classroom

Introduction

Technology is defined as “the making, usage, and knowledge of tools, machines, techniques, crafts, systems or methods of organization in order to solve a problem or perform a specific function.” All technology affects animals in their natural environments. In this same way technology affects humans in all sorts of ways to provide the ability to control and adapt to their environment.

Information and communication technologies (ICT) are a fundamental driver of the digital revolution – from smart terminal devices to ultra-fast internet, mobile applications and research into emerging technologies. They are also an essential factor in building a competitive knowledge-based and inclusive information society. The widespread use of innovative technologies underpins and ensures the development of all socio-economic sectors, including education.

Smart Classroom

What is a smart classroom and how does it compare to the classroom of yesterday, today, or the future? Adding smart boards, laptops, tablets, and other similar devices in a classroom do not define a smart classroom. These modern tools are part of the classroom, that when leveraged effectively can factor into greater learning outcomes for all students. The learner’s engagement is the product of the whole classroom environment which encompasses infrastructure,



methodologies, hardware, and software. These aspects working in concert create an optimal learning environment considered the smart classroom. A smart classroom involves all learning stakeholders and the learning ecosystem, and how they interact collaboratively in physical and virtual space.

Northwestern University (2019) defined smart classrooms as “technology enhanced classrooms that foster opportunities for teaching and learning by integrating learning technology, such as computers, specialized software, audience response technology, assistive listening devices, networking, and audio/visual capabilities.”

Importance of Smart Classes

“ E-learning and smart classroom aims at increasing the students learning aptitude as the complete chapters become more attractive to study and hence get better the results of the students. The smart classrooms are the new age group educational product which helps students gain more marks and is a step to the future of education. E-learning is a radical product in the field of education. The Smart classroom knowledge approach provides learners of all ages and walks of life with an in e-step structure and a host of Smart thinking tools that motivate higher levels of understanding. Through the process learners activate and build background knowledge, process information, transform their learning into a product that shows what they know, and reflect on their learning. Prearranged talk and assessment as and for learning are carefully wickers into the process to build a thoughtful context for learning and to advance the thinking of all learners.” (Daisy, Karthi & Balaishwarya, 2017).

Self-concept

Self-concept is an important concept of any child’s development. As children develop a sense of self and interact with and gain experience in the world, their self-concept is affected. The importance of self-concept within educational settings has been discussed by several scholars and has led to the performance of studies examining the role of self-concept in school performance (Oliva 1999).

Self-concept is defined as the value that an individual places on his or her own characteristics, qualities, abilities, and actions (Woolfolk 2001). The self-concept comprises three main elements:

1. The identity of the subject or self-image, referred to as the perceptions of him/herself;
2. Self-esteem, which is related to the value individuals attach to the particular manner in which they see themselves;



3. A behaviour component, reflecting how self concept influences and formulates the individual's behaviour.

The concept of self concept starts in a child from their family atmosphere. Good parent child relationship is based on conducive and healthy atmosphere of a home. The self- concept is not a finished product at birth. But is something which develops and how it develops, what its constituent attitudes are depends upon the family in which the individual is brought up with all the social norms of the group to which the family belongs and the education and experiences of each individual (Kaur, 2012).

Self concept has a great influence on personality development of an adolescent .If the family environment of an adolescent is not healthy it develops poor self concept which leads them towards lack of confidence. Self concept and family relationship has a positive relationship (Lakshmi, 2015).

Self-efficacy

Self-efficacy as an end result is not whatever but a “can do” cognition which mirrors in sense of manipulates over one's environment. It presentations the beliefs of being capable of manipulate hard environmental needs with the aid of manner of taking adaptive movement. Being self-efficacious can help one cope with high quality lifestyles stresses.Regular with concept and studies, self-efficacy makes one feel exceptionally ready to take options and acquire instructional fulfillment(Rashmi, 2018).

Bandura (1986) considered “self-mirrored image because of the reality the maximum unique human functionality, for through this shape of self-referent notion humans have an examine and modify their private questioning and conduct. Those self-critiques embody perception of self-efficacy beliefs in ones abilities to put together and execute the guides of movement required to manipulate conflicting situations. Perceived self-efficacy is a good sized determinant of average ordinary performance. Self-efficacious humans preserve in thoughts themselves capable of appearing a selected hobby that affects patterns and what sort of strain people experience in environment. Self-efficacy in the long run determines how a character behaves, thinks and turns into recommended to be involved with precise roles”

Justification of the Study

There is nothing untouched with the use of technology. It plays a vital role in all spheres of human life. Education sector is also not an exception. Education encounters, in modern times, challenges in all aspects of social, economic & cultural life; the most important of which are over-population, over-knowledge, education philosophy development & the change of teacher's role, the spread of illiteracy, lack of the staff & the technological development & mass media



(Aloraini,2012). The use of ICT is not new to the educational community. The use of older technologies such as the telephone, radio, print media and television has a longer and richer history as instructional tools and has remained embedded in educational system since ages. In today's world, teachers need to be equipped not only with subject expertise and effective teaching methodologies but with the capacity to assist students to meet demand of the emerging knowledge based society with new forms of ICT and need to have the ability to use that technology to enhance the quality of learning. Development of ICT enabled classrooms or smart classrooms and widespread acceptance of ICT may suggest an alternative mode of instruction. Integration of ICT in teaching learning of Social Science is still in infancy stage. The use of ICT in teaching learning of Social Science classrooms has remained almost unexplored. A very few studies have been conducted in this direction and a lot of work needs to be done in this direction.

Objectives of the Study

The present study is designed to attain the following objectives:

1. To study the self-concept among boys and girls of 6th grade students.
2. To study the self-concept among boys and girls of 6th grade students.
3. To study the effect of smart classroom for developing self-concept of boys and girls of 6th grade students.
4. To study the effect of smart classroom for developing self-efficacy of boys and girls of 6th grade students.

Hypotheses of the Study

Based on above stated objectives, following hypotheses were framed:

H1 There is no significant difference in self-concept between boys and girls of 6th grade.

H2 There is no significant difference in self-concept between boys and girls of 6th grade.

H3 There is no significant difference in developing self-concept among boys and girls of 6th grade while teaching in smart classroom.

H4 There is no significant difference in developing self-efficacy among boys and girls of 6th grade while teaching in smart classroom.

Method of the Study

The experimental method was employed in the present study.



Design of the Study

The study was primarily designed among 6th grade boys and girls who were selected by using random sampling technique. Two tests were used in studying interrelationship of two variables. The investigator classified the sample into two equal number boys and girls of 6th grade.

Sample of the Study

The sample of the study was consisting of randomly selected 100 boys and girls of class 6th of Mohali.

Delimitations of the Study

The present study was delimited to the following areas:

1. It was delimited to the schools of Mohali.
2. The present study was delimited to 100 students of 6th grade.

Tools Used

- The Self-concept Questionnaire (Saraswat, 1984) was used to measure self-concept of students. The test-retest reliability coefficients for total self-concept was found to be .91. Experts' opinions were obtained to establish the validity of the inventory. Items of highest agreement and not less than 80% of agreement were selected.
- Self-Efficacy Questionnaire (Bandura, 1997) was used to measure the self-efficacy

Statistical Techniques

The following statistical techniques were employed to analyze the collected data:

1. Descriptive statistics like mean, standard deviation, kurtosis were employed for the calculation of descriptive statistics.
2. t-test was employed to ascertain the mean difference between boys and girls of 6th grade.

Results and Discussion

To investigate the significance of difference between the means, the self-concept scores of boys and girls of 6th grade are arranged into frequency distribution through Table 1.



Table 1: Mean Score, SD's and CR of Self-concept Score of boys and girls

Group	Mean	SD	N	Df	CR
Boys	166.66	10.99	25	48	6.55*
Girls	159.78	13.15	25		

*** Significant at 0.05 level**

Table 1 shows that the mean scores of self-concept between boys and girls as 166.66 and 159.78 respectively and their standard deviation as 10.99 and 13.15 respectively. The CR is 6.55 with df 48 which is significant at 0.05 level of confidence. The boys of 6th grade exhibited higher mean scores on self-concept than the girls. Hence, the first hypothesis which states that ‘there is no significant difference in self-concept between boys and girls of 6th grade’ stands rejected.

- To investigate the significance of difference between the means, the self-efficacy scores of boys and girls of 6th grade are arranged into frequency distribution through Table 2

Table 2: Mean Score, SD's and CR of Self- efficacy Scores of boys and girls

Group	Mean	SD	N	Df	CR
Boys	136.28	6.35	25	48	7.27*
Girls	127.23	8.14	25		

Significant at 0.05 level

Table 2 shows that the mean scores of self-efficacy between boys and girls as 126.28 and 127.23 respectively and their standard deviation as 8.35 and 8.14 respectively. The CR is 7.27 with df 48 which is not significant at both levels of confidence. The boys of 6th grade exhibited higher mean scores on self-concept than the girls. Hence, the second hypothesis which states that ‘there is no significant difference in self-efficacy between boys and girls of 6th grade’ stands rejected.

- To investigate the significance of difference between the means, the self-concept test score of boys and girls of 6th grade performed in smart classroom arranged into frequency distribution through Table 3.



Table 3: Mean Score, SD's and CR of Self-concept test score of boys and girls of 6th grade in smart classroom

Group	Mean	SD	N	Df	CR
Boys	167.80	9.97	25	48	6.81*
Girls	174.12	7.53	25		

- * Significant at 0.05 level

Table 3 shows that the mean scores of self-concept between boys and girls as 167.80 and 174.12 respectively and their standard deviation as 9.97 and 7.53 respectively. The CR is 6.81 with df 48 which is significant at 0.05 level of confidence. The girls of 6th grade exhibited higher mean scores on self-concept when taught in smart classroom than the boys. Hence, the third hypothesis which states that ‘there is no significant difference in developing self-concept among boys and girls of 6th grade while teaching in smart classroom’ stands rejected.

- To investigate the significance of difference between the means, the self-efficacy test score of boys and girls of 6th grade performed in smart classroom arranged into frequency distribution through Table 4.

Table 4: Mean Score, SD's and CR of Self-efficacy test score of boys and girls of 6th grade in smart classroom

Group	Mean	SD	N	Df	CR
Boys	128.23	10.99	25	48	2.81
Girls	129	10.15	25		

Table 4 shows that the mean scores of self-efficacy between boys and girls as 128.23 and 129 respectively and their standard deviation as 10.99 and 10.15 respectively. The CR is 2.81 with df 48 which is not significant at both levels of confidence. Hence, the fourth hypothesis which states that ‘there is no significant difference in self-efficacy between boys and girls of 6th grade’ stands accepted.



Main findings

Following are the main findings of the study:

- The boys and girls of 6th grade have significant difference in self-concept. Hence, the first hypothesis which states that ‘there is no significant difference in self-concept between boys and girls of 6th grade’ stands rejected.
- The boys of 6th grade exhibited higher mean scores on self-concept than the girls in extent of self-efficacy than the boys. Hence, the second hypothesis which states that ‘there is no significant difference in self-efficacy between boys and girls of 6th grade’ stands rejected.
- The girls of 6th grade exhibited higher mean scores on self-concept when taught in smart classroom than the boys. Hence, the third hypothesis which states that ‘there is no significant difference in developing self-concept among boys and girls of 6th grade while teaching in smart classroom’ stands rejected.
- Hence, the fourth hypothesis which states that ‘there is no significant difference in self-efficacy between boys and girls of 6th grade’ stands accepted.

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