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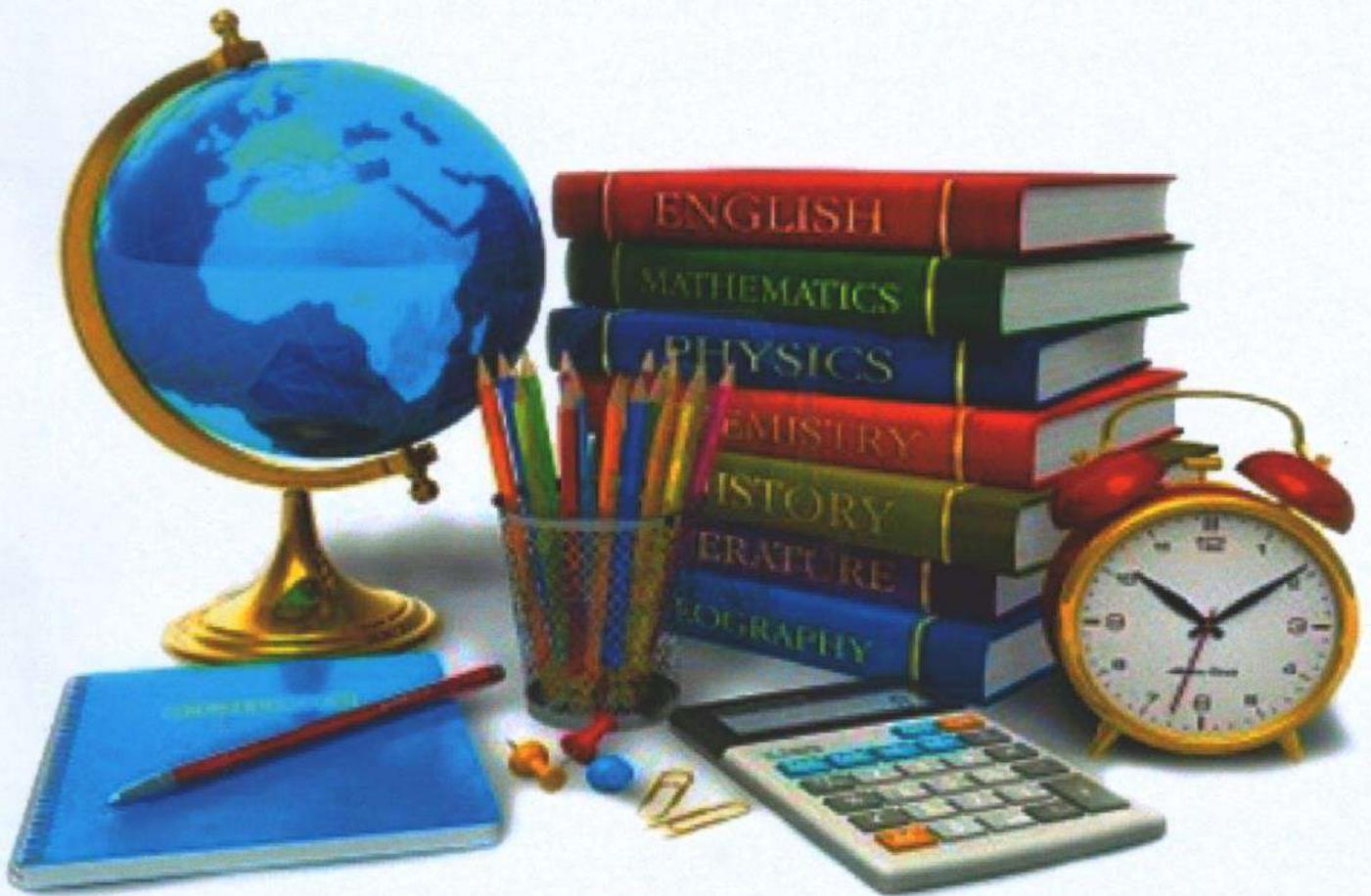
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# ETHNOGRAPHY RESEARCH IN EDUCATION

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## ABSTRACT

Ethnography is a qualitative research method often used in social sciences, particularly in anthropology and sociology. It is often employed for gathering empirical data on human societies/cultures. It helps the research that gathers observations, interviews, and documentary data to produce detailed and comprehensive accounts of different social phenomena. Through the collection of observations, interviews, and documentary data. Reliability in ethnographic research is dependent on the resolution of both external and internal design problems. It offers a qualitative approach with the potential to yield detailed and comprehensive accounts of different social phenomena such as actions, behaviour, interactions, and beliefs. Education ethnography deals with the school and academic culture emphasizing school or university educational experiences and tries to propose a deep knowledge of the education system through describing and explaining the experiences. So the present study focuses on ethnography research in education.

**Keywords:** Ethnography, educational research, academic culture

## Introduction

Educational research has been traditionally dominated by quantitative and experimental conceptions of research. Ethnography is the study of social interaction and cultural groups, whether these groups are defined as societies, communities, organizations or teams (Reeves, S., Peller, J., & Kitto, S. 2013). It involves participation and observation, and which is systematic, comprehensive, and topic-oriented, could provide the opportunity for mutual relation of interaction between ethnographers and sponsors of educational research. With systematic and comprehensive information about the community to be studied in an educational context, ethnographers will be able to test hypotheses in the field of educational research. Ethnography is to provide rich, holistic insights into people's views and actions, as well as nature (that is, sights, sounds) of the location they inhabit, through the collection of detailed observations and interviews (Reeves, S., & Hodges, B. D. 2008).

Ethnographic research has its roots in ethnography which is the in-depth study of people, cultures, habits, and mutual differences. It can be anywhere, including familiar settings. Ethnographic research can take place in many types of communities including formal and informal organizations such as workplaces, urban communities, fan clubs, trade fairs, shopping centres, and social media. This expansion of qualitative research has provided a range of insightful accounts of the factors that influence the development and delivery of medical education across the globe. However, as much of this qualitative work has focused on the collection of interviews (individual interviews, focus groups) to generate evidence, the result has been the creation of a largely perceptual account of what students, faculty, and administrators think about medical education, rather than data of what happens in this domain. Ethnography offers a way to help overcome these limitations of relying solely on interview data. Through the collection of observations, interviews, and

documentary data, which are triangulated (i.e. compared and contrasted with one another) ethnographic research offers a qualitative approach with the potential to yield detailed and comprehensive accounts of different social phenomenon (actions, behaviour, interactions, beliefs). Through its use of in situ observations, ethnographers can 'immerse' themselves in a social setting, thereby generating a rich understanding of social action. Participant observation also provides ethnographers an opportunity to gather empirical insights into social practices which are normally 'hidden' from the public gaze (Reeves,S., Peller,J., Goldman,J., & Kitto,S. 2013). Capable of being put to a variety of different uses, ethnographic research is an important and increasingly accepted tool as a research design for social scientists (Bryman, 2001). Ethnographic research is vital to understanding a certain cultural or social setting (Hobbs, 2011). The process involves the ethnographer closely observe, record, and engage in the daily life of the people in naturally occurring settings (Hammersly and Atkinson, 1995).

#### **Steps of ethnographic method**

- **Selection:** The ethnographic method begins with the selection of culture. The researcher selects the culture/ community or population according to his or her interest.
- **Review of Literature:** The researcher reviews the literature about the culture to get a brief idea and historical sketch of the culture selected for the study.
- **Identification of variables:** The researcher can identify variables that interest him or her as well as the members of the culture and needs to be explored.
- **Entry:** The ethnographer then tries to enter the culture and gain the acceptance of the members of the culture.
- **Cultural Immersion:** Ethnographers live in the culture for months or even years which they have chosen to study. The middle stages of the ethnographic method involve gaining

informants, using them to gain yet more informants in a chaining process.

- **Data Collection:** After gaining the confidence of the respondents, the researcher collects information in form of observational transcripts and interview recordings, and tapings.
- **Development of theory:** After analyzing the data, the researcher formulates theory based on interpretation of the results and reports achieved.

#### **Types of ethnography in research**

Ethnography is one of the most distinctive characteristics of Anthropology. Socio-cultural anthropologists who write ethnographies are termed, ethnographers.

- **Classic/traditional/realist ethnography-** It is also referred to as a "case-study" methodology (Hogan et al. 2009). Its approach was that of in-depth and holistic empirical description, based on the positivist notion of 'detached researcher' attempting to 'objectively' describe their ethnographic experiences.
- **Genre ethnography-** Genre is a literary term that denotes the discourse or rhetoric of different texts. Genres are closely linked to methodological, ethical, and theoretical aspects of fieldwork, the writing of ethnography is considered something to be studied in its own right. Writing ethnography is the importance of building the identity of the author and delivering information that is considered reliable and valid to the reader (Behar 2008).
- **Rapid ethnography-**Rapid ethnographic research is an approach whereby fieldwork is undertaken in a short and well-defined timeline. Typically, anthropological fieldwork took place over many months or years. Rapid ethnography is often conducted in settings where allowances for time and resources are not always available to conduct the research. Particularly in healthcare, ethnographic approaches have been considered especially appropriate to study

the organization of healthcare, professional groups, and the delivery of healthcare (Savage 2000).

- **Feminist ethnography-** It is a textual form, which came to prominence in the 1970s. The decree of this type of ethnography is to redress the sexist imbalance in ethnographic research. The feminist ethnographers seek to achieve an egalitarian research process, depicted by authenticity reciprocity and intersubjectivity, rather than embrace hierarchical and exploitative relationships associated with conventional research.
- **Critical ethnography-** Like feminist ethnography, it critiqued the traditional and natural research approach and identified the political nature of ethnographic research and the substantive subject matter (Hogan et al. 2009). Three conditions of critical ethnography are that the ethnographer must engage in the political aspects of conducting research, the work must be a starting point for social critique and transformation, and the inquiry engages in reflexivity to identify the research's limits (Foley 2002).
- **Online ethnography-** This form of ethnography, sometimes referred to as virtual ethnography or netnography, uses the internet to gather and analyse data such as online texts, interviews, and discussions from interactive chat rooms, forums, and virtual communities. In many respects, this form of ethnography maintains the traditional approach of ethnography through the generation of 'thick description' from an immersion into the life of the online culture or community (Hine 2000).
- **Duoethnography-** Duoethnography is a collaborative research methodology. In this, researchers use their biographies as sites of inquiry to create dialog narratives (Norris et al., 2012).
- **Autoethnography-** This type of ethnography focuses more centrally on the writer's subjective experience and perspective as the object of study (Chang

2008). Autoethnography embraces the self as a narrator and part of the story unlike the naturalist and positivist approaches to traditional ethnographic work.

#### **Ethnography as a methodology**

Ethnography is a research methodology it has a strong foundation in empiricism and naturalism (Hammersley & Atkinson 2007) collectively these approaches emphasize the collection of data in naturalistic social settings. It differs from positivistic inquiry, as ethnographers neither hypothesize about their research nor does the ethnographic method set out to test hypotheses. Instead, ethnographic research is exploratory. This approach means that the ethnographer goes into the field to explore a cultural group and/or explore certain social interactions. Ethnography can be applied to the study of online relationships which overcome the usual time-space restrictions associated with traditional ethnographic work.

#### **Theory and ethnography**

While traditional anthropological accounts were conducted from a positivist theoretical position designed to gather descriptive accounts of 'distant' and 'new' (non-western) cultures, increasingly, ethnography has been influenced by a range of theoretical perspectives, including symbolic interactionism, phenomenology, feminism, constructionism, and postmodernism. Theoretical development as defined by Snow et al. (2003) has been described as having four basic elements as a set of logically interrelated propositions, Openness to subjecting propositions to empirical assessment and falsification, A focus on making empirical events meaningful via conceptualization. Discourse that facilitates explanation of empirical events. In general, theories are used in ethnographies to explain and provide a deeper understanding of findings. Theories are useful for making inferences from data collected at a single site for wider application to other settings. Ethnographic works can be classified as engaging with theory in three

ways: theoretical discovery, theoretical extension, and theoretical refinement.

**Conclusion**

Ethnography has its roots planted in the fields of anthropology and sociology. Ethnography in education is the process of providing holistic and scientific descriptions of educational systems, processes, and phenomena within their specific contexts. Ethnography method is a kind of accurate study method in the procedure of studying cultural, educational, or even health beliefs of the societies. Implementing the ethnography strategy in analyzing people's beliefs is a complicated subject needing conversance of the researcher. The ethnography researcher should observe the execution, interpretation, and expression of the findings terms and be aware that the lack of the mentioned terms can jeopardize the credibility of the research findings. The educational ethnography can clarify about procedures of a school or university through deeply analyzing the beliefs, values, and academic and school educational experiments.

**References**

1. Atkinson, P., Hammersley, M. (1994) Ethnography and participant observation. *Handbook of qualitative research*, Sage, 248–261.
2. Behar, R. (2008). Ethnography in a time of blurred genres. *Anthropology & Humanism*, 32(2), 145 – 155
3. Chang, H. (2008). *Autoethnography as method*. Left Coast Press, Walnut Creek.
4. *Duoethnography: dialogic methods for social, health, and educational research*. Left Coast Press, Walnut Creek, CA 2012
5. Foley, D. E. (2010). Critical ethnography: the reflexive turn. *International Journal of*

- Qualitative Studies in Education*, 15(4), 469-490.
6. Foley, D.E. (2002). Critical ethnography: the reflexive turn. *Int J Qual Stud Educ*, 15(4), 469–490.
7. Hammersley, M. & Atkinson, P. (2007). *Ethnography: principles in practice*. New York: Routledge.
8. Hine, C. (2000). *Virtual ethnography*. Sage, London 2000.
9. Hobbs, D. (2011). *Ethnography in Context*. SAGE Benchmarks in Social Research Methods.
10. Hogan, J., Dolan, P., & Donnelly, P. (2009). *Approaches to qualitative research: theory and its practical application*, 1-18.
11. Reeves, S., Peller, J., Goldman, J., & Kitto, S. (2013). *Ethnography in qualitative educational research*, 35(8), 1365-79.
12. Reeves S., Kuper, A., & Hodges, B. D. (2008). *Qualitative research methodologies: ethnography*. 512-514.
13. Reeves, S. (2008). Planning and implementing a collaborative clinical placement for medical, nursing and allied health students: a qualitative study. *Med Teach*, 30(7), 699–704.
14. Snow, D. A., Morrill, C., & Anderson, L. (2003). Elaborating analytic ethnography: linking fieldwork and theory. *Sage Journals*, 4(2), 181-200
15. Savage, J. (2006). Ethnographic evidence: the value of applied ethnography in healthcare. *J Res Nurs*, 11(5), 383–393.
16. <https://www.formpl.us/blog/ethnographic-research>.
17. <https://www.tandfonline.com/doi/full/10.3109/0142159X.2013.804977>

# EFFECTIVENESS OF SMART CLASSROOM TECHNOLOGY AMONG HIGH SCHOOL STUDENTS

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## ABSTRACT

Smart Classroom Technology has been designed for the efficient and flexible integration of a variety of teaching technologies and which takes account of a variety of teaching styles. This study analyzes the effectiveness of Smart Classroom Technology among high school students. An experimental research method was adopted for the study. The researcher adopts the equivalent group design for the study. A total number of 80 students were selected as a sample by using the purposive sampling technique. Smart classroom technology and achievement tests in Science (ATS) were the tools used to collect the data for this study. Mean, Standard Deviation, 't' test, and 'F' test were the statistical techniques that were employed to analyze the data. The result indicates that the effectiveness of smart classroom technology is higher than the traditional method.

**Keywords:-** Smart classroom, technology, achievement test, science and students

## Introduction

Technology for information in this century has grown unpredictably. As well as computer as one of the information technology has grown through its infrastructure and function. With the existence of the internet, we feel conduct a tour around the world that as life as to make a trip manifestly although only reside at home. We have never conceived to have a long walk around the world, getting the latest information about political growth, education, art, culture, music, film until splashy pornography.

## Need for the study

With the introduction of web-based education at the school level, the children and youngsters will grow as "Computer Kids". The exposure will get increased due to which the knowledge level will get improved. In short, we can say that WBL is a platform for independent, convenient access, cost-saving, easily updated content, and with emerging technologies, it can be made are effective. Web-based learning adds human support through the online tutor, thereby extending the scope of what can be

effectively taught into many new subject areas. In addition, more supporting material can be made available through website links to other documents and systems. With all these important features incorporated in the web-based learning system, it will enhance the quality of education in our country at all levels i.e., Primary, Secondary, Higher Secondary, and Higher education. Numerous studies have been done concerning the development of language learners' four skills (listening, speaking, reading, and writing). The present study attempts to examine the effectiveness of smart classroom technology on achievement in science among high school students.

## Scope of the study

The scope of this study is restricted to Science students at the high school level prescribed by the Board of Secondary Education, Government of Tamilnadu. This study is primarily concerned about how much that Smart classroom technology influences achievement in Science.

## Objectives of the study

1. To study the effectiveness of Smart Classroom Technology on student's

achievement in Science at the high school level.

2. To find out whether there is any significant difference between the Pre-test and Post-test mean scores of the achievement in Science of the experimental group and the control group.
3. To find out whether there is any significant difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to the locality of the student, study habit, parent's educational qualification, and parent's annual income.

### **Hypotheses of the study**

1. There is no significant difference between the Pre-test and Post-test mean scores of the achievement in Science of the experimental group and the control group.
2. There is no significant difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to the locality of the student.
3. There is no significant difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to study habits.
4. There is no significant difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to parent's educational qualifications.
5. There is no significant difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to parent's annual income.

### **Research procedure**

In the present study, the Experimental research method was adopted for its suitability and accuracy. Two groups of students, namely the experimental and control group were taken for the study. The control group was taught through a conventional method of teaching and smart classroom technology was used for teaching the experimental group. To find-out, the difference in the effectiveness of learning through smart classroom technology and conventional method, the researcher adopts the two groups Pre-test: Treatment: Post-test experimental design (Equivalent group design).

### **Tools used**

The researcher has selected the following tools and used them to collect the data for this study.

1. Smart classroom technology
2. Achievement Test in Science (ATS)

The personal information of the students was also collected.

### **Sample of the experiment**

The sample selected for this experiment was the purposive sample. The 40 students studying IX standard in A.U. Municipal Higher Secondary School, Sivakasi, Virdhunagar District were treated as an experimental group and the 40 students studying IX standard in S.R. Boys Higher Secondary School, Thiruthangal, Sivakasi Educational District were treated as the control group.

### **Statistical techniques used in the study**

The data obtained were then analysed by using appropriate statistical techniques such as mean, standard deviation, t-test, and F-test.

### **Analysis and interpretation of data**

Table 1: Test of significance of difference between the Pre-test and Post-test mean scores of the achievement in Science of the control group and the experimental group

Pre-Test						
Group	N	Mean	S.D	df	t-value	Level of Significant
Control	40	15.5432	4.2136	78	0.5507	NS
Experimental	40	16.1342	5.3214			

Ns-Not Significant

It is inferred from the above table that the computed value of ‘t’ (0.5507) between the control group and experimental group with respect to their Pre-test is less than the critical values of 2.02 at 0.05 level of significance. Hence, it is not significant. Consequently, the null hypothesis is not to be rejected and it can be said that, there is no significant difference between the Pre-test mean scores of the achievement in Science of the control group and the experimental group.

Post-test						
Group	N	Mean	S.D	df	t-value	Level of Significance
Control	40	15.8439	4.5467	78	6.6130*	0.05
Experimental	40	21.8743	3.5481			

**Significant at 0.05 levels**

It is inferred from the above table that the computed value of ‘t’ (6.6130) between the control group and experimental group with respect to their Post-test is greater than the critical values of 2.02 at 0.05 level of significance. Hence, it is significant. Consequently, the null hypothesis is to be rejected and it can be said that, there is a significant difference between the Post-test mean scores of the achievement in Science of control group and experimental group. It is also inferred that the effectiveness of smart classroom technology is higher than traditional method.

**Table 2: Test of significance of difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to locality of the student**

Locality of the Student	N	Mean	S.D	df	t-value	Level of Significance
Rural	18	25.3211	4.8792	38	2.3463*	0.05
Urban	22	28.6752	3.9824			

**\* Significant at 0.05 level**

The above table shows that the computed value of ‘t’ (2.3463) is greater than the critical values of 2.02 at 0.05 level of significance. Hence, it is significant. Consequently, the null hypothesis is to be rejected and it can be said that, there is a significant difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to locality of the student. It is also inferred that the urban students have achieved more than

the rural students.

**Table 3: Test of significance of difference**

**between the Post-test mean scores of the achievement in Science of the experimental group with respect to study habit**

Study Habit	N	Mean	S.D	df	t-value	Level of Significance
Self-study	21	29.5672	3.1022	38	2.3662*	0.05
Group-study	19	26.4762	4.8699			

\* **Significant at 0.05 level**

The above table shows that the computed value of ‘t’ (2.3662) is greater than the critical values of 2.02 at 0.05 level of significance. Hence, it is significant. Consequently, the null hypothesis is to be rejected and it can be said that, there is a significant difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to study habit. It is also inferred that the students who are doing self-study have achieved more than the students who are doing group study.

**Table 4: Test of significance of difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to parent’s educational qualification**

Source of Variation	Sum of Squares	df	Mean Variance Squares	F-Value	Level of Significance
Between Group	21.548	2	10.774	0.4430	NS
Within Group	899.764	37	24.3179		

**NS – Not Significant**

The above table shows that the computed value of ‘F’ (0.4430) is less than the critical values of 3.23 at 0.05 level of significance. Hence, it is not significant. Consequently, the null hypothesis is not to be rejected and it can be said that, there is no significant difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to parent’s educational qualification.

**Table 5: Test of significance of difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to parent’s annual income**

Source of Variation	Sum of Squares	df	Mean Variance Squares	F-Value	Level of Significance
Between Group	50.633	2	25.3165	1.0847	NS
Within Group	863.5623	37	23.3395		

**NS – Not Significant**

The above table shows that the computed value of ‘F’ (1.0847) is less than the critical values of

3.23 at 0.05 level of significance. Hence, it is not significant. Consequently, the null hypothesis is not to be rejected and it can be said that, there is no significant difference between the Post-test mean scores of the achievement in Science of the experimental group with respect to parent's annual income.

### **Conclusion**

Smart classroom technology is a suitable, flexible, and effective technique for effective teaching. It is an alternative to face-to-face teaching that is now being extended as an application to higher education. Much effort is undertaken to provide multimedia-rich, attractive content to learners. Computer-mediated technologies deliver more than earlier technologies. It is an age of information and we find human lives dominated by technologies lead by it. It is very difficult to say that this information access has affected the fundamentals of pedagogy.

### **References**

1. Aggarwal, Y.P. (2002). *Statistical Methods: Concepts, Application and Computation*. Sterling Publishers private limited.
2. Best, W. John (1975). *Research in Education*. Prentice hall of India private limited.
3. Das, R.C. (2004). *Science teaching in schools*. Sterling Publications Private Limited.
4. Ediger & Marlow. (2004). Science Learning and the student. *The Educational Review*, 47(9).
5. Kothari, C.R. (1990). *Research Methodology- Methods and Techniques (2<sup>nd</sup> ed.)*. VishwaPrakashan Publishers.
6. Lokesh Koul. (1990). *Methodology of Educational Research*. Vikas Publishing house Private Limited.
7. Mouly J. Geroge (1964). *The Science of Educational Research*. Eurasia Publishinghouse Private Limited.
8. Sidhu, K.S. (2001). *Methodology of Research in Education*. Sterling Publishers Private Limited.
9. Yadav, M.S. (2004). *Teaching of Science*. Anmol Publication Private Limited

# REVALIDATION OF TROMSO SOCIAL INTELLIGENCE SCALE (TSIS) FOR HIGHER SECONDARY STUDENTS

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## ABSTRACT

Tromso Social Intelligence Scale (TSIS) was a seven-point Likert-type scale developed and standardized for analysing the social intelligence level in the University of Tromsø by Silvera, Martinussen, and Dahl. In the current study, the investigators reconstructed the scale into a five-point scale, and the pilot study was conducted among 30 Higher Secondary students and revalidated. The reliability of the study was re-established through the test-retest method.

**Key words:** social intelligence. Social intelligence test, higher secondary students, Tromso scale, social skills, social awareness

## Introduction

Social intelligence is the primary building block of developing and maintaining social relationships. It is the capacity to get along with others and navigate complex social relationships and environments. Social intelligence is an individual's competence to understand one's environment and react appropriately for socially successful conduct. It plays a crucial role in an individual's socialization process and professional development. It paves the way for cultural intelligence, social reform, and social activities that are intended to improve human well-being. Everyone likes persons with social intelligence, never seems uncomfortable in even the most unpleasant social situations, and seems to be aware of even the most minor conversational signs. It's often much easier to imagine someone who truly struggles in social situations. While being a refined and capable person, a person constantly seems to get the worst social problems. Despite our subjective feelings that social intelligence is a natural and influential individual difference, research has repeatedly failed to demonstrate the social intelligence

construct's validity (e.g., Sternberg & Smith, 1985; Walker & Foley, 1973).

## Tromso Social Intelligence Scale

Tromso Social Intelligence Scale (TSIS) was constructed and standardised in the University of Tromsø by Silvera, Martinussen and Dahl (2001). TSIS was a seven point Likert type scale having 21 statements. Among this 21 statements, 10 are positively polar and 11 are negatively polar. It has three sub dimensions called social information processing, social skills and social awareness. For each dimensions, there are seven statements present and possible score for the scale was between 21 and 147. The Cronbach's Alpha internal consistency for social information process, social skills and social awareness were found to be 0.81, 0.86 and 0.79 respectively.

The three dimensions of social intelligence are

### A. Social information processing (SIP)

Ability to understand the verbal and nonverbal messages are measured under this subscale.

**B. Social Skills (SS)**

Basic communication skills are measured under this subscale. Active listening, acting boldly, establishing, maintaining and breaking up of a relationship are the various basic communication skills established under this subscale.

**C. Social Awareness (SA)**

Behaviour of individuals with respect to the situation, place and time are established and measured under this sub dimension.

**Items as per the sub divisions**

The various items in TSIS as per the sub dimensions are given in the table 1. There are three sub divisions for the test items and each sub division contains seven items.

**Table 1: Items in TSIS**

Sub Dimensions	Items
Social Information Processing	1,3,6,9,14,17,19
Social Skills	4,7,10,12,15,18,20
Social Awareness	2,5,8,11,13,16,21

**Revalidation of TSIS**

The TSIS had already been validated by the developers however the current study is among Higher Secondary Level students and it should be evaluated to make it sure that the items are according to the level of the sample. The content validity of the scale re-established by the experts in the field. The reliability of the scale was re-established by test retest method. The TSIS was administrated to a set of 30 Higher Secondary Level students. After a week the re- test was conducted to the same set of students and the correlation between the two sets of scores was found to be point 0.8101. Thus the reliability of the test was re-established for higher secondary level students.

**Pilot study**

The feasibility to conduct the study among Higher Secondary Level students should be established for successful data collection. Thus the test was conducted to 30 Higher Secondary Level students and the difficulties faced by the sample were discussed. According to the views of samples and experts the 7 point scale changed to 5 point scale by the investigator and again established the reliability of the test by test retest method. After that also the reliability was found to be point 0.7983 for the overall test.

**Scoring procedure for revalidated TSIS**

The revalidated test also contains 21 items in the three sub domains as like in the original scale. But the revalidated scale is a five point scale with the responses Strongly agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree(SD). Positively polar items are scored in the order 5,4,3 2 and 1 for the responses Strongly agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree(SD) respectively while negatively polar items was scored in the reverse order.

**Positive and negative items in TSIS**

The positive and negative items in the TSIS are represented in the table 2 Among the 21 items, 10 are positive and 11 are negative in nature.

**Table 2 : Positive and Negative Items in the TSIS**

Item	Positive	Negative	Total
	1,3,6,7,9,10,14,17,18,19	2,4,5,8,11,12,13,15,16,20,21	
Total	10	11	21

**Results and discussion**

The TSIS was reconstructed and revalidated according to the standard techniques for the

standardisation of a Likert type scale with five point rating scale. It contains 21 items among 11 of them are negatively polar and the rest were positively polar. The maximum score which can be obtained by a sample is 105 and the minimum score is 21. If the sample is 100% neutral to the statement, the score will be 63.

If a sample gains a score below 63, then it means that the sample is moderately or less social intelligent while a score which is higher than 63 shows that the sample is having high level of social intelligence. As the score is as minimum to reaches 21, the sample needs adequate attention and may be requested for an intervention from a professional for betterment.

### Conclusion

In a society where social relationships are crucial component of everyday life, having enduring and enjoyable social ties not only promotes happiness but also better health. Technology is a boon when it is used productively. In the age of digital natives, the creative usage of mobile phones can never be ruled out. These things changed the society to focus on individuals rather than on social values and social moments. During the contemporary scenario when the entire world faces an unprecedented standstill, the situation became worst and individual oriented. Better social intelligence is required for human being as a social animal, but the level of social intelligence among the new generation is not at all countable in a positive direction. This study highlights towards the issue and trying to get a solution for finding the level of social intelligence among adolescent students.

### References

1. Frey, B. B. (2018). The SAGE encyclopedia of educational research, measurement, and evaluation. SAGE Publications.

2. Silvera, D. H., Martinussen, M., & Dahl, T. I. (2001). Tromso social intelligence scale. *PsycTESTS Dataset*. <https://doi.org/10.1037/t25706-000>
3. Silvera, D., Martinussen, M., & Dahl, T. I. (2001). The tromso social intelligence scale, a self-report measure of social intelligence. *Scandinavian Journal of Psychology*, 42(4), 313-319. <https://doi.org/10.1111/1467-9450.00242>
4. Sreeja, P., & Nalinilatha, M. (2017). A study on relationship between social intelligence and academic achievement of higher secondary students. *International Journal of Research*, 5(6), 476-488. <https://doi.org/10.29121/granthaalayah.v5.i6.2017.2059>
5. Srivastava, M., Mathur, A., Anshu, & Chacko, N. (2016). Impact of social intelligence on peer relationships among adolescents: a gender analysis. *International Journal of Recent Scientific Research*, 7(8), 12791-12794.
6. Sternberg, R. J., & Li, A. S. (2020). Social intelligence: What it is and why we need it more than ever before. *Social Intelligence and Non-verbal Communication*, 1-20. [https://doi.org/10.1007/978-3-030-34964-6\\_1](https://doi.org/10.1007/978-3-030-34964-6_1)
7. Sternberg, R. J., & Smith, C. (1985). Social intelligence and decoding skills in nonverbal communication. *Social Cognition*, 3(2), 168-192. <https://doi.org/10.1521/soco.1985.3.2.168>
8. Walker, R. E., & Foley, J. M. (1973). Social intelligence: Its history and measurement. *Psychological Reports*, 33(3), 839-864. <https://doi.org/10.2466/pr0.1973.33.3.839>

# INNOVATIVE BRAIN STRATEGIES IN EDUCATION FOR EFFECTIVE LEARNING

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## ABSTRACT

Teaching is the process of inculcating moral values, abilities, skills by an experienced person to an inexperienced person to ensure positive change in valuable behaviour in developing oneself and society. It includes two main components sending and receiving information. Teachers are trying their best to impart knowledge as the way they can understand it. The use of innovative methods in educational institutions has the potential to improve education and empower people, strengthen governance, and galvanize the effort to achieve the human development goal for the country. This paper aims to suggest practical, innovative teaching methods to impart knowledge to the students.

**Keywords:** Teaching, project-based learning, role play

## Introduction

Education is an important role in the growth of the students. Innovation and creativity in teaching are essential for both the students and teachers. ( Kalyani, Rajasekaran,2018). Students in colleges and universities are diverse in different aspects such as culture, religion, family background, region, and schools where they have been studying. Due to such diversities, students' learning needs are also becoming increasingly diverse. A new challenge is to look for teaching ways that can address their needs. To respond to such diverse needs of the students at higher educational levels, different innovative teaching and differentiated strategies and methods are used by the teachers in their classes. Since the last three decades, innovative teaching methods to deal with the diversity of today's students are widely used worldwide. New teaching methodology using innovative techniques can enhance the teaching-learning process. Students get benefitted using these new teaching and evaluation strategies. These are combined with methods that promote active teaching techniques that help teachers develop their students' learning abilities.

## Innovative teaching

The innovative teaching can be broadly categorised into three types of practice as follows

- Student-centred pedagogies
- Extending learning beyond the classroom to include knowledge building and problem-solving in today's world
- ICT is the supportive learning goal, which makes teaching effective.

## Innovative strategies in education

The few innovative strategies in education for effective learning are Inquiry-based learning, project-based learning and role play

## Inquiry-Based learning

Inquiry-based learning is an approach to learning that emphasizes the student's role in the learning process. Rather than telling students what they need to know, students are encouraged to explore the material, ask questions, and share ideas.

Inquiry-based learning uses different approaches to learning, including small-group discussion and guided learning. Instead of memorizing facts and material, students learn by doing. This allows them to build knowledge through exploration, experience,

and discussion. Inquiry-based learning is one of the most powerful teaching strategies in the classroom because research tells us that students learn best when they construct their meaning. Inquiry-based learning triggers student curiosity. Teachers act as facilitators during the inquiry-based learning process.

#### **Benefits of Inquiry-based learning**

- Enhances learning experiences for children
- Teaches skills needed for all areas of learning
- Fosters curiosity in students
- Deepens students' understanding of topics
- Allows students to take ownership of their learning
- Increases engagement with the material
- Creates a love of learning.

Inquiry-based learning allows students to "learn deeper and wider than ever before" In traditional teaching, students are less likely to ask questions and are expected to listen and answer questions posed by the teacher. Inquiry-based learning allows students to pose the questions and research and convert the information into useful knowledge, thus ramping up student engagement.

#### **Project-Based learning**

Research confirms that project-based learning (PBL) is an effective and enjoyable way to learn. PBL also develops deeper learning competencies required for success in college, career, and civic life. Project-based learning uses real-world scenarios, challenges, and problems to engage students in critical thinking, problem-solving, teamwork, and self-management. It can build decision-making skills, foster independence while also enhancing collaborative work skills, challenge students' creativity, cultivate

creative thinking skills, and improve problem-solving skills.

The project-based learning approach creates a "constructivist" learning environment in which students construct their knowledge. PBL teaches students not just content, but also essential skills in ways students have to function like adults in our society. These skills include communication and presentation skills, organization and time management skills, research and inquiry skills, self-assessment and reflection skills, group participation and leadership skills, and critical thinking. Performance is assessed on an individual basis and considers the quality of the product produced, the depth of content understanding demonstrated, and the contributions made to the ongoing process of project realization. PBL allows students to reflect upon their ideas and opinions and make decisions that affect project outcomes and the learning process in general. The final product results in high quality, authentic products and presentations.

#### **Benefits of Project-based learning**

- Students exposed to project-based learning are given the opportunity to nurture their talents and passions.
- It encourages preschooler to use their voice when problemsolving.
- It promotes the act of questioning concepts and materials.
- Project-based learning is designed to foster a love of learning for children of all ages

#### **Role play**

Teaching through role-playing is a great way to make children step out of their comfort zone and develop their interpersonal skills. This method comes in handy, especially when teaching literature, history or current events. The role-playing approach will help a student understand how the academic material will be relevant to his everyday tasks. Role-playing is most effective for students of almost any age

group. It is a very flexible teaching approach because it requires no special tools, technology or environments. This technique allows students to explore realistic situations by interacting with other people in a managed way in order to develop experience and trial different strategies in a supported environment. Depending on the intention of the activity, participants might be playing a role similar to their own (or their likely one in the future) or could play the opposite part of the conversation or interaction. Both options provide the possibility of significant learning, with the former allowing experience to be gained and the latter encouraging the student to understand the situation from the 'opposite' point of view.

#### **Benefits of role play**

- Students can transcend and think beyond the confines of the classroom setting.
- Students see the relevance of the content for handling real world situations.
- The instructor and students receive immediate feedback with regard to student's understanding of the content.
- Students engage in higher order thinking and learn content in a deeper way.
- Instructors can create useful scenarios when setting the parameters of the role play when real scenarios or contexts might not be readily available.
- It encourages students to express ideas and feeling in a relaxed environment.

#### **Conclusion**

Any teaching method without destroying the objective could be considered an innovative method of teaching. The researchers believe that the core objective of education is passing on the information or knowledge to the students' minds. There are several ways that teachers can bypass the system and offer

students the tools and experiences that spur an innovative mindset.

#### **References:**

1. Albert, R. S., Runco, M. A. (1999). A history of research on creativity. *In Handbook of creativity*, 2,16-31.
2. Cottrell, S. (2001). *Teaching study skills and supporting learning*. Palgrave Macmillan.
3. Anderson, R. T., & Neri, L. (2012). *Reliability-centered maintenance: management and engineering methods*: Springer Science & Business Media.
4. [https://www.researchgate.net/publication/325090377\\_Innovative\\_Teaching\\_and\\_Learning](https://www.researchgate.net/publication/325090377_Innovative_Teaching_and_Learning)

## ACTION RESEARCH

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### ABSTRACT

Action research is a philosophy and methodology of research generally applied in the social sciences. It seeks transformative change through the simultaneous process of taking action and doing research linked together by critical reflection. Action research involves methodical observation, data collection for purposes of reflection, decision-making, and development of efficient strategies in the classrooms. Action research consists of phases including selecting an area of focus, data collection, data organization, analysis and interpretation of data, the study of professional literature, and taking informed action. Basically an action research is a spiral process that includes problem investigation, taking action & fact-finding about the result of action. It enables a teacher to adopt/craft most appropriate strategy within its own teaching environment.

**Keywords:** Action research, strategies, teaching environment

### Introduction

Action research is a process of practitioners checking their work to confirm if it is as good as they want. It is a systematic inquiry conducted by teachers, administrators, counsellors, or others with a vested interest in the teaching and learning process or environment to gather information about how their particular schools operate, how they teach, and how their students learn. As action research is done by, the practitioner is often referred to as practitioner-based research or even self-reflecting practice as it entails checking the effectiveness of work done. Educators who engage in action research will generate new knowledge and beliefs based on their experiences in the classroom.

### The Action Research Process

Educational action research can be engaged in by a single teacher, by a group of colleagues who share an interest in a common problem, or by the school's entire faculty. Whatever the scenario, action research always involves the same seven-step process. These seven steps, which become an endless cycle for the inquiring teacher, are the following:

#### Selecting a Focus

The action research process begins with serious reflection directed toward identifying

a topic or topics worthy of a busy teacher's time. Considering the incredible demands on today's classroom teachers, no activity is worth doing unless it promises to make the central part of a teacher's work more successful and satisfying. Thus, selecting a focus, the first step in the process is vitally important. Setting a focus begins with the teacher researcher or the team of action researchers asking:

What element(s) of our practice or what aspect of student learning do we wish to investigate?

#### Clarifying theories

The second step involves identifying the researchers' values, beliefs, and theoretical perspectives relating to their focus. For example, suppose teachers are concerned about increasing responsible classroom behavior. In that case, it will be helpful for them to begin by clarifying which approaches using punishment and rewards, allowing students to experience the natural consequences of their behaviors, or some other strategy they feel will work best in helping students acquire responsible classroom behavior habits.

#### Identifying Research Questions

Once a focus area has been selected and the researcher's perspectives and beliefs about that focus have been clarified, the next step is to

generate a set of personally meaningful research questions to guide the inquiry.

### **Collecting data**

Professional educators always want their instructional decisions to be based on the best possible data. Action researchers can accomplish this by making sure that the data used to justify their actions are valid (meaning the information represents what the researchers say it does) and reliable (meaning the researchers are confident about the accuracy of their data). Lastly, before data are used to make teaching decisions, teachers must be convinced that the lessons drawn from the data align with any unique characteristics of their classroom or school.

To ensure reasonable validity and reliability, action researchers should avoid relying on any single source of data. Most teacher researchers use a process called triangulation to enhance the validity and reliability of their findings. Triangulation means using multiple independent sources of data to answer one's questions. Triangulation is like studying an object located inside a box by viewing it through various windows cut into the sides of the box. Observing a phenomenon through multiple "windows" can help a single researcher compare and contrast what is being seen through various lenses.

### **Analyzing data**

Although data analysis often brings to mind complex statistical calculations, this is rarely the case for the action researcher. Several relatively user-friendly procedures can help a practitioner identify the trends and patterns in action research data. During this portion of the seven-step process, teacher researchers will methodically sort, sift, rank, and examine their data to answer two generic questions:

- What do these data tell the story?
- Why did the story play itself out this way?

By answering these two questions, the teacher researcher can acquire a better understanding of the phenomenon under investigation and

produce grounded theory regarding what might be done to improve the situation.

### **Reporting results**

It is often said that teaching is a lonely endeavour. It is doubly sad that so many teachers are left alone in their classrooms to reinvent the wheel daily. The loneliness of teaching is unfortunate not only because of its inefficiency but also because when dealing with complex problems, the wisdom of several minds is inevitably better than one.

### **Taking informed action**

Taking informed action, or "action planning," the last step in the action research process, is very familiar to most teachers. When teachers write lesson plans or develop academic programs, they are engaged in the action planning process. What makes action planning particularly satisfying for the teacher researcher is that with each piece of data uncovered (about teaching or student learning) the educator will feel greater confidence in the wisdom of the next steps. Although all teaching can be classified as trial and error, action researchers find that the research process liberates them from continuously repeating past mistakes. More important, with each refinement of practice, action researchers gain valid and reliable data on their developing virtuosity.

### **Purpose of action research**

The purposes of action research in school and classroom fall broadly into five categories (Cohen, 1989).

- First- It is a mean of remedying problems diagnosed in specific situations, or improving in some way a given set of circumstances.
- Second-it is a mean of in-service training, thereby equipping the teacher with new skills and methods, sharpening his analytical powers and heightening his self-awareness.
- Third- it is a mean of injecting additional or innovatory approaches to teaching and

learning into an on going system which normally inhibits innovation and change.

- Fourth- it is a mean of improving the normally poor communication between the practicing teacher and academic researcher.
- Fifth- it is a mean of providing a preferable alternative to more subjective approach to problem solving in the classroom.

### **Connecting theories to practice**

Action research can help bridge the gap between the theories and practice by creating a two-way flow of information. On one hand, educators can use research findings to inform best practices and to do better understand what is happening in their classrooms. On the other hand data collected and analysed by practicing teachers in their own classrooms can be used to inform theories and research related to best practices.

### **Improvement of educational practice**

Teachers can reflect their own practices, they use the information they collect and phenomena they observe as a means of facilitating informed, practical decision making. The strength of the action research is to reflect and collaborate which can ultimately lead to improvements in educational practices. Systematic reflection in the form of action research can provide the stimulus for changing and improving practice. Collaborative action research is an ideal mechanism for engaging teachers, administrators and support personnel in systemic, self-initiated school improvement. This concept is also known as “school wide action research”. By improving schools and empowering educators this process will lead to better instruction, better learning and more productive students coming out of our classrooms.

Teacher empowerment and intellectual engagement are important to enhance and promote notion to teacher’s leadership in schools. Through action research teachers are allowed, encouraged and take risk and make changes to their instructional practices. Teacher takes on different roles. The locus of control is in essence of returns to the classroom level, thereby enhancing the effectiveness of schools and promoting school improvement.

### **Professional growth**

Action research has been shown to serve as a means of improving teacher’s problem solving skills and their attitudes toward professional development and school change as well as increasing their confidence and professional self- esteem. The process of action research can be used to customise a teacher’s professional development allowing for a much more meaningful approach to professional growth. This approach permits teachers to investigate their own practice and helps in their professional growth and development.

### **Advantages of action research**

Action research can be carried out in a teaching organization to allow teachers to recognize their weaknesses and improve on them to increase student experience.

It will also aid in improving the effectiveness of teaching to make teachers efficient in imparting knowledge and development to the students.

It also aids in the building of professional culture in the profession of the practitioners. Action research can sharpen the reasoning abilities of the practitioner and aids them in the development of measures of self-monitoring to augment performance effectiveness.

### **Disadvantages of action research**

- There is a risk in the benefits of action research in this case on the student selection

criteria, objectivity in selecting the participants by the practitioner.

- This reduces the ability of action research to meet the critical needs as there may not be an accurate picture of the situation.
- It is that the results in action research cannot be generalized.

**Conclusion**

Action research is essentially the scientific method of teaching. Teachers use action research to figure out exactly what works in the classroom and what does not. It is widely used in education, especially by teachers who use it to improve their teaching. Teachers from all over the world can employ action research as a part of their teaching and research. It is widely believed that action research is extremely suitable for education as its main purpose is to help teachers as researchers solve their teaching problems. Action research is an excellent approach to use in educational system. Action research conducted in a classroom provides an accurate insight into pattern of student response and teaching strategies over the entire teaching session, not just a matter of days or two. It seeks to answer questions and solve problems that arise from the daily life of the classroom and to put findings into immediate practice

**References:**

1. Dick, B. (2006). Action Research Literature. *Action Research*, 4(4), 439-458.
2. Dick, B. (2004). Action research literature: themes and trends. *Action Research*, 2(4), 425- 444.
3. Fine, & Michelle (2018). *Just research in contentious times: widening the methodological imagination*. Teacher College Press.
4. "Practitioner Research". Social Publishers Foundation. Retrieved 2019-05-17.
5. Reason, Peter, Bradbury, & Hilary, (2001). *Handbook of action research: participative inquiry and practice*. London:Sage. ISBN 9780761966456. OCL C 50303325.

Action Research | Tutorials". Car-tutorials. Retrieved 2019-05-17.

7. <https://core.ac.uk/download/pdf/228447953.pdf>
8. [https://uk.sagepub.com/sites/default/files/upm-assets/104561\\_book\\_item\\_104561.pdf](https://uk.sagepub.com/sites/default/files/upm-assets/104561_book_item_104561.pdf)

# RELEVANCE OF CURRENT TECHNOLOGY IN EDUCATIONAL RESEARCH

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## ABSTRACT

Technology plays a vital role in every sphere of life, and education is no exception. The advent of technology has deeply impacted the educational scene. It has made learning easy and exciting. It is involved improved teaching and learning processes to better student outcomes, increased student engagement and seamless communication with teachers and parents. Technology can reduce the tremendous effort given by students to gather several printed books and journals for acquiring knowledge and increase students' focus on a more critical knowledge gathering process. It motivates, differentiates, and allow students to achieve and excel in ways that they have never been able to before. This paper is to study the relevance of current technology in education.

**Keywords:** Technology, education, teaching, ICT

### Introduction

Technology plays a significant role in the development of the educational process. Rapid development of information technologies has led to the birth of information societies and made it necessary for societies to follow it and adjust themselves to new technological advances (Keser, H., & Deniz Ozcan, D., 2011). Educational technology is used to increase the efficiency of education in educational settings. Computers and related technology are viewed as the future of teaching and learning and also as a powerful technological machine to promote development of learning. Computers are able to create a more attractive and effective learning environment. ICTs are making dynamic changes in society. They are influencing all aspects of life. The influences are felt more and more at schools. It provide both students and teachers with more opportunities in adapting learning and teaching to individual needs, society is, forcing schools aptly respond to this technical innovation. ICTs are making dynamic changes in society. They are influencing all aspects of life. The influences are felt more and more at schools. Because ICTs provide

both students and teachers with more opportunities in adapting learning and teaching to individual needs, society is, forcing schools aptly respond to this technical innovation

### Importance of technology in education

The role of technology in the field of education is four-fold: it is included as a part of the curriculum, as an instructional delivery the system, as a means of aiding instructions and also as a tool to enhance the entire learning process. Education has gone from passive and reactive to interactive and aggressive. In the former, education or training is used to help workers do things differently than they did before. In the latter, education is geared towards creating curiosity in the minds of students. In either case, the use of technology can help students understand and retain concepts better. Learning is now becoming more virtual. It is possible by modern technology. It is aiding us to develop our better skills. Today's learning environment is quite different. Students are equipped with the best education promoted by a sufficient adoption of technological innovation; providing a suitable platform is integral in an education system. Technology

is the most accessible access for the resources people rely on technology in their everyday lives. Education is all about inquiring about the proper knowledge.

#### **Factors affecting technology in education**

The enormous challenge teachers are facing in our society is due to the rapid expansion of knowledge. The modern technologies are demanding that teachers learn how to use these technologies in their teaching. Hence these new technologies increase the teachers' training needs. Gressard and Loyd (1985) asserted that teacher's attitudes toward computers are a key factor in the successful implementation of ICT in education. They pointed out that teachers do not always have positive attitudes towards computers and their poor attitudes may lead to a failure of computer-based projects. The technology barriers in education are lack of time, access, resources, expertise and support. Another obstacle is given by Butler and Sellbom (2002) and Chizmar & Williams (2001) is reliability. Reliability included hardware failures, incompatible software between home and school, poor or slow internet connectivity and out of date software which is primarily available at school. At the same time, the students/educators have more up-to-date software at home.

#### **Role of Information and Communication Technology (ICT)**

Information and communication technology (ICT) is a boom for students today as it has a significant and positive effect on student achievement. ICT includes television, computers, the internet etc., when used appropriately, it can strengthen, expand and raise the quality of education. The use of computers and the internet for enhancing the quality of education by making learning more relevant to life has been seen as an ideal by educational institutions. The citizens of tomorrow who are our students now will live in the age of electronic media. ICT can boost

creativity and problem-solving capability in students.

#### **Advantages of technology in educational research**

- **Easily access to learning material-** E-books, revision guides and past examination papers available on World Wide Web and students can take advantage of these to improve their knowledge base.
- **Continuous learning** - With the help of information technology in education students can keep on learning, irrespective of where they are, even at home. This has dramatically enhanced efficiency in the education sector.
- **Sharing of knowledge** - Students from all over the world can come together and can share their experiences; the geographical distances are no more barriers. It has been made possible only through technology.
- **Learning aids** - By using audio and visual materials, we can put some practical aspects to the theory taught in class. Students can develop a better understanding of the topics being taught.
- **Distance learning** - With the help of online courses, anyone can get second degrees or additional certifications.
- **Proper record-keeping-** Unlike in the past when records used to be kept manually, and there were many cases of lost files, the use of information technology in education has made it possible for safe and proper record keeping.

#### **Limitations of technology in education**

- **Access to inappropriate content:** The biggest concern about using technology is how easy pornographic, violent, and other problematic materials can be easily accessed and viewed.
- **A disconnected Youth:** The harmful effect of technology is that when people are attached to their screens almost 24/7, which is causing an entirely new set of social issues pops up.

- **Cyberbullying trap:** Giving students access to anonymous accounts and endless contact avenues can only lead to trouble. Cyberbullying has become a problem among young people today. This harassment has no end. There is no way to monitor or discipline students who are involved in it.
- **Inevitable cheating:** Easy access to information may seem like a great thing, it can become a real problem in a test-taking environment. Cell phones have made cheating more accessible than ever.
- **A major distraction:** Attentiveness drops drastically in the classroom when students have their cell phones or other technologies out. The focus shifts from their teacher and education to whatever they are looking at, playing, or doing on their phones (Budhwar, K.2017)

### Conclusion

Technology has been the conventional rhetoric since medieval times. Education methods that were utilized ten years ago might still be in use, but better ways of making things work. Education becomes better with access to technological innovation. It allows researchers to facilitate their research easily. By incorporating modern technology in education, teachers develop creative and innovative ways of educating themselves. There are new methods to develop teaching material and deliver the lecture. Teachers are encouraged to identify learning objectives and differentiate instruction based on the needs of their students for their progress. Therefore it is time to expand technology for support and get the opportunity in various educational and scientific research field worldwide.

### References

1. Budhwar, K.(2017). The role of technology in education. *International Journal of Engineering Applied Sciences and Technology*, 2(8), 55-57.
2. Omodara O.D., & Adu E.I. (2014). Relevance of educational media and

- multimedia technology for effective service delivery in teaching and learning processes. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 4(2), 48-51.
3. Roschelle, J., Pea, R., Hoadley, C., Gordin, D., & Means, B. (2000). *Future of children*, 10(2), 76-101.
4. Shah (2011). Why does writing make us smart ? huffingpost.com. Retrieved February 25th 2013 from [http://www.huffingtonpost.com/2011/07/16/why-does-writing-make-us-\\_n\\_900638.html](http://www.huffingtonpost.com/2011/07/16/why-does-writing-make-us-_n_900638.html)
5. Wenglinski, H. (1998). Does it compute? The relationship between educational technology and student achievement in mathematics. Princeton, NJ: ETS

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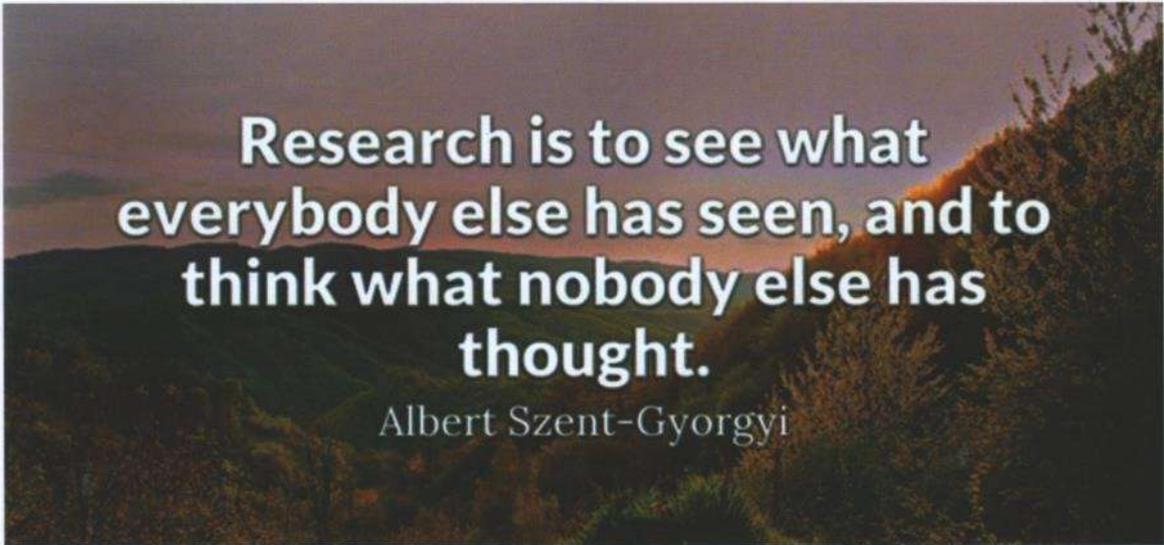
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Research is to see what  
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Albert Szent-Gyorgyi

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