

**Impact  
Factor  
4.574**

**ISSN 2349-638x**

**Peer Reviewed And Indexed**

**AAYUSHI  
INTERNATIONAL  
INTERDISCIPLINARY  
RESEARCH JOURNAL  
(AIIRJ)**

**Monthly Journal**

**VOL-V**

**ISSUE-VII**

**July**

**2018**

**Address**

• Vikram Nagar, Boudhi Chouk, Latur.  
• Tq. Latur, Dis. Latur 413512 (MS.)  
• (+91) 9922455749, (+91) 8999250451

**Email**

• aiirjpramod@gmail.com  
• aayushijournal@gmail.com

**Website**

• www.aiirjournal.com

**CHIEF EDITOR – PRAMOD PRAKASHRAO TANDALE**

## **The Study On Effect Of Video Based Technology Of Teaching In Enhancing Environmental Awareness Among Secondary School Students**

**Dr. N. S. Jadhav**

K.S.R. College of Education  
Assistant professor, Belgaum

### **Abstract**

*The purpose of the study The Study on Effect of Video based Technology of Teaching in Enhancing Environmental Awareness among Secondary School Students. The population of the study will be secondary school students. The sample of 40 secondary school students of Belgaum City. The sampling will be stratified random technique, with experimental and control group making sure that Gender will be appropriately represented. Descriptive survey method was adopted. The findings concluded that; i)The post test scores of achievement in importance of environment awareness are significantly higher in test group i.e. teaching with video based technology as compared to control group i.e. teaching without video based technology; ii) The gain of pre and post test scores of achievement in importance of environment awareness are significantly higher in test group i.e. teaching with video based technology as compared to control group i.e. teaching without video based technology; iii) The post test scores of achievement in importance of environment awareness of boys are significantly higher in test group i.e. teaching with video based technology as compared to control group i.e. teaching without video based technology.*

**Keywords :** *Video based Technology, Environmental Awareness*

### **Introduction**

Technology can also improve the dynamics between teachers and students, often leading to enhanced learning. “Students can see you’re doing a lot of work to further their education and I think that there’s an appreciation factor that ultimately contributes to their own motivation,” Tomarken says.

Technology Brings Challenges Introducing technology into the classroom can also bring a set of challenges. First among them is finding the time needed to incorporate new technology into courses. Professor Smithey not only uses the technology herself but also requires her student to produces multi-media projects during the semester. “If you’re going to ask the students to do such a challenging project, you have to be available to them. You have to have support. There has to be some relief time to learn about the technology. You don’t have to know the details of technology but you have to understand it well enough that you can envision what your students need to know about using it.”

### **Why Students Benefit From Using Technology in the Classroom**

Integrating technology into classrooms allows for more (and more effective) communication between students and teachers, as well as students and peers and parents and teachers, all of which are vital to students’ academic success. Using technology in your classrooms also creates space for students to have a voice in their learning. Students are empowered to take responsibility of their learning through giving feedback on lessons, participating in projects and learning activities that respect their individuality and having opportunities and support to learn and understand how to use technology creatively, effectively and safely.

Technology is transforming education, changing how, when and where students learn, and empowering them at every stage of their journey.

On the path to personalizing learning, technology empowers students by giving them ownership of how they learn, making education relevant to their digital lives and preparing them for their futures. With technology and access to resources beyond classroom walls, students are inspired to become problem-solvers, critical thinkers, collaborators, and creators. Where technology has been successfully integrated into classrooms, students develop a lifelong love of learning.

Educators are always striving to personalize learning for students. Technology can help them reach new levels with access to real-time student data, longitudinal information, content, apps, and more. Technology can help educators create blended learning environments and leverage digital tools for formative and summative assessments, bringing new models for learning and teaching to classrooms.

Technology in education and the right devices in students' hands helps prepare them with the career and technical skills they need to be successful today and in tomorrow's workforce. Relevant learning experiences in STEAM can inspire creativity, help students apply meaning to their learning, and prepare them for future career opportunities and jobs that haven't even been created yet. Specific skills in coding, programming, physical computing, and computational thinking have become common requirements in the workforce. Though making, students can gain these skills and hone their problem-solving and critical thinking skills for the 21st century. Learning by doing with maker mindsets and environments can be very engaging when designed and integrated with the right technology.

School systems have the hard decision of choosing devices and technology models that will help achieve their visions of transforming learning. Device decisions should be made by working with multiple stakeholders and evaluating how educators and students use the devices for day-to-day learning. Stakeholders should take into account appropriate grade-level curriculum, content needs, and how the devices will be used inside and outside the classroom. It's no easy task, but considerations such as compatible digital curriculum and content, assessment requirements, manageability options, security features, device functionality, and the overall cost of ownership are key to choosing the right device. A secure and robust IT infrastructure is the foundation of a 360° learning experience, and supports digital content, protects key student data, boosts operational efficiency, and provides the security and privacy protection today's schools needs.

Intel can help school systems enhance the experience of each student and educator with a holistic solutions approach that focuses on technology to enable personalized learning, connected, and efficient classrooms, and a secure, powerful IT infrastructure. All the while, educators must be properly trained and supported through ongoing professional learning resources and communities.

It all adds up to a transformative and sustainable impact on the success of all students.

Technology provides numerous tools that teachers can use in and out of the classroom to enhance student learning.

### **Teaching with Tablet Computers**

We're only beginning to explore their many possibilities for higher education. Here are some ideas.

#### **Converting a Face-to-Face Course to an Online Course**

Teaching online, whether in a hybrid course or a wholly-online course, requires different techniques and different tools. Without the F2F contact, professors will need to be even clearer about setting and articulating expectations for digital work and participation. Encouraging interaction between professor and student and among students is an additional challenge, as is monitoring student learning as the course progresses. The online environment requires the use of basic technologies to digitize course materials as well as mastery of the university's learning management system. And various tools like Skype allow synchronous communications, while blogs and Twitter can encourage

asynchronous interaction. Here are some ideas to get you started. 8 ways classrooms are using technology for teaching and learning

**1. Online learning and blended classrooms:** While K-12 online learning gains traction around the world, many teachers are also exploring blended learning -- a combination of both online and face-to-face education.

**2. Project-based activities incorporating technology:** Many of the foremost rigorous projects are infused with technology from the beginning till the end.

**3. Game-based learning and assessment:** There has been quite a buzz regarding the advantages of incorporating simulations and game-based learning activities into schoolroom instruction.

**Read: Game-based learning benefits: The new education process that can change everything**

**4. Instructional tools like interactive whiteboards and student response systems:** Here are just a few possibilities that increase the potential for using interactive whiteboards in school:

- Digital storytelling.
- Creating, viewing, and annotating student PowerPoint and multimedia presentations in real time.
- Showing streamed or downloaded videos.
- Using online map and satellite imagery to teach geography.
- Displaying artwork or online museum presentations.
- Demonstrating moviemaking techniques.
- Teaching students how to conduct research on the Internet.
- Working collaboratively on writing and editing exercises, math lessons, and science experiments.
- Instructing the class on the use of a software program, keyboarding techniques, and other computer skills

The goal of student response system is to transform abstract learning into a hands-on experience through the use of remote-control-like clicker devices.

**5. Student-created media like podcasts, videos, or slideshows:** One of the central concepts of digital skill or media literacy is that students ought to be creators and critics, not simply customers, of media.

**6. Collaborative tools like Wikis or Google Docs:** Connecting with others online can turn out to be a realisation for change, both for teachers and for students. Teacher Vicki Davis is an evangelist for such connections.

**7. Using social media to engage students:** Though social media tools are still blocked in many schools, students around the world spend vast amounts of time on social networks outside of school.

**8. Frameworks for technology integration:** SAMR and TPACK are models which are frequently used for technology integration.

- **The SAMR (Substitution, Augmentation, Modification, and Redefinition) model**, created by Dr. Ruben Puentudura, guides the process of reflecting on how we are integrating technology into our classrooms. The ideal goal of technology integration is to give a new meaning as to how education is taught and received and to do things that never could have happened before the technology was in our hands.
- **The TPACK (Technological Pedagogical Content Knowledge) framework** lays out the information that educators want so as to successfully integrate technology into their teaching. The TPACK web site offers a large collection of free resources for teachers.

Despite the dramatic variations in resources and abilities from school to school, and place to place, integrating technology tools is attainable in ways which will influence engagement and learning for all students.

### **Artificial intelligence is changing the teaching-learning process in education!**

#### **Definitions of Technical Terms**

- **Traditional method:** It is usual classroom teaching by the concerned student in-charge.
- **Environmental Awareness:** It is the sum total of 'Environmental Orientation', 'Environmental Attitude', and 'Environmental Responsibility'.
- **Video Based Technology:** Video Based Technology with Mass media implying as channels of social programmes again relevance from their capacity to disseminate information to great number of people (masses) and make the present social, educational and cultural programmes more effective and meaningful to create all sorts of thinking capacity among the people.
- **Gender :** Gender of the students were considered the boys and girls which will be selected for the study
- **Secondary Schools:** Schools with VIII, IX and X standard are considered as secondary schools.

#### **Need for the Study**

Tbilisi conference (1977), with reference to need and urgency developing intensive Environment Awareness training programmes recommended strongly to member states that;

- environmental science and Environment Awareness be included in curricular pre-service student education,
- students should get Environment Awareness training relating to the area, either urban or rural where they are going to work,
- they take necessary steps to make in-service training of students in Environment Awareness available to all who need it,
- Students in training should be given an understanding of the widest possible range of educational materials and aids with special reference to low-cost materials and opportunities for adaptations and improvisation according to local circumstances. Students should be involved in preparation and adaptation of instructional materials for Environment Awareness.

It must be understood that improving the level of living is the key to development, be it economic development, sustainable development or human development. This is because the level of living is closely related to inadequate availability of life sustaining goods and non-existent education, health, sanitation and other social service. Low incomes are also related to large family size and high fertility; high unemployment and low productivity. This link is both a cause and an effect and gets perpetuated as reported in World Development Report, 1931 of World Bank. Further, it was observed that many of the basic. Environmental problems like, inadequate sanitation and clean water, indoor air pollution from bio-mass burning and land degradation are closely related to the lack of development. At present the greatest challenge to the world community is the well-being of those people who live in acute poverty and do not have access to clean water and sanitation at all.

#### **Objectives of the Study**

1. To study the difference between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to pre and post test scores of achievement in importance of environment awareness.

2. To study the difference between group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to pre and post test scores of achievement in importance of environment awareness of boys.
3. To study the difference between control group i.e. teaching without video based technology and test group i.e. teaching through video based technology with respect to pre and post test scores of achievement in importance of environment awareness of girls.

**Hypotheses**

1. There is no significant difference between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to pre and post test scores of achievement in importance of environment awareness.
2. There is no significant difference between group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to pre and post test scores of achievement in importance of environment awareness of boys.
3. There is no significant difference between control group i.e. teaching without video based technology and test group i.e. teaching through video based technology with respect to pre and post test scores of achievement in importance of environment awareness of girls.

**Methodology**

In order to collect data Descriptive survey method of research was followed.

**Sample**

The population of the study will be secondary school students. The sample of 40 secondary school students of Belgaum City. The sampling will be stratified random technique, with experimental and control group making sure that Gender will be appropriately represented.

**Tools**

The Environment Awareness Ability Measure was used for the present study.

**Statistical Techniques**

The unpaired t-test Statistical methods was applied for the present study

**Analysis and Interpretation**

**Hypothesis:** There is no significant difference between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to pre and post test scores of achievement in importance of environment awareness.

To test this hypothesis, the unpaired t-test was applied and the results are presented in the following table.

**Table 1: Results of t-test between test group and control group with respect to pre and post test scores of achievement in importance of environment awareness.**

Variable	Group	n	Mean	SD	t-value	P-value	Signi.
Pre test	Test	40	20.8500	5.1368	0.8957	>0.05	NS
	Control	40	19.9250	4.0344			
Post test	Test	40	33.3750	6.1339	8.1828	<0.05	S
	Control	40	23.1250	5.0138			
Gain	Test	40	12.5250	7.1504	7.2674	<0.05	S
	Control	40	3.2000	3.8377			

From the results of the above table, it can be seen that,

1. A non-significant difference was observed between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to pre test

scores of achievement in importance of environment awareness ( $t=0.8957$ ,  $p>0.05$ ) at 0.05 level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It can be concluded that, the pre test scores of achievement in importance of environment awareness are similar in control and test group.

2. A significant difference was observed between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to post test scores of achievement in importance of environment awareness ( $t=8.1828$ ,  $p<0.05$ ) at 0.05 level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that, the post test scores of achievement in importance of environment awareness are significantly higher in test group i.e. teaching with video based technology as compared to control group i.e. teaching without video based technology.
3. A significant difference was observed between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to gain of pre and post test scores of achievement in importance of environment awareness ( $t=7.2674$ ,  $p<0.05$ ) at 0.05 level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that, the gain of pre and post test scores of achievement in importance of environment awareness are significantly higher in test group i.e. teaching with video based technology as compared to control group i.e. teaching without video based technology.

**Hypothesis:** There is no significant difference between group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to pre and post test scores of achievement in importance of environment awareness of boys.

To test this hypothesis, the unpaired t-test was applied and the results are presented in the following table.

**Table 2: Results of t-test between test group and control group with respect to pre and post test scores of achievement in importance of environment awareness of boys.**

Variable	Group	n	Mean	SD	t-value	P-value	Signi.
Pre test	Test	20	20.0500	5.8980	0.1216	>0.05	NS
	Control	20	19.8500	4.3923			
Post test	Test	20	33.3500	6.5556	4.7607	<0.05	S
	Control	20	24.2000	5.5593			
Gain	Test	20	13.3000	7.4488	4.5006	<0.05	S
	Control	20	4.3500	4.8588			

From the results of the above table, it can be seen that,

1. A non-significant difference was observed between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to pre test scores of achievement in importance of environment awareness ( $t=0.1216$ ,  $p>0.05$ ) of boys at 0.05 level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It can be concluded that, the pre test scores of achievement in importance of environment awareness of boys are similar in control and test group.
2. A significant difference was observed between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to post test scores of achievement in importance of environment awareness ( $t=4.7607$ ,  $p<0.05$ ) of boys at 0.05 level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is

accepted. It can be concluded that, the post test scores of achievement in importance of environment awareness of boys are significantly higher in test group i.e. teaching with video based technology as compared to control group i.e. teaching without video based technology.

3. A significant difference was observed between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to gain of pre and post test scores of achievement in importance of environment awareness ( $t=4.5006$ ,  $p<0.05$ ) of boys at 0.05 level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that, the gain of pre and post test scores of achievement in importance of environment awareness of boys are significantly higher in test group i.e. teaching with video based technology as compared to control group i.e. teaching without video based technology.

**Hypothesis:** There is no significant difference between control group i.e. teaching without video based technology and test group i.e. teaching through video based technology with respect to pre and post test scores of achievement in importance of environment awareness of girls.

To test this hypothesis, the unpaired t-test was applied and the results are presented in the following table.

**Table-3: Results of t-test between control group and test group with respect to pre and post test scores of achievement in importance of environment awareness of girls.**

Variable	Group	n	Mean	SD	t-value	P-value	Signi.
Pre test	Test	20	21.6500	4.2461	1.3017	>0.05	NS
	Control	20	20.0000	3.7557			
Post test	Test	20	33.4000	5.8526	7.0045	<0.05	S
	Control	20	22.0500	4.2732			
Gain	Test	20	11.7500	6.9424	6.0136	<0.05	S
	Control	20	2.0500	1.9595			

From the results of the above table, it can be seen that,

1. A non-significant difference was observed between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to pre test scores of achievement in importance of environment awareness ( $t=1.3017$ ,  $p>0.05$ ) of girls at 0.05 level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It can be concluded that, the pre test scores of achievement in importance of environment awareness of girls are similar in control and test group.
2. A significant difference was observed between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to post test scores of achievement in importance of environment awareness ( $t=7.0045$ ,  $p<0.05$ ) of girls at 0.05 level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that, the post test scores of achievement in importance of environment awareness of girls are significantly higher in test group i.e. teaching with video based technology as compared to control group i.e. teaching without video based technology.
3. A significant difference was observed between test group i.e. teaching with video based technology and control group i.e. teaching without video based technology with respect to gain of pre and post test scores of achievement in importance of environment awareness ( $t=6.0136$ ,  $p<0.05$ ) of girls at 0.05 level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that, the gain of pre and post test scores of



achievement in importance of environment awareness of girls are significantly higher in test group i.e. teaching with video based technology as compared to control group i.e. teaching without video based technology.

### Discussion and Conclusion

In the present study effectiveness of Environmental Awareness and Video Based Technology developed were tested.

The present study has been conducted by taking more than one domains of the behaviour viz. cognitive and affective. Further, this study was conducted by taking Environmental Awareness and Video Based Technology in terms of its components. In view of the findings of the study, it is concluded that, teaching of Environmental Awareness and Video Based Technology was found to be more effective than the traditional method.

- i) The Achievement of the experimental group reflects that Environmental Awareness and Video Based Technology is an effective strategy in teaching at school level. These Environmental Awareness and Video Based Technology may also useful in other subjects at various levels, including Open University.
- ii) The teacher educators having the knowledge of educational technology can develop Environmental Awareness and Video Based Technology in different subjects. This type of work reduces the workload of the teacher as well as monotonous task of learning on the part of students.
- iii) The Orientation and Refresher courses for University and college teacher can be channeled to distance mode through Environmental Awareness and Video Based Technology.
- iv) School based training programmes through Video Based Technology may be brought in to practice.

### References

1. Patel, D.G. 1995. An Investigation in to the Impact of Audio-Visual Aids on Environmental Awareness, *In Quest of Bharatiya Shikshana* No. 10.
2. Patel, D.G., 1993. An Investigation into the Environmental Awareness and its enhancement in the primary school teachers. Ph.D. Thesis Sardar Patel University.
3. Sale, L.I. & Lee, E.W. 1972. *Environment Education in the Elementary Schools*, New York: Holis Rinehart and Winston.
4. Saxena A. B., Jadhao, V.G., Rajput, J. S. 1981. Development of an Environmental Awareness Test, *Indian Educational Review*, July, NCERT, New Delhi.
5. Saxena, A.B. 1985. *Environment Awareness*, Bhargava Book House, Agra-2.
6. Shahnawaj. 1990. Environmental awareness and environmental attitude of secondary and higher secondary schoolteachers and students. Ph.D., Edu. Univ. of Rajasthan.
7. Wilson, Robert. Joseph. 1985. Moral Salient Beliefs Towards .Environmental Action Strategies of Groups Displaying Differing Levels of Action Behaviour. *Dissertation Abstracts International*, May 1986, 46(11), 3312-A.