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## EFFECTIVENESS OF MULTIMEDIA ON THE ACHIEVEMENT IN SANSKRIT AT SECONDARY SCHOOL LEVEL: DURING PANDEMIC – COVID19

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### INTRODUCTION

Sanskrit is not only a subject of study but also a part of education in molding the character of pupils and influence in their lives. Learning of Sanskrit helps the Nation to maintain a permanent link between the past and present. It deserves an honored place in curriculum. It is also a tool for the enrichment of language and literature.

Year 2020 will forever be remembered as the year in which a tiny virus changed the course of the world in more ways than one. It's the year in which man began to re-think and re-shape things according to the need of the hour. As in others spheres of life the education system to underwent a sea change. Going to school to attend classes and write the examination has become a thing of the past. Online classes at home is the new norm for both the teachers and students. If live classes, pre-recorded lectures, homework and other assignments are part of the new world order, so are online tests and examination. So the present study to measure their impact on the performance of pupils in Sanskrit at Secondary School Level: During Pandemic- COVID 19.

The term effectiveness stands for the outcome of the study, when the influence of one factor or condition is dependent on the presence or absence of another factor or condition. Multi Media refers to the instructional strategy, which incorporates two or more media in its instructional process to enable the pupils to achieve predetermined and desired behavioral objects. It refers to the total scores obtained by an individual as measured in the test constructed, covering objectives namely Knowledge, Understanding and Application. This is the school level following the middle school, comprising standards VIII, IX and X (of the 13-15 age group). Only standard IX comes under the purview of the present study. The COVID-19 pandemic, also known as the coronavirus pandemic, is an ongoing global pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The virus was first identified in December 2019 in Wuhan, China. The World Health Organization declared a Public Health Emergency of International

Concern regarding COVID-19 on 30 January 2020, more than 143 million cases have been confirmed, with more than 3.05 million deaths attributed to COVID-19, making it one of the deadliest pandemics in history.

## Review of Related Literature

The knowledge of related literature brings the researcher up-to date on the work which others have done and this to state the objectives clearly and concisely. It enables the researcher to define the limits of his fields.

The survey of related literature is a crucial aspect of the planning of the study and the time spent in such a survey invariably is a wise investment (Mouly;1964)

Multimedia or digital learning resources assist learners to get on well with mental representations with the use of different media elements, which support information processing. Information, which is made up of content and sometimes learning activities, are presented with the use of the combination of text, image, video and audio by digital learning resources. It has been demonstrated, by research on using multimedia for learning, that there are more positive results observed in learners who combine picture and words than those who use words only (Chen and Liu, 2008; Mayer, 2008). As stated in Eady and Lockyer (2013), different pedagogy methods were implemented by the use of digital resources. Their paper presented how the authors were able to introduce topics to students, demonstrate to them, stimulate a group, make different text types available and engage students in an interactive manner.

Multimedia technology for educational purposes can be categorized according to whether they are used for teaching or for learning. Some of the different multimedia or digital learning resources are listed in Eady and Lockyer (2013). Furthermore, according to Guan et al. (2018), several studies have established the importance of multimedia technologies to education and the widespread adoption of multimedia tools. Multimedia generally involves the use of technology and the widespread adoption of multimedia applications in education is as a result of its many benefits (Almara'beh et al., 2015). Some of the benefits of the multimedia application tools for teaching and learning are summarized as follows:

- (1) Ability to turn abstract concepts into concrete contents
- (2) Ability to presents large volumes of information within a limited time with less effort
- (2) Ability to stimulates students' interest in learning
- (3) Provides teacher with the ability to know students position in learning.

Multimedia designed for learning refers to the process of building mental representation from words and pictures in different contexts. They are designed to assist learning with tools which can be used in presentations, class room or laboratory learning, simulations, e-learning, computer games, and virtual reality, thereby allowing learners to process information both in verbal and pictorial forms (Alemdag and Cagiltay, 2018). Multimedia designed for learning requires understanding of some theories such as cognitive theory of multimedia learning, which postulates three assumptions that describe how people learn from instructional multimedia materials. These assumptions can be phrased as dual-channel, limited capacity, and active processing (Alemdag and Cagiltay, 2018). Dual-channel assumes that learners have many channels to separate visual and auditory information. The restricted/limited capacity assumes that there is a limit to the load of data that can be processed in each channel. Understanding these will allow teachers not overwhelming learners with much information. On the other hand, learners will be aware of their information processing limitations or capabilities. Active processing proposes that

when it comes to information selection, organization, and integration, human beings are active agents and are capable of managing the forms of information they are interacting with.

The appropriate use of ICT in teaching transforms the learning environment from teacher-centered to learner-centered (Coleman et al., 2016) just as it is transforming all aspects of human life (Guan et al., 2018). Coleman et al., (2016) emphasised that the shifting from teaching to learning creates a student-centered learning where teachers are there as facilitators and not sages on the stages, thus changing the role of the teacher from knowledge transmitter to that of a facilitator, knowledge navigator and a co-learner. Keengwe et al., (2008) concluded that the application of multi-media technologies ensures a very productive, interesting, motivating, interactive and quality delivery of classroom instruction while addressing diverse learners' needs.

Earlier attempts at analysing student behaviour while engaging with online material included analysing student access computer logs, and the frequency of participation and duration of participation (Morris et al., 2005). Nie and Zhe (2020) demonstrated that the conventional method of manually analysing student behaviour is gradually becoming less effective compared to online classroom visual tracking. They found that the online classroom visual tracking behaviour can be divided into several components: selection, presentation, mapping, analysis and collection, as well as the analysis from students' facial expression

Several works exist that use student behaviour tracking to examine how students interact with multimedia learning tools. For instance, Agulla et al. (2009), incorporated in a learning management system (LMS), student behaviour tracking that provided information on how much time the student spent in front of the computer examining the contents. They did so through the use of face tracking, fingerprint and speaker verification. Alemdag and Cagiltay (2018) conducted a systematic review of eye-tracking research on multimedia learning and found that while this research method was on the rise it was mainly used to understand the effects of multimedia use among higher education students. They also identified that although eye movements were linked to how students select, organise and integrate information presented through multimedia technologies, metacognition and emotions were rarely investigated with eye movements.

Molina et al. (2018) used eye-tracking in evaluating multimedia use by primary school children. Some studies have used a combination of eye tracking data and verbal data in order to gain insight into the learners' cognitions during learning and how they perceived the learning material (Stark et al., 2018).

## Hypotheses

The hypotheses formulated in the present study are:

1. The Multi Media is more effective than the conventional method in the achievement of Sanskrit at Secondary School level during pandemic COVID 19.

## Methods

The present study is about Multi Media and to measure their impact on the performance of pupils in Sanskrit at Secondary School Level: During Pandemic- COVID 19. It will help teachers to understand the effectiveness and necessity of the application of the Multimedia during Pandemic COVID 19.

## Procedure

The method adopted for the present study is experimental method. Experimental verification is necessary to determine the effectiveness of Multi Media over conventional method. The study will be conducted on a sample of 40 students (20 each) of two divisions in standard IX.

## Data Analysis

The two groups will be equated on the basis of the mean, Standard Deviation and Critical ratio of the average marks of the pre-test. The data will be collected and will be analyzed using appropriate statistical techniques and interpreted accordingly. The present study has been an attempt to test the effectiveness of Multi Media on achievement in Sanskrit at Secondary School Level: During Pandemic- COVID 19.

### Values of various Statistics calculated for the pre-test scores of pupils in the experimental and control groups

| Group              | No of pupils | Mean | S.D  | Critical ratio | Level of significance |
|--------------------|--------------|------|------|----------------|-----------------------|
| Experimental Group | 20           | 4.2  | 1.73 | 0.15           | P>0.05                |
| Control Group      | 20           | 4.5  | 1.94 |                |                       |

The above table shows that there is no significant difference between the means of pre-test scores of the pupils in the experimental group and control group (C.R=0.15, P>0.05). These two groups do not differ significantly in the initial academic ability of pupils. Therefore, it can be concluded that the two groups are more or less of the same ability.

### Values of various Statistics calculated for the post-test scores of pupils in the experimental and control groups

| Group              | No of pupils | Mean | S.D  | Critical ratio | Level of significance |
|--------------------|--------------|------|------|----------------|-----------------------|
| Experimental Group | 20           | 20.2 | 3.46 | 3.46           | P<0.01                |
| Control Group      | 20           | 12.1 | 2.02 |                |                       |

The above table shows that there is significant difference between the means of post-test scores of the pupils in the experimental group and control group (C.R=3.46, P<0.01). This means that the two groups differ significantly in their post academic ability. Since the mean score of the experimental group is greater than the control group, the experimental group is superior to the control group in achievement. So it can be concluded that the Multimedia is more effective than the conventional Method in teaching Sanskrit during the pandemic COVID19.

## Conclusion

The conclusions that emerged out of the analysis of data using different tools are classified. Multimedia is more effective than the conventional method in teaching Sanskrit during pandemic COVID 19.

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