

# Instructional Technology in Sanskrit

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## Abstract

India is the second largest mobile phone user with over 900 million users in the world. Since India is a country, where most of the students have access to cell phones, instructors should be harnessing this power to enrich language education experience and bring memorable experiences to the Sanskrit language classroom. Sanskrit teaching could be promoted with advanced multimedia and hypermedia. For over a decade, the new media (NMC) has been charting the landscape of emerging technologies in teaching learning and creative inquiry on a global scale. Since Sanskrit is the most suitable language for computer, instructors could use emerging technologies to train the language.

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**Index terms**— instructional technology, sanskrit, education, classroom.

## 1 I. Introduction

sanskrit is the oldest and most systematic language in the world. 1 The word 'Sanskritam' meaning 'refined' or 'purified' is the antonym of 'Prakrita' meaning 'natural'. 1 Sanskrit is an ancient and classical language of India in which first ever book of the world, the Rig-Veda was compiled. ?? The Vedas are dated by different scholars from 6500 BC to 1500 BC. ?? Sanskrit language must have evolved to its expressive capability prior to that period. ?? Sanskrit is said to belong to Indo Aryan or Indo Germanic family of languages which includes Greek, Latin and other alike languages. 2

## 2 II. Traditional Teaching Method of Sanskrit

In Vedic period, teacher was designated with utmost; he was regarded as a guardian of sacred knowledge; an exhibitor of divine illumination as well as medium of highest attainment; former sources and philosophical evidences reveal that the method of teaching was well planned and progressive ???] ??4] ???] ???] . Teacher was accountable for educating the pupil to reach the highest goal of life 4 . His efficacy in teaching was so remarkable that he admitted a student and made him proficient in the subject; by giving complete education and training 5 . Discipline and strictness were maintained during the time of instruction 5-6 .

## 3 III.

## 4 Current Teaching Method of Sanskrit

Currently in India, there have been in vogue three principal method of teaching Sanskrit for convenience of understanding. They are;

Author ? ? : Strayer University, Memphis, Tennessee, USA. e-mail: remmiars@gmail.com a) The Pundit or the Logical Method This method has the honor of being the oldest of these in as much as it has been vogue since times immemorial 7 . The medium of instruction in the logical method was not always Sanskrit although it might be said with more or less certainly that the higher stage of specialization 7 . The medium is not only teaching but even communication was Sanskrit.

b) The Adult's Method or the Bhandarkar Method This method might be useful to adult's who can concentrate voluntarily on anything 7 .

### 5 c) The psychological Method

This method aims at making things easily comprehensible to pupils principally by adapting the teaching to their mental caliber and to their instincts interests because this method is adapted to the common pupils. In this asking pupils to translate sentences into Sanskrit for providing them opportunities to use their newly acquired knowledge some more interesting means are used for the same purposes 7 IV.

### 6 Utilization of Instructional Technology in Sanskrit

Very soon the traditional Indian language Sanskrit will be a part of the space, with the USA mulling to use it as computer language at NASA 8 . Rick Briggs in his book "Knowledge Representation in Sanskrit and Artificial Intelligence" explains that, Sanskrit is such a language in which a message can be sent by the computer in the least number of words 9 . The NASA website also confirms its Mission Sanskrit and describes it as the best language for computer 8 .

Sanskrit teaching could be promoted with advanced multimedia and hypermedia. For over a decade, the new media (NMC) has been charting the landscape of emerging technologies in teaching learning and creative inquiry on a global scale 9. The NMC's advisory board includes 750 technology experts and faculty members from colleges and universities in 40 countries, and is supported by the consortium for school Networking (Co SN) and the international society for technology in education (ISTE) 9.

The NMC's latest research efforts, together highlight ten emerging technologies that will impact education over the course of the next five years; Cloud computing, mobile learning, learning analytics, open content, 3D printing, Mooc's, Virtual and Remote laboratories, games and gamification, tablet computing and wearable technology 9 .

Since Sanskrit is the most suitable language for computer, instructors could use emerging technologies to train the language. In India, even in 2015, the teaching of Sanskrit primarily is by the oral method. Even though the Indians are modernized with digital technology, the Sanskrit instructors are not exploiting this digital classroom technology. These results in unproductive students in Sanskrit, who do not have the aptitude to locate themselves with the new competitive world of technology. They do not have a possibility to communicate and collaborate their ideas internationally in Sanskrit. Subjects in Sanskrit like Astrology, Astronomy, Vedic Mathematics and Literature can effortlessly taught with the use of the above mentioned technologies. Very often Sanskrit learning is become dreary and only trying to commit to memory and not change choice of word. Sanskrit has to be pertinent with the help of technologies like mobile learning. "Emerging technologies are applicable to self access of listening and speaking, collaborative writing, reading and language structure, and online instruction".

The development and diffusion of software for producing, uploading downloading and playing digital audio files (i.e., podcasts) make the flexible use of a wide range of audio material easier than ever for language learners 10 .

Sanskrit students may benefit from cloud computing technology which has a list of advantages-to store content data and applications that would be particularly functional for both students and educators: Sanskrit has many traditional books which are difficult to access by everyone and most of the Sanskrit books are not available in any website. Once all these valuable documents are made available in Cloud, it automatically saves content, making it impossible to lose or delete any vital material. This means that even if a computer crashes, all documents and content will remain safe, saved and accessible in the cloud 11 .

Sanskrit documents vary from hard copy of books to mantra chanting classes, DVD's and photos etc. The cloud allows its users to store almost all types of content and data including music, documents, ebooks, applications, photos and much more. The Sanskrit data stored in the cloud can easily be accessed from almost any device including mobile devices such as phones or tablets. Multiple Sanskrit instructors could work and edit documents together at the same time; cloud enables effortless sharing and transmission of ideas 11 . K-12 Sanskrit instructors are able to make ideas for group projects or they will be able to collaborate lesson plans can be optimized for both instructors and students. This will allow the instructor to reflect beyond their syllabus while preparing students for Sanskrit projects and assignments.

In the Indian education system, two of the most recognized board of education that one gets into opt for are CBSE and ICSE 12 . In Sanskrit language study, these two boards are diverse in their syllabus, method of instruction and examination. Through cloud computing instructors will be capable of club together both education system to open up new ideas in Sanskrit for seminar, discussion and debate.

### 7 V. Mobile Learning for Sanskrit Language

India is the second largest mobile phone user with over 900 million users in the world 13 . Since India is a country, where most of the students have access to cell phones, instructors should be harnessing this power to enrich language education experience and bring memorable experiences to the Sanskrit language classroom. Sanskrit students could use this m-learning 'notes' feature in mobile to collect everyday language 14 . They could use 'camera' feature of mobile to take pictures of text. Students will be able to record language conversations and text messaging feature to reinforce vocabulary.

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## 8 VI. Clicker Technology for Sanskrit

Sanskrit is actually a language close to late Vedic and was elegantly described in one of the finest grammars ever produced. (6 th -5 th century BCE), the Ashtadhyayi (eight chapters ) composed by Panini 13 . Starting with about 1700 basic elements like nouns, verbs, vowels, consonants he put them into classes 13 . The construction of sentences, compound nouns etc. is explained as ordered rules operating on underlying structures in a manner similar to modern society 13 .

Panini's Ashtadhyayi is complicated to learn by any Sanskrit student. To avoid the dreary in the classroom, the instructor could use Clicker technology. It is a classroom response technology. Using this technology, the instructor could hold the attention of the students and could make the classroom engaged. This technology will help the student to recognize the level of understanding of the subject.

Further educational technologies ( Table 1) are also supportive to motivate the students and it will be constructive to teach and study different fields of Sanskrit language.

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## 9 VII. Barriers and Opportunities

The barriers of using these technologies could be the lack of knowledge in Sanskrit software's, untrained instructors, non digitalized classrooms and financial issues. However, these could be solved in India rapidly. India Government trying their level best to promote Sanskrit language and its culture. "In order to promote Sanskrit language, the central government has requested all central universities, where the department of Sanskrit does not exist, to explore the possibilities of opening Sanskrit department" Indian education minister said in the Lokh sabha in 2014 ??5 The University Grants Commission provides plan and non plan grants five Sanskrit state universities and two Sanskrit deemed to be universities, she said. Recently, the minister had also announced that the Kendriya vidyalayas could discontinue teaching German as an alternative and replace it with Sanskrit as a third language a decision she said was taken in the " national interest" 15 language. Sanskrit scholars must be aware of the fact that Sanskrit will remain the same or regard as as a dead language if it is not being modernized with moment in time. Sanskrit may be the only one language which is keeping the same traditional teaching methods. Sanskrit scholars should integrate technology with the traditional method. Remember technology is not trying to exterminate the core of the traditional method but building teaching and learning more effective and efficient than the traditional way. <sup>1</sup>

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Technology	Application in Sanskrit
<p>Tablet Computing</p> <p>With their growing number of features like Apps, tablets give educational from facilitating the real-time data mining needed to support learning analytics to offering a plethora of game-based</p>	<p>Sanskrit books related to Astrology, Arthasastra, Neetisataka are easily accessible through this.</p>
<p>Mooc</p> <p>The learning environment is being Course Networking, with full translation media, and social networking tools.</p>	<p>learning apps. delivered through features, rich publishments in this site.</p> <p>Sanskrit assessments could easily updated and evaluate by this technology. Sanskrit instructors could check the authenticity of the</p>
<p>Open Content</p> <p>The use of open content promotes a skill set that is critical in maintaining currency in any area of study-the ability to find, evaluate, and put new information to use.</p>	<p>Sanskrit instructors will be able to create Sanskrit video tutorials for online learners as well as regular students.</p>

Figure 1: Table 1 :

Year 2015  
( A )  
VIII. Conclusion

Figure 2:

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