

1 Instructional Technology in Sanskrit

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5 **Abstract**

6 India is the second largest mobile phone user with over 900 million users in the world. Since
7 India is a country, where most of the students have access to cell phones, instructors should be
8 harnessing this power to enrich language education experience and bring memorable
9 experiences to the Sanskrit language classroom. Sanskrit teaching could be promoted with
10 advanced multimedia and hypermedia. For over a decade, the new media (NMC) has been
11 charting the landscape of emerging technologies in teaching learning and creative inquiry on a
12 global scale. Since Sanskrit is the most suitable language for computer, instructors could use
13 emerging technologies to train the language.
14

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

17 **1 I. Introduction**

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

24 **2 II. Traditional Teaching Method of Sanskrit**

25 In Vedic period, teacher was designated with utmost; he was regarded as a guardian of sacred knowledge;
26 an exhibitor of divine illumination as well as medium of highest attainment; former sources and philosophical
27 evidences reveal that the method of teaching was well planned and progressive ??3] ??4] ??5] ??6]. Teacher was
28 accountable for educating the pupil to reach the highest goal of life 4 . His efficacy in teaching was so remarkable
29 that he admitted a student and made him proficient in the subject; by giving complete education and training 5
30 . Discipline and strictness were maintained during the time of instruction 5-6 .

31 **3 III.**

32 **4 Current Teaching Method of Sanskrit**

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

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

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

42 **5 c) The psychological Method**

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

47 **6 Utilization of Instructional Technology in Sanskrit**

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

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

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

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

71 The development and diffusion of software for producing, uploading downloading and playing digital audio
72 files (i.e., podcasts) make the flexible use of a wide range of audio material easier than ever for language learners
73 10 .

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

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

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

92 **7 V. Mobile Learning for Sanskrit Language**

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

99 8 VI. Clicker Technology for Sanskrit

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

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

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

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112 9 VII. Barriers and Opportunities

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

9 VII. BARRIERS AND OPPORTUNITIES

1

Techno~~logy~~ technology

TabletWith their growing number of
Com-
put-
ing

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

Mooc'The learning environment is
being
Course Networking, with full

translation
media, and social networking
tools.

Open The use of open content
Con-
tent

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.

Application
in
San-
skrit

Sanskrit books related to

traction to other

technologies-

Astrology,
Arthashastra, Neetisataka
are
easily accessible through
this.

learning apps.

delivered through

features, rich

Sanskrit assessments could
easily updated and evaluate
by this technology. San-
skrit

instructors could check the
authenticity
of the
publications
in
this
site.

Sanskrit instructors will be

able to create Sanskrit
video
tutorials for online learners
as
well as regular students.

Figure 1: Table 1 :

Year 2015
(A)
VIII. Conclusion

Figure 2:

127 [Panini (2000)] , Panini . <http://www-history.mcs.st-and.ac.uk/Biographies/Panini.html> 2000.
128 November 1. January 1, 2000. (Retrieved)

129 [George (2010)] '20 Ideas for using Mobile Phones in the Language Class' C George . <http://www.slideshare.net/Andrea19742007/20-ideas-for-using-mobile-phones-in-the-language-class?related=4> Sanskrit language, 2014. January 16. January 1. 2014. 2010. November 10, 2010.

132 [A triute to Hinduism] *A triute to Hinduism*, <http://www.hinduwisdom.info/Sanskrit.htm>

133 [Central Universities should open Sanskrit Departments: Smriti Irani (2014)] <http://indiatoday.intoday.in/education/story/central-universities-should-open-sanskrit-departments-smriti-irani/1/405144.html> Central Universities should open Sanskrit Departments: Smriti Irani, 2014. December 1.

136 [Emerging Educational Technologies and How They Are Being Used Across the Globe -InformED (2013)]
137 *Emerging Educational Technologies and How They Are Being Used Across*
138 *the Globe -InformED*, <http://www.opencolleges.edu.au/informed/features/the-ten-emerging-technologies-in-education-and-how-they-are-being-used-across-the-globe/>
140 2013. July 16. July 16. 2013.

141 [Warschauer and Liaw ()] 'Emerging technologies for autonomous language learning' M Warschauer , M Liaw .
142 *Studies in Self-Access Learning Journal* 2011. 2 (3) p. .

143 [ICSE vs CBSE: Here Are Six Major Differences (2013)] <http://www.youthkiawaaz.com/2013/05/battle-of-the-boards-icse-vs-cbse-here-are-six-major-differences/> ICSE vs CBSE: Here Are Six Major Differences, 2013. May 19. Battle Of The Boards

146 [NASA to use Sanskrit as computer language (2012)] <http://post.jagran.com/NASA-to-use-Sanskrit-as-computer-language-1332758613> NASA to use Sanskrit as computer language, 2012. March 26. March 26. 2012.

149 [Diane (2013)] *Six Advantages of Cloud Computing in Education*, W Diane . <http://www.pearsonschoolsystems.com/blog/?p=1507#sthash.m35zES2M.Bsc0w6Zf.dpbs> 2013. April 1.

152 [Dr and Kumar (2013)] *Techniques and Methods of Sanskrit Language Teaching in Education*, Dr , L Kumar . http://raijmr.com/wp-content/uploads/2014/02/2_4-6-Dr.-Ashokkumar-L.-Patel.pdf 2013. December 1.