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Sanskrit: e-Tools for e-Learning Education

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Abstract. *When considering e-tools, we often think too much of innovative applications- whether they can have a direct implementation in education or not. Often, e-tools are seen as novelties, people are enthusiastic about them or not, and some try applying them as a separate tool or subsequently change from an already familiar tool to a new tool. However, when we want e-tools to be durable and that applications of such tools offer possibilities in education, we need a certain kind of quality standard. A strong link between innovation and quality is inevitably needed. This study gives an overview of determining criteria for the effective use of e-tools, for both students and teachers. Additionally we have formulated suggestions for the development of a pedagogical-didactical quality measure for the use of e-tools.*

Keywords: *E-tools in education; quality of e-tools; didactical use of e-tools; e-learning.*

1 Introduction:

The Information Age has presented some of the most evident benefits of all time, especially given the propensity and agility with which people can now communicate, interact and even share notes on topical economic, social and political developments across the globe. In short, most of the social utilities have been able to live the world and lives of users. On the education side, the unprecedented number of students seeking to further their academic and professional skills could not have come at the right time. It is unimaginable how institutions would have handled the large number of tertiary students in the absence of ICTs. In addition, balancing work and study would not have taken off from the ground for most distance education and part-time student without the invaluable utilization of the internet. The private sector has also benefited from the products of higher education institutions whose skills have been able to service industry for economic growth and development.

During the last decade, the use and implementation of e-learning or electronic learning became a fully-fledged research area and also the use of e-tools has largely intensified. More and more, learners are being prepared for living and working in the digital era and e-learning in the 21st century has many faces. As a consequence, many users are overwhelmed by this technology and are rather reticent about the umpteenth new tool or application that has been launched as the ultimate application in the field of e-learning. The area of e-learning applications has recently evolved from processes that are more focused on the distribution of information to processes where collaboration and reflection are central themes. These changes in e-learning only have become possible by a continuous interaction between technical and didactical innovations in e-learning.

2. Computer-based learning environments:

Computer-based learning environments offer learners a large spectrum of supporting applications. These applications, often imbedded in open learning environments, are developed to support learners in their learning process; a distinction is possible between embedded software, such as feedback and the information structure in learning materials, and non embedded software where the initiative for use depends largely on the user. Non-embedded software can be considered as added to the learning environment. This non-embedded software is often described as tools. We categorises e-tools as being part of an instructional design model for so-called constructivist learning environments. The goal of these learning environments is to encourage problem-solving and conceptual development. This occurs by confronting learners with ill-defined problems as:

2.1. Information resources. These sources offer just-in-time information which helps the learner to solve the problem. An example of this is access to the Internet.

2.2. Cognitive tools. These are tools that support the learner in visualising, organising, automat sing or replacing thinking skills. Information maps are an example of cognitive tools.

2.3. Knowledge modelling tools. These tools make the understanding of the problem explicit and foster learners' reflection on their learning process. Questions like "what do I know? "and What does it mean?"can characterise knowledge modelling tools.

2.4. Performance support tools. They support the cognitive functions necessary for performing a task, such as arithmetic and data-storage. By using these tools, learners can concentrate more on higher-order cognitive processes.

2.5. Information gathering tools. Such tools help learners in searching for certain information so that learners can stay focused on the problem solving process.

2.6. Conversation and collaboration tools. Social interaction is an important aspect in the learning process. Learning can be simplified by lending support to a discussion forum, a knowledge building community and a community of learners. This includes tools like e-mail, wikis, weblogs and etc. It is obvious that the most widely known e-tools can be placed under the category of conversation and collaboration tools. Still, most electronic learning environments (ELOs) have enough possibilities to relate to other categories of e-tools, for example, the construction of a trial assessment in an electronic learning environment as support for reflecting on the learning process (tools for knowledge modeling). Other examples could be the assignment of making a mindmap (cognitive tools) or increasing information skills by integrating goal-oriented search tasks on the Internet (information gathering tools).

3. Effective use of e-tools in computer-based learning environments:

Offering e-tools is one thing, however, the effective use of them is an absolutely different issue, and that is where problems often arise. A possible cause of these problems stems from the transition from pen-and-paper learning materials into web-based learning materials. The way the existing course materials are turned into web based materials often prevents an effective and efficient use of e-tools. Most instructors, coaches or teachers simply import or drop their pen-and-paper courses

into an electronic learning environment and consider the "e" of e-learning as fulfilled. However, e-learning does not only comprises electronic learning or ELO-supported learning, but also presupposes an efficient learning process. In a great number of cases people get stuck with the regular applications of e-learning, without considering the didactical approach to e-learning or the process of efficient e-learning. That is why e-learning could expand to e^2-learning or efficient e-learning.

The use of ELOs supposes a high level of learner control and the possibility that learners regulate their own learning. This implies the selection of the most suitable tools to support this learning process. In creating electronic learning environments, teachers or coaches have to bear in mind several things, namely:

i) The process of tool use;

ii) The motivation for using tools;

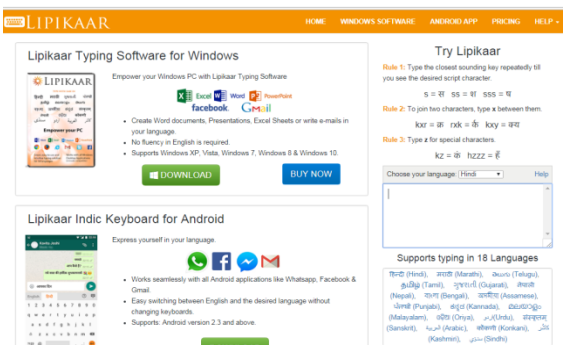
iii) Possible individual differences between learners;

iv) The efficiency and intensity that learners use the tool.

4. Typing tools for Personal computer:

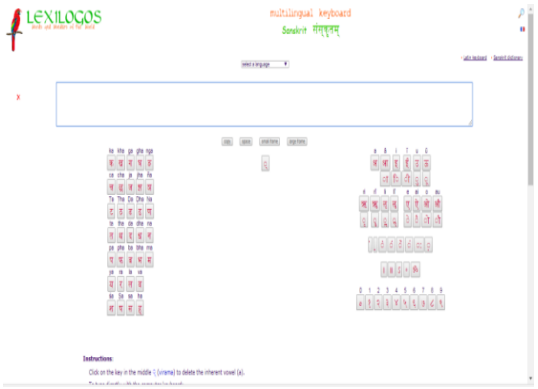
4.1 http://www.lipikaar.com

Sanskrit Typing through"sanskrit.indiatyping": Here is the first best tool to Learn Sanskrit Typing in just few Minutes. If we want to type in Sanskrit than it is rather difficult but through this typing tool we can easily type in Sanskrit knowing the other language, here is the tool that knowing English we can easily type in Sanskrit. Just type the text in knowing language like say English in the given box and press space, it will convert the text in Sanskrit. This tool having the facility that one can copy the converted Sanskrit text and use it anywhere on emails, chat, facebook, twitter or any website. This a Free online Sanskrit typing tool for type Sanskrit anytime you want it's available free and 24x7 hours. The software converts English to Sanskrit in Unicode font so one can use resultant text anywhere from Facebook, twiter, comments, emails, MS- word etc.



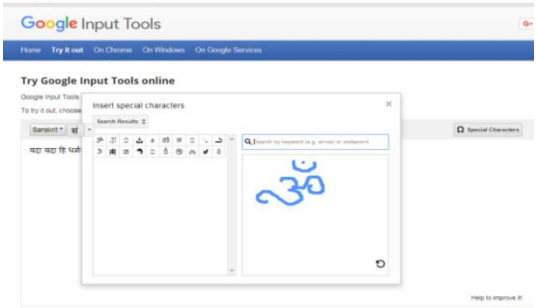
4.2

http://www.lexilogos.com/keyboard/arabic.htm



This is the second best free tools available having Devanagari Sanskrit Keyboard to type a text with the Sanskrit characters. We can write in any languages since it inbuilt with multiple keyboards in Sanskrit language as: dictionary & grammar; Devanagari Keyboard for the Sanskrit language ; Latin Keyboard for the Sanskrit language; Multilingual keyboard.These tools included also Sanskrit dictionary in which we can insert new word and also inserted word suggested list.

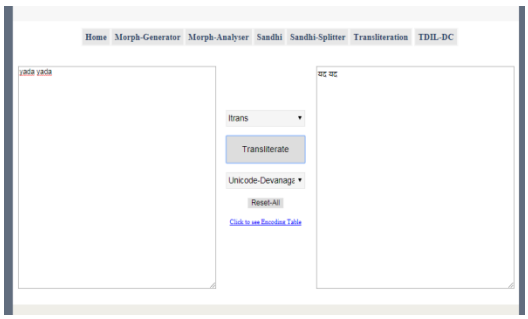
4.3. https://www.google.com/intl/sa/inputtools/try



One more tool called Google Input Tools that makes it easy to type in the language you choose and anywhere on the web. Choose your language and input tool and begin typing. We can also insert a special character.

4.4 http://tdil-dc.in/index.php/option /com_vertical &parentid/84&lang/en

Sanskrit E-learning & Multimedia

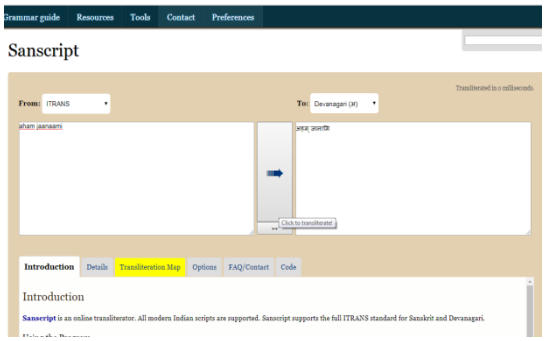


This system provides an easy and good e-learning platform in INDIA for users, who want to learn or teach basics of Sanskrit. The system is developed by 'Computational Linguistics R&D, Special Center for Sanskrit Studies', JNU, New Delhi.

This tool inbuilt with Online Sanskrit Tools like**Transliteration:** This tool provides conversion facility among the Romanized transliteration schemes into Devanagari and also from Devanagari into various Romanized transliteration schemes.

4.5http://www.learnsanskrit.org /tools/sanscript

Sanscript is an online transliterator.



4.6 http://tdil.mit.gov.in

As we know that in India only about 5% people know English and rest are deprived of benefits of information technology development. So the benefits of information technology can reach to the common man only when software tools and human machine interface systems are available in people's own languages. This tool is enablingto wide proliferation of ICT in Indian languages, tools, products and resources should be freely available to the general public.

4.7 http://gate2home.com/Sanskrit-KeyboardSanskrit Typing Tool (Unicode):

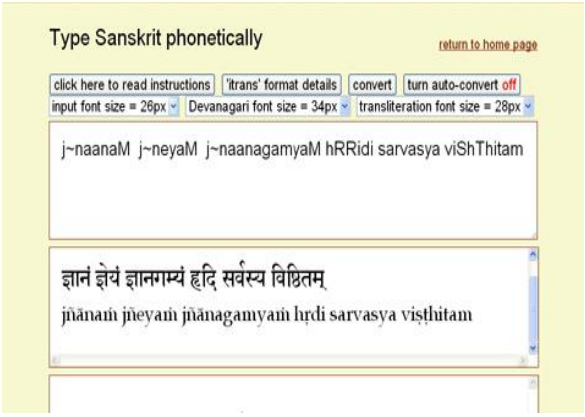
From this tool we can use English to Sanskrit Conversion. If you want to type something in English in the middle of Sanskrit text, press **Ctrl+g** to toggle between English and Sanskrit.This application in built with copy environment, share with social media, YouTube facility also Google &Wikipedia contains direct E-Mail facility.

4.8. http://enjoylearningsanskrit.com/ sanskrit-tools-and-applications

This tools having multiple utilities as:

(i) Sanskrit Text to Speech - Enter Sanskrit text and the computer will read it for you. Now the data-base does not contain all the sounds of the language but quite a lot of them. Already now it can be used with almost all the text of the bhagavad gita and in a short while it will be able to read almost any text.

(ii) Sanskrit Typing Tool a web-application for typing Sanskrit phonetically.



In the last 10 to 15 years a few formats for Sanskrit digital text input were developed and a lot of digitally encoded Sanskrit texts became available on the internet.One of the most popular schemes for digitally encoding Sanskrit texts is the "itrans" format. "itrans" stands for "Indian languages Transliteration.The main idea of the "itrans" format, as well as of other Sanskrit encoding schemes, is that Sanskrit can be phonetically typed in a very easy manner. All these applications are best viewed and used with the latest version of either Google Chrome or Mozilla Firefox.

5. Some Sanskrit Software

(i)http://learnsanskrit.org/tools: Below is a collection of tools for helping read, transcribe, or process Sanskrit texts.

Transliteration: Transliteration is the task of converting digitized Sanskrit text from one scheme to another.The Online Interface to ITRANS, has full support for all Indian languages. It can generate image files and PDFs.

The word generators and sentences processers &The Sanskrit Heritage Site :This site contains several grammar tools. It also contains large lists of different Sanskrit words. Most of these lists are available for download, which is especially useful if you plan to write a Sanskrit parser.

Sanskrit Library: This site includes tools that take a basic Sanskrit word. It is comparable to the Sanskrit Heritage Site. The site contains other resources as well, including a fairly large text collection.

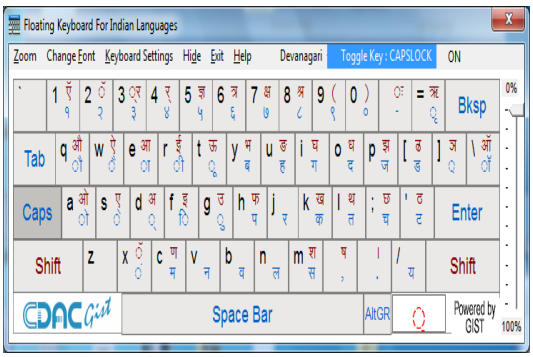
(ii) Sanskrit Translator : https://cdac.in/index.aspxid=ev_corp_gist_ism_launch

Intelligent Script Manager(ISM): ISM from C-DAC GIST is the acronym for Intelligent Script Manager. Using ISM Basic is the easiest way to get started with Indian languages on our PC. This software consists of aesthetic Indian language fonts and tools that one can start working with Indian Languages on computers. Pluggable architecture of ISM Basic ensures easy integration, upgrade and auto-update of various useful Indian language services and tools.

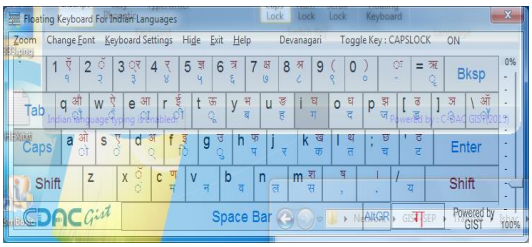
Salient Features*:* Enables typing with all **Indian languages,** Supports **UNICODE**, data and Open Type (OT) Fonts, Enables **creation of Indian language content** using Windows based applications, Can be used for typing in web-browser to support applications such as e-mailing, chatting, searching, etc., **On screen floating keyboard** to help novice users in content creation and learning the keyboard, **Easy Phonetic typing** support for users comfortable with the English keyboard, Support for popular script specific keyboards layouts like **Typewriter**.

C-DAC GIST Data Converter is integrated with ISM Basic for Conversion of Data from third party fonts (legacy data) to standard Unicode format. It also enables user to transliterate text from English to Indian Languages and vice versa. It supports all file formats as input: - Text files (*.txt), Excel (*.xls and *.xlsx), Word (*.doc and *.docx), PowerPoint (*.ppt and *.pptx), CSV (*.csv), HTML (*.htm and *.html). Other than files, the tool also supports conversion of data in various databases like MS SQL, MySql and Oracle.

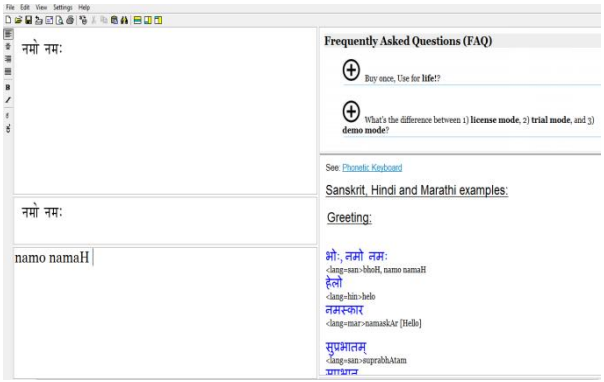
ISM Basic: This tool is primarily for creation of documents in Indian languages. It supports Unicode version 6.0 and since it is supporting Unicode, documents thus created will be easily viewed properly on any Unicode enabled operating systems such as Windows XP, Windows Vista and Windows 7.With this tool, we can able to type in windows based applications such as Notepad, Word pad, Open Office, MS



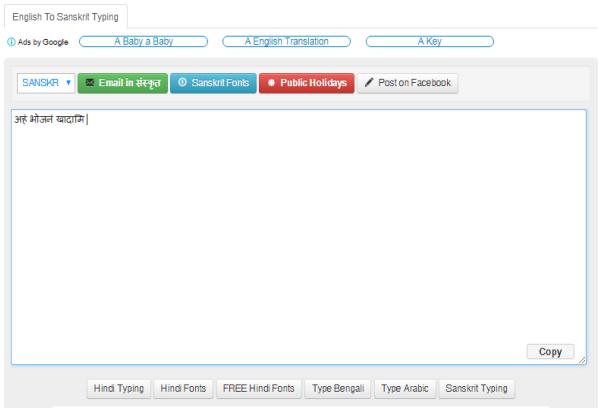
Office, etc. ISM Basic has been developed to work with various Indian languages/ scripts.



(iii)http://www.baraha.com/baraha_setup.php: Baraha supports Sanskrit as well as all Indian Languages. Baraha can be used to create Document, Spreadsheet, Presentation, Email, Blog, Website, and Database in all Indian languages&is compatible with Microsoft Word, Excel, PowerPoint, Open Office, PageMaker, CorelDraw, PhotoShop, Facebook, Twitter, and many other applications. It runs on Windows XP, Windows Vista, Windows 7, Windows 8 and Windows 10.Due to "portability of data", Baraha can export the data in various file formats such as ANSI text, Unicode text, RTF, HTML. The documents that are created in Baraha, stay relevant in the future and will never become obsolete.Baraha was released as a freeware in order to motivate Indians to communicate in their languages on computers. We believe that only easy to use, free Indian language software can jump-start extensive usage of Indian languages on computers.



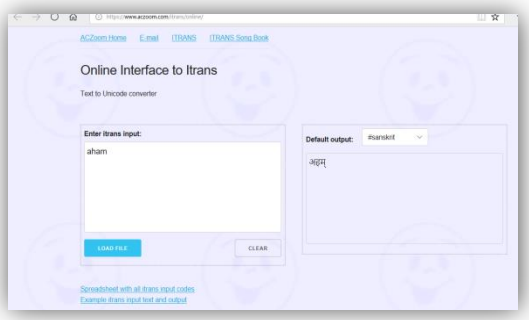
(iv)**http://www.easynepalityping.com/type-in-sanskrit**:



- Typing RomanizedEnglish words in above text area will be converted into Sanskrit.
- Press (Ctrl+G) to switch between English and Sanskrit.
- For purnabiram (पुर्णबिराम) - entering pipe key (next to shift key) will convert it into purnabiram "। ".
- Auto save any text you type after space on your computer for a week.
- You can email the content you have typed. Moreover we can E-MAIL IN SANSKRIT and download SANSKRIT FONT.

(v) http://www.alllanguagetranslator.com/2015/09/type-in-sanskrit-english-to-sanskrit.html

Language Translation: Aim of Sanskrit Language Translation or English to Sanskrit Conversion is to understand the Correct Meaning of your Communication to Others with same Sanskrit as mother tongue. This mobile friendly online Sanskrit Translation tool helping in type, writes, convert and translate English to Sanskrit. This is the good Sanskrit translation tool and can use this in all devices like Mobile phones, Android, tablets, iPhones and the iPads to type Sanskrit easily. In this software direct copy paste will not work. Type in English, each word by word then press [SPACE], It converted into Sanskrit. In case you are not getting the correct word, press backspace for more suggestions.



(vi) https://www.aczoom.com/itrans/online

Itran input code : Itrans uses a precise mapping of input codes to output code. It is not a phonetic conversion system, nor is it meant to be. Itrans is a table-driven, customizable mapping of input words to any Unicode character sequence. They also had a widget, and added transliteration in Gmail as well.

(vii) Google IME - the equalizer

The latest in the series is the IME, a downloadable piece that run on computer after a single install. There is a major advantage of this IME from Google. While it has the full power of the existing service, here are the advantages -: at times, due to the browser misbehavior or something, typing in Blogger or Gmail would cause cursor jumping. The IME comes between your keyboard and OS, so one can directly type in Indic languages. Be it Firefox, Safari browsers, or Word, Excel, PowerPoint.

Conclusions:

Electronic learning environments and e-tools are becoming more oriented towards the learner and ask for active feedback by the users of the learning environments. As a consequence, there is strong need for a pedagogical didactical support when implementing e-tools and when transforming pen-and-paper courses into electronic learning materials. The use of a tool because such a tool exists is not enough and there is a need for a structured approach when one wants to start using e-learning of implementing e-tools in a highly qualitative and well-considered way. We know that the intention of effective use of a tool largely depends on the evaluation or appraisal of the tool use. Usability can be related to the technical quality criteria, the usefulness of the tool is comparable with the didactical criteria. Some website considers as a universal resource that all sorts of Sanskrit learners can use, that goal will probably forever remain out of reach. For this reason, we have collected thee-tools resources that might be useful in better perspective. During the last decade, the use and implementation of e-learning or electronic learning became a fully-fledged research area and also the use of e-tools has largely intensified. Offering e-tools is one thing, however, the effective use of them is an absolutely different issue, and a possible cause of problems stems from the transition from pen-and-paper learning materials into web-based learning materials. Efficient e-learning and an overview of

determining criteria for the effective use of e-tools, for both students and teachers point of view to learn Sanskrit is detailed exhibited in the article.

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