Classical Odia Language in the Digital Age

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Odisha's documentation and archival history dates back to the pre-Kalinga civilization that existed more than 5,000 years back in which today's Odisha was a major part of it. It, later was more vibrant when Kalinga kingdom and was widespread from Ganga to Godavari, geographically consisting of modern day Odisha entirely and partly Bangladesh, West Bengal, Bihar, Jharkhand, Madhya Pradesh, Chattishgarh, Andhra Pradesh, Telengana and part of Tamilnadu and Kerala. The epigraphs of cave painting in Gudahandi and stone inscriptions of Hatigumpha in Udayagiri complex are a few examples of the early documentations that the ancestral Kalingan tribes had made. Furthermore, the early Buddhist poets of Kalinga (popularly known as *64 Sidhapada*) wrote "*doha*" (spiritual verses) in Pali language. Pali is the language of all of the Buddhist literature and predecessor of modern Odia, Maithili, Bangla and Assamese language and has deep impact on many other Indic languages. Odia has travelled through a long journey of "*Tambapata*" (bronze plate inscription), "*Talapatra*" (palm leaf manuscripts), printed books since early 18th century and e-books in the modern days. Years of history that have perished during invasions by foreign invaders could have told more about this civilization. Modern Odisha state, so far has been able to uphold the pride of having the largest number of palm leaf manuscripts (over 20,000 manuscripts) in the world. Odia printing and publication industry is spread across all the 30 administrative districts of Odisha and other Indian cities like Kolkata and New Delhi and to some extent in some parts of Surat. A few million books would have been printed starting from the first book "*New Testament*" that got printed in 1809.[1] In this chronology there comes the new age reading tools "e-books" or electronic books less formally initiated in the eighties by students of Regional Engineering College, Rourkela (Now National Institute of Rourkela) and now crossed a decade.[2]

Odia got classical status on 20 February this year after 5 other Indian languages on the basis of its literary heritage of over three millennia. Interestingly, it is older than most of the most spoken languages in the world. Like many other mighty civilizations, traders of this region conquered places and took their language and culture to their occupied colonies. Early traders of Kalingan Sadhabas were trading silk and spices with South Asian countries. With them travelled Kalinga's language and culture. When all of the other language's have been able to have a strong presence on the Internet, online content available in Odia is way limited compared to even other Indic languages. It has been almost a decade since

Odia support is available in most computers across operating systems. But, the digital desktop publishing (DTP) published resources are still not available in a searchable manner – not on internet or in a computer locally. Currently, the Odia publication industry uses proprietary standard fonts for Odia typing. Akruti, LEAP office, Shreelipi are name to few. All of these were the only means for printing books using desktop publishing at one point of time. But, these encoding systems are out-of-date. The major drawback of these fonts is, they have regular Latin characters replaced by Odia characters. If a document is typed using one such fonts is sent to someone it is difficult to even read or reuse if the person in the receiving end does not have the exact font used for typing. As already mentioned the fonts are commercial and proprietary and it is mandatory to buy them to use. In reality most of the users do not buy and use pirated versions of the software for work. The printed documents typed in one standard is not compatible with the other one. To avoid this problems, an advanced universal standard called "Unicode" was released in early 2000. Unicode has both Odia and Latin characters in a font that allows both the scripts to be displayed correctly at the same time. It is universally compatible and all the operating systems have Unicode fonts installed in the computers. This takes the pain of installing multiple fonts to access any typed text. Searching any text typed in Unicode is as simple as googling something in English. Moreover, documents typed using one Unicode font could be read using another Unicode font. Unfortunately, none of the Odia newspapers have their publications in Unicode at this moment. This, practically does not allow any reader to search, access, reuse and quote any content. Same is the case for all other published resources like books and magazines. More than 80 per cent of the published content are not even released online and also not archived.

Many publishers, intimidated of online content plagiarism have been protecting their publications. Unfortunately, copyright laws in India are not stringently practiced unlike the west. This has given rise to a parallel piracy market for the movies and music over the years. Interestingly, books are not of that much demand as music and movies are. As a result of the lingua-cultural shift to English from native languages regional language publications are not widely sold in the post-colonial Indian book market as compared to the English publications. The case of the use of Odia language as a language of governance is still not put in place. Odia is still to be used as a medium for official communication in all of the government offices. English medium educational Boards have been domineering over the Odisha state Board. Despite of these challenges, number of Odia dailies is slowly growing. There are around 100 newspapers published daily from various regions of Odisha. It is essential to note that news archives, unlike literary writings have much of any kind of high commercial value. So is in the case of scholarly and research publications. If all of these publications could be made available online in digital form that will take Odia literature to the global audience. This triggers the need of A) making sure the forthcoming publications are not just typed in Unicode but made available online, B) digitization of published books and making them available free on internet.

It is essential to take measures to ascertain the forthcoming publications use Unicode standard and digitizing published matter and publishing them online. Online content could be made available in Unicode and has trillion times reach than printed matter. As a vast number of the users use Microsoft's Windows XP they could either upgrade their operating system or move to completely free and open source and Linux based operating systems like Ubuntu. At this moment,

Odia has far less content on internet. Odia Wikipedia tops the list of Odia Unicode content websites and is the largest Odia online encyclopaedia with over 8,000 articles. Available for free on or.wikipedia.org, Odia Wikipedia is a community project where any user could create, edit and modify content. The articles being encyclopaedic and referenced from other reliable sources has some level of authenticity. As this is a small project and is developing it needs more voluntary contribution to grow to a larger project that could serve the purpose of an Open Educational Resources (OER) for students. There are a handful of web and news portals maintained by individuals and organizations that have Odia content in Unicode. The other upcoming project is Odia Wikisource which is an online library. Odia books that are useful for the Odia speaking community like classical literature, religious scriptures, dictionaries and lexicons, journals and research papers and manuscripts could go online on this platform. The most important thing about these two projects is that they both have only volunteers as contributors and anyone and everyone could contribute. Any individual or organization who is interested could add a lot of value to Odia language by contributing the process of digitizing content and making them available for free. These projects, additionally are released under Creative Commons Share-Alike licenses that allows free reuse, modification and commercial reproduction of content. Many valuable books could also be part of Odia Wikisource.

Srujanika, a Bhubaneswar based organization in collaboration with National Institute of Technology, Rourkela and Pragati Utkal Sangh, Rourkela has scanned over 760 Odia books. Out of these, over 200 books are hosted in a non-profit project "Open Access to Oriya Books (OAOB)" and hosted at: oaob.nitrkl.ac.in. Organizations like Manik-Smrutinyas and Institute of Odia Studies and Research have re-licensed books of noted author Dr. Jagannath Mohanty and Dr. Debi Prasanna Pattanayak and Subrat Prusty respectively to Creative Commons licenses for free, commercial distribution. Majority of the resourceful magazines like The Utkal Prasanga could be also made available in Unicode standard by changing its copyright terms to Creative Commons licenses. Larger debates are also needed to convince authors and knowledge and information producing organizations/departments like universities and government's departments (e.g. Information and Public Relations, Department of Mass Education and Department of Statistics.) to migrate from proprietary copyright restrictions to reusable licenses like Creative Commons licenses. This will not only will help for more public-private collaboration and knowledge production but also taking language resources to masses which is discontinued because of lack of updated technological advancement like use of Unicode font and digitizing valuable content. Government portals need Odia localization in Unicode standard so public get access to information in Odia language and this could make e-governance much more easier. Government notifications that often are released publicly are found to be released in image formats. Many such public and private information could just be released in plain text that will increase the searchability, accessibility and reusability million times.

Footnotes :

1   Pattnaik, Pushpashree. Presentation on digitization of Odia books in Utkal University (21 February 2014)

2   Mohanty, Jagadish, eSabada. eOdissa.com (2009 - 2010)