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Wanted: *The Five Most Sought-after Educational Apps to Enhance Learning of Oral Traditions in a Digital Age*

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Abstract

The best practices of pedagogy, curriculum and instructional design in the West have primarily evolved from textual traditions. With the use of digital technologies becoming indispensable in education, there is an opportunity for our educational enterprise to share and apply its best practices more broadly including ethnocultural educational settings. Doing so will not only foster new partnerships but will also empower educators who work with non-textual knowledge resources such as oral traditions. In this paper I will discuss how my experience of working with ginans, a collection of sacred religious hymns of the Shia Ismaili Muslim community, has informed my practice and perspective as a practitioner-researcher. More specifically I will describe the five most sought-after educational technologies or apps identified by young ethnic learners in today's digital age.

Introduction

In this contribution I will share with you the five educational apps most desired by the ethnic youth to enhance learning of oral traditions. The successful transmission of oral traditions to successive generations is crucial in safeguarding oral traditions, yet not much attention has been given to this area in the West. The best practices of pedagogy, curriculum and instructional design in the West have primarily evolved from textual traditions. With the use of digital technologies becoming indispensable in education, there is an opportunity for our educational enterprise to share and apply its best practices more broadly including ethnocultural educational settings. Doing so will not only foster new partnerships but will also empower educators who work with non-textual knowledge resources such as oral traditions.

This study is based on my work with the Ismaili Muslim community in Saskatoon, Canada. As a minority community within Islam and a diaspora community in North America, the community is facing challenges in teaching their oral tradition of *ginans* (devotional hymns) to its younger generations. The oral tradition of *ginans* originated in India and continues to be part of congregational services of the community today despite being in language not understood by most Ismaili youth living in North America and elsewhere (Asani, 2002). Historically, the oral tradition of *ginans* played an important role in connecting faith with culture and society in India. It helped embed religious identity of the Ismaili community as native to Indian culture and society. But the level and quality of engagement of the youth in the community with *ginans* today in North America differs from what it was in India. Additionally, due to geographical dispersion of the community majority of the *ginans* have been lost or forgotten. Thus for the past 15 years or more I have been gathering and organizing *ginans* with the goal of preserving them. First as a system scientist and later on as a librarian, I have learned about various approaches, algorithms, and technologies to organize, manage, share and preserve

knowledge. And along the way, it started to become apparent to me that for any long term preservation effort to be successful and sustainable, community engagement remains crucial. In my experience, engaging a community to safeguard its own intellectual cultural heritage requires an educational mindset and not just a technological one. Thus using the oral tradition of ginans as a case study, I have been researching how practices from various disciplines may be combined and leveraged for engaging and educating the youth and thereby preserving community's traditional knowledge.

A recent case study of Ismaili Muslim children living in Canada revealed that “children construct their sense of self, including their cultural identity, as they interact with forces such as family, school, community, place of worship, the wider world, mass media, and travel” (Dalton and Virji-Babul, 2008). This research is also based on the premise that the ways in which ginans were perceived and utilized by elder generations (who grew up in their native land and migrated to the West as adults) are different from how younger generations who are born and raised here experience ginans. Unlike their parents, who may have enjoyed wider societal support in expressions of their faith in their respective homelands, the Ismaili youth growing up in Canada and the U.S. struggle to find their own personal sense of faith and its expression through ginans in the context of the society in which they live and interact in. This has been an important and deliberate positioning of this study as I sought to understand learners' perspectives on *how can digital technologies be utilized to improve teaching and learning of oral traditions in minority ethnic youth living in North America?*

Context

Regardless of its context or content, effective learning must take into account the intellectual and situational needs of learners (Driscoll, 2005). As educators we constantly strive to understand what learners think and how they perceive things in everyday life. We do this to ensure that we are able to adjust our instructions and lesson plans to meet the unique and changing needs of learners and keep them motivated and engaged. This is even more important in the context of ethnocultural learners as they struggle to find balance and synergy between their secular, societal and communal obligations and experiences.

It is quite natural for young ethnocultural learners who are born and raised in North America to feel affinity to the North American society and culture. For instance, use of technology in North America today is perhaps as native and prevalent as use of music was in India at the time when ginans were composed. In fact children born and raised in today's technological age are often called 'digital natives', “who have grown up with digital technologies, and are surrounded by and immersed in technologies in their daily activities. Some commentators maintain that there is a fundamental difference between the current and previous generations of young people, in terms of learning styles and how they access information” (Lai, 2011). It is normal, therefore, for digital natives to expect use of technology in teaching and learning. This is the reason why perhaps some scholars emphasize that educators must respond to these realities by incorporating "more technology-driven, spontaneous, and multi-sensory" learning styles (Prensky, 2001).

In the case of ethnocultural communities, an additional “potential benefit to making traditional knowledge accessible in a digital format is that this may make it more appealing to youth or others who may see traditional knowledge as *old-fashioned*” (Stevens, 2008). With technology becoming an essential expectation and motivator for young learners in North America today, what educational technologies could educators in ethnocultural communities provide for students to learn oral traditions and how? Unfortunately, there are not very many research studies in the current literature that discuss or bring together educational technologies for teaching oral traditions. This is not surprising as the general area of religious music including hymnology in the Western academia suffers from an identity crisis itself. As Beck explains, “religion and music as a singular entity appears to have tumbled down into one of those bottomless ravines between monolithic departments on present-day college and university campuses” (Beck, 2001). In addition to being very dogmatic about its disciplines, unfortunately our current educational enterprise is also a victim of its traditional reliance on, and infatuation with textual traditions and sources, as Marini points out (2001):

The primary reason why sacred music is largely absent from our courses is not the need for special training. The problem lies elsewhere, in the inadequacy of our interpretive and pedagogical models of what religion is in the first place. Most of us have been trained in a logocentric approach to religion that focuses on religious thought, especially belief systems and moral teachings.... Sacred song is perhaps the most potent, and popular, synthesis of head and heart in American religious culture. To exclude it is to disembody religion artificially and inaccurately. To include sacred song, on the other hand, invites our students to confront religion for what it has been in human experience: a synergy of belief, ritual, institution, and spirituality that always remains beyond the reach of logocentric inquiry. When our students hear how a religion sounds, their study of it, and our teaching of it, can be fundamentally transformed.

In this respect educational technologies can perhaps be seen as means to integrate and unify different contexts (North American versus ethnocultural), approaches (traditional versus technological), methods (textual versus oral), as well as stakeholder needs (educators versus experts) in and around learners.

Traditional Teaching Tools

In the context of the Ismail community, the teaching of oral traditions generally takes place in the community-run Sunday school program. In Saskatoon the Ismaili community has been around since the 1970s but its population has never exceeded more than a hundred members. Despite its small size, the community has a dedicated place for congregation, which is also where the Sunday school is held. When it comes to ginans, the performance of Sunday school students in Saskatoon is particularly weak, which is a common concern shared by the community leaders, elders and parents alike. Being a small community, access to expert ginan reciters also remains a challenge. In addition, the volunteer teachers are not necessarily trained to teach ginans in an organized and

effective fashion. All these factors impact the quality of teaching as well as student motivation and engagement.

As noted above, ginans are part of the community's intellectual and liturgical heritage and given that ginans continue to play a vital role in the religious life of the community, teaching of ginans is one of the mandates given to the community Sunday school. Just as memorizing the shape and sound of alphabets is an initial and important step in preparing students for their higher studies, the ability to recite ginans with proper pronunciations and tunes is crucial initial step for students to learn about expressions of their faith and devotion. The language used in ginans is a combination of many Indic languages, which makes it difficult to say and understand the ginans for students. In addition the Indic language phonetics are different and distinct from those in the English language. To this end, volunteer teachers have developed several textual and oral learning resources for students to use in classrooms.

In terms of textual and paper-based resources, gnan lyrics are transliterated in the Roman script for students to read and follow recitals in their classes and congregations. Furthermore, a list of difficult words with their meanings and pronunciation guide is also provided at the end of each gnan to assist motivated learners to familiarize, memorize and recall these words during recitations. Although not distributed widely, English translations and summary of the meaning of ginans are also made available to students to foster deeper understanding. Since each gnan has a specific tune for singing, students must also master these tunes to be able to lead and follow congregational recitals. The melodies used in the ginans are drawn from the classical Indian musicology and students must learn these directly from trained teachers and experts. The expert reciters help students with phonetics, performance and learning various tunes for proper recitation. In terms of digital resources, digital audio files (in form of MP3 and audio CDs) are also made available for students to listen and practice these tunes.

Envisioning Transformative Technology-Driven Learning Tools

The following learning tools were identified and envisioned based on my interactions with the young learners, parents and teachers of the Saskatoon Sunday school. Making these educational apps available to learners will go a long way in not only connecting young ethnic population to their ethnocultural heritage but also in safeguarding the community's intangible and intellectual traditions for generations to come.

1. Configurable juxtapositioning of text and translation

Students expressed their desire to be able to see the Romanized text of lyrics and its translation side by side. While this is not an entirely new idea, it is perceived as very useful in the minds of the students as they learn to read and recite ginans. As mentioned before, the teachers have attempted to fulfill this particular need of their students by preparing such materials in print (see Figure 1).

GINAN: Ghar sar vadhaayun more liyo by Pir Sadardin

Eji Ghar sar vaadhaayun Shaah more
liyo avtaar,laakh choraasi Shaah tun
jiven-jo daataar

Blessed be your homeEach and every
homeAs our Lord has manifested
himself before usO Lord! You are the
sustainer of all living creatures of the
world

(Refrain, to be repeated after each part)
*bhore man sirevo sirjannhaar,jivddaa tun
jaag alaaraa tun jaagmere alaah so din
aave ji;*

Serve the Lord with an immaculate
heart. Awaken O soul!Awaken O
attendant of God! O Allah! I wish I see
such a day

sache saaheb jiki karanni mittheAli jiki
karanni ham dil bhaave;jivaddaa tun jaag
alaaraa tun jaag;mere alaa so din aaveji 1

The devotion to our true LordThe
devotion to our beloved AliGives
satisfaction to our hearts. O Allah! I
wish I see such a day

Eji Sir so hamaaraa yaa Ali tere paaun
dariyaa;tere pirsaaade yaa Ali jivaddaa
nipannaa

We bow our heads down to your feet,
O Ali, Because of you the lives of the
universe came into existence.

*bhore man sirevo sirjannhaar,jivddaa tun
jaag alaaraa tun jaagmere alaah so din
aave ji 2*

Serve the Lord with an immaculate
heart. Awaken O soul!Awaken O
attendant of God! O Allah! I wish I see
such a day!

Eji Visav kunvaari Shah tun paranego
baali;jit khaddaa huaa Shaah tun anatejo
vaali –

O Guardian of the universal souls! You
will establish a spiritual union with the
human soul by conquering the evil
forces hidden within it

Figure 1 – Juxtapositioning of ginanic text and translation in print

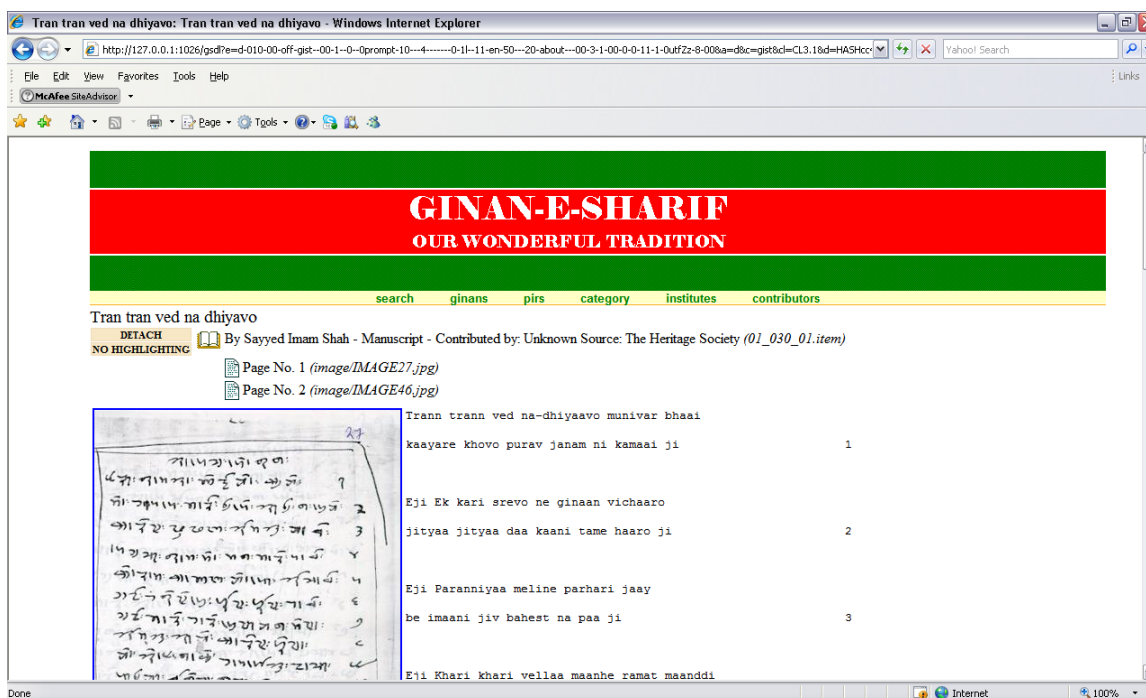


Figure 2 – Juxtapositioning of ginanic text and translation in a digital repository

In terms of feasibility of this app in the digital realm, a few of the open-source digital repositories that are used to manage digitized collections in libraries (such as Greenstone, Islandora, etc.) have built-in juxtapositioning functionality. However these repositories often assume one or both source documents to be in image or pdf format (see Figure 2). This functionality can be leveraged to make the proposed app even more flexible by letting both the text and translation to be configurable to accommodate various languages and not just the Roman script. Thus in addition to the juxtapositioning text and translation of a given ginan, the functionality to be able to configure and personalize text and translation script display could make this app a valuable and versatile educational tool.

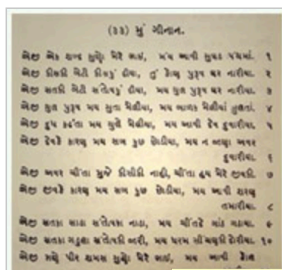
2. *Hyperlinked difficult words to learn meaning and pronunciation*

Even with the transliteration of ginans into Roman script, students must learn how to pronounce words properly. In the traditional face-to-face interaction, instructors would be responsible for helping students improve their pronunciations. In a digital learning environment, this could be achieved through hyperlink and digital audio technology. On the Worldwide Web for example, this technique is commonly referred to as mouseover or hovering and is implemented in HTML by providing a title attribute within the anchor tag used for creating hyperlinks:

```
<a href="" title="This text becomes visible upon hovering.">My Link</a>
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An advanced implementation of this idea (which is also widely in use these days) would be to display another webpage instead of simple text upon mouseover or hovering. The value-add of the proposed app in this context would be the ability to integrate textual (for meaning of difficult words) and audio (for pronunciation) in a non-intrusive yet context-sensitive manner for learning foreign vocabulary.

Ginans: A Tradition of Religious Poetry:



The *ginans* are a vast corpus consisting of several hundred (indeed, by some estimates over a thousand) hymns or religious lyrics which have for long been a central part of the religious life of the Indian Nizari Ismaili Community, and of which they continue to form the living religious tradition. The literature is also shared by the Imamshahi community in Gujarat, who are believed to have split off from the Ismailis sometime in the 16th century.

The term '*ginan*' is a Sanskrit-derived noun, which may be variously rendered as 'hymn' or 'poem'. It is derived, to some extent, of the Greek word *gignomai*, 'to be born', composed by the Great Ismaili Saint Pir Shams. *Ginan* 33, p. 37.

The language of the *ginans* is fascinatingly mixed. Its vocabulary is derived alike from Sanskrit, and languages descended from Sanskrit (chiefly Gujarati) on one hand, and Arabic and Persian on the other. Few *ginans*, if any, can be distinguished by content. What rather gives each its unity, its identity, is the melody (*raga*) assigned to it. Furthermore, the last verse of every *ginan* mentions, without fail, the name of its accepted author. It is these features which make every single composition, whose content is normally quite heterogeneous, recognisably distinct.

Figure 3 – Web Hyperlink and hover over features (Source: Institute of Ismaili Studies)

3. Synchronizing lyrics and sound with user controls

Another dominant desire from students was to be able to follow lyrics while listening to expert recitation. In the traditional face-to-face setting this is an effective multisensory teaching technique utilized by instructors. Interestingly for very different reasons, the ability for an app to replicate this technique has come across as a very desirable technology in the context of a digital learning setting. From students' perspective, having such an app liberates them from being physically present at a given location or time, thus making the entire process of learning ginans not only personal, but also convenient and above all on-demand.

Once again from a feasibility perspective, the underlying foundational technology for implementing such an app may already be available albeit with a lower level of sophistication. For example the LRC file format is commonly used for synchronizing lyrics with an audio file. It is a text-based format in which timestamps are provided for displaying either individual words or entire lines as desired. Some mobile apps such as *Lyrics Go* have the ability to attach LRC files to desired mp3 files to achieve such synchronization in smartphones and other handheld devices. In addition to transcending time and place of learning, the value-add for developing such an app will be in its ability to provide additional user controls (such as play/pause, rewind/forward, repeat/loop, etc.) to become a critical app for educational purposes.

4. Online annotation of lyrics

In the print realm students rely on printed ginan texts compiled and provided to them in a book format. It is not uncommon to find annotations and markings on these books as manifestation of the need to personalize both the artifact and the knowledge contained within it. Understandably, there is a desire for students to carry such expression of personalization in the digital realm as well. Functionalities of such an app may include ability for students to record personal information such as their favorite, mastered, or difficult to learn ginans, etc. In addition this functionality can be used to record and retrieve additional contextual information that students may find useful in remembering the content and delivery of ginans such as syllables, accents, or intonations for better recitations. This data is of course personal and transient throughout a learner's journey.

While not exactly the same, from technical feasibility standpoint, an aspect of this desired functionality could be related to the ability of many online news websites to let their readers post comments and replies in the context of a given news article. Another possible implementation can be seen in the ability to annotate or tag digital resources. For instance, the DiRT (Digital Research Tools) website¹ lists a plethora of online applications and plug-ins that allow users to “to take notes, share them with other researchers, attach them to digital resources, and more.” While the desire by students to add and edit intonation in and around lyrics is quite understandable in the physical world, implementing this app may not be as straightforward to implement.

5. Real time singing feedback

¹ Please see Annotation and Notetaking Tools available at <https://digitalresearchtools.pbworks.com/w/page/17801642/Annotation%20and%20Notetaking%20Tools>

The most desirable app identified by learners is unequivocally the ability to receive real time singing feedback in a private setting. Unlike learning other subject areas, singing requires students to perform in front of their peers. Many students find this aspect of learning ginans very intimidating even though they may have genuine interest in ginans. This, in many ways, is akin to public speaking that initially makes many students nervous despite their command on the subject matter. With the ability to receive personal feedback in a private and safe setting, many students may find learning ginans less intimidating, at least initially. Another aspect that may explain strong desirability for this app from a learner's perspective is that many a time students are encouraged to record and provide recording of their renditions of ginans to their instructors for review, which again despite being an effective technique requires putting oneself out there. If the intention is to be able to build learner-centric teaching tool, this app more than any other, deserves our attention. This is because that in addition to providing feedback to learners on their performance, it also eliminates intimidating factors that may keep many learners from even trying.

In its simplest form, such an app is envisioned to provide real-time feedback to a learner's singing based on comparison to an expert recitation. Fortuitously there are several flavors of this functionality that have already been developed. In a relatively recent review of software designed to provide feedback to singers, the authors identified several applications and projects such as Singbad, Albert, Sing & See, etc. (Hoppe, Sadakata & Desain, 2006) Perhaps the most applicable and promising software is MiruSinger which was developed in Japan and has the desired capability to provide comparative feedback between learner and expert renditions: (Nakano, Goto & Hiraga, 2007):

MiruSinger is a singing skill visualization interface that ... focuses on visualizing the characteristics of singing skills with real-time feedback. Although there are previous systems for singing training assistance that provide real-time visual feedback of the singing voice, none had utilized real-world (commercial) recordings as referential data.

From an educational technologies perspective, the value-add of this app is that it not only continues to perpetuate the master-apprentice signing model that has been proven to be very effective in developing basic singing and performance skills, but also alleviates students' fear of failing in front of peers or public.

Conclusion

If education can be defined as a process of transforming information into knowledge, then educational technologies can perhaps be seen as a critical enabler of this transformation in today's digital world. Using ginans as a case study, I have tried to explore how modern pedagogical tools and technologies can be leveraged for educating ethnic youth about their cultural heritage. I hope that this study will be of relevance and interest to other religious and indigenous communities who are also struggling to find ways of safeguarding their rich intangible cultural heritage for future generations in a digital age.

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