



DOI: 10.2478/jolace-2022-0011

Digitalizing Folk Education: A Semiotic Modeling Approach

Soumya Sankar Ghosh¹ and Sibansu Mukherjee²

¹VIT Bhopal University, India

²Society for Natural Language Technology and Research, India
soumya.sankar@vitbhopal.ac.in

Abstract

Cultural legacy, according to UNESCO, includes not only monuments and collections of artefacts, but also traditions and living expressions inherited from our forefathers and passed down to our successors. Folk literature, in the form of poems, lines, and melodies, is a part of cultural legacy, and its preservation for future generations appears to be crucial. The advent of technology in the post-covid era gave rise to a new perspective on the educational system. Folk education, which has never been regarded as a separate discipline in the sphere of primary education, is now in jeopardy as it is losing its cultural heritage in this digital age. It can only be preserved if it can be linked to newly developed technologies. The current research proposes the Socio-Digital Knowledge System, or SDKS, in light of this. This model deals with the detour of transition from the 'as is' to the 'as ought to be' reality, which can be considered the main grounds of folk education. The status 'as it is' of folk society represents the remaining varieties, not yet to be accounted for by any other educational developmental agencies. There may not be such instances of 'remaining varieties' in real. On the other hand, the 'as ought to be' educational system remains under development determined by surrounding political and socio-cultural parameters. This effort focuses on the nature of the psychology of the monolingual speakers' collective self when they are obliged to maintain a tumultuous social environment with two poles, 'as it is' and 'as it ought to be.' In Indian communities, our model focuses on the ambiguous interpretation of social mobilization and hierarchy principles, as well as the imprecise term 'class.' To comprehend the mentioned bipolar possibility in terms of educational growth, we employ semiotic devices as a methodology.

Keywords: folk education, digitalization, socio-digital knowledge system, translingualism, transculturalism.

Introduction

In addition to language and culture, India's diversity includes color, customs, and even religion and beliefs. Our country has been impacted by the cultures of other countries as a result of cooperative relations. Consequently, the pre-existent diversity, brought by every ethnic community of this country, becomes increasingly complex when we take the plunge into the sea of folk culture. The following example will help us to understand the complexity, the examples are taken from Bhul (2018):

- (1) chele ghumalo, paRa juRolo
borgi elo deSe.
bulbulite dhan kheyechhe, khajna debo kiSe.
'Kids slept, the neighborhood is silent,
looters came, birds have eaten the paddy,
how can I pay the tax'.

- (2) mOni ghumalo, paRa juRolo
gOrki elo deSe.
gulgulie dhan kheyechē, khajna debO kiSe.
'Babies slept, the neighborhood is silent,
land flooded,
Gulguli has destroyed the paddy, how can I
pay the tax'.

Example (1) is a widely common folk verse in Bengal's western region, but (2) is mostly recorded in Bangladesh's eastern region, Chittagong (Shahed 1993). A detailed examination of these two examples reveals that both verses include not only cultural but also historical and demographic identity. The word *borgi* is used in (1) to refer to the Maratha onslaught on Bengal in the 18th century. According to Hossain (1982), the Maratha invasion caused fear and ruin in the social, cultural, and economic spheres. This type of verse uses a rhythmic pattern to convey and represent that horror. Whereas in (2), the verse doesn't depict any such invasion or attack context, rather *gorke* here indicates a high tidal wave that destroys the crop every year in the rainy season.

The most essential sign that these two instances convey is the traversing of folk culture, and when this happens, the structure of folk culture does not lose its natural discourse but rather establishes the identity of people and culture in the framework of a global society. The idea of folk traversing, which we are discussing over here, is called 'dual correlation' which is happening between two different semiotic systems (two different folk cultures, in our case) in the persuasion of rhetorical contexts that elaborate 'new meanings' (Lotman 1990). In educational practice, these new meanings are crucial. The present work while studying folk literature discovered some instructional components that remain constant as diachronic semiospheres cross.

Folk education is fighting for survival in today's world for two main reasons, *firstly* in Indian primary education, folk education has never been considered a separate discipline. As a result, it has always been restricted to a single semiospheric boundary, preventing the semiosphere cross from occurring. *Secondly*, in the post-covid era, the use of technology in education, such as online education systems and virtual classrooms, has expanded the age-old concept of semiosis. Everyone, regardless of their socio-cultural or economic distinctions, has been learning to live in the new culture, which Paul Daugherty refers to as a NEW REALITY. Furthermore, the current pandemic crisis has accelerated the adoption of a growing digital culture as a requirement of daily life. As a result, the newly emerged semiotic space is a two-dimensional environment that includes technology as an integral aspect, rather than a separate act of the teaching-learning process. Under these circumstances, the current work conceptualizes folk education as a strategic model of education, which will not only solve the issue of folk sustainability but will also improve our primary education in general.

While dealing with this newly established two-dimensional semiotic space, the present study proposes a system called the Socio-Digital Knowledge System (hence SDKS), where, we attempt to present a conceptual framework for a new-real folk education strategy based on SDKS in this study. However, before we do so, it's critical to consider the significance of folk devices in the educational system.

Theoretical background

The creation of a section of society that was associated with the rural class, at least for the period from the 18th century until its dramatic transformation after World War II, in

its midst, reinforced folklore as an autonomous discipline in the study of Greek culture. Following the war, a shift occurred, resulting in changes in the rural class as well as an increase in the number of people living in cities. As a result, these changes heightened the social and urban substance of folklore (Dundes 1965). One of the most important benefits of folklore in the classroom is the understanding of modern man's modern identity and interaction with the "other" in the context of students' correspondence with one other, or more broadly, the correspondence between students, parents, and teachers.

When discussing the educational system, Tagore (1929) established the concept of *education of feeling*. By utilizing this term, he made it apparent that it is distinct from the *education of intellect* and *education of senses*, as it allows one to comprehend humankind's unity with the cosmos through spirit, soul, and intuitive feeling. A perfect rendering of this idea could be found in his songs, consider (2):

- (2) Simar majhe OSim tumi bajao apon Sur
 amar majhe tomar prokaS, tai eto modhur.
 "Bound by boundaries, O' you boundless,
 you play your melodies.
 It is therefore in me your presence I feel
 with such sweetness."

As the music and idea of the song indicated in (2) are heavily influenced and inspired by Lalon's song, the concept of infiniteness within finiteness that he expresses here comes from our folk culture (3).

- (3) ei manuSe ache re mon, jare bOle manuS rOton
 Dube dEkh mon tare;
 kirup lilamOY, jare akaS patal khONja
 tini ei dehetei rOY.
 "Soul is there within this being - That is called
 human-gem.
 Have a dip into it and you will find it full of
 dalliance.
 For which, Quest is everywhere Lives within
 this body."

The philosophy of education that he promotes through education of feeling is primarily founded on folk, and this will aid the student in discovering the reality of education, which is universalism rather than imperialism, commercialism, or nationalism. According to him, a country's educational system should allow learners to choose their educational path. With this in mind, he established Sri Niketan and Bramhachari Ashram in Shantiniketan, allowing his pupils to pursue study in the vocational field as well as any branch of the arts or science. He goes on to say that the proposed education system should use the learner's mother tongue as a medium because it aids in self-expression and self-realization. The addition of mother language education will assist the learner in gaining a better understanding of his or her community and culture. This will, in some ways, aid in the development of their comprehension skills. The following example will help us to understand this. The example is taken from Bhul (2018)

- (4) hi hi Ri pipiRire bon janamlan
khOj kamanrebon haralen
haratare bon haralen
sasON beDaRe bon jat ena ho.
'We were born in the place called Hi
Hi Ri Pipiri. We were brought up in
Haratare. Based on caste we get
divided in Sasong Bedare.

Folk education entails learning about history, society, culture, and change in addition to the language. *Binti*, the song referenced in (4), is a Santhali song. It is a major piece of oral literature in their culture, containing all social and cultural behaviors, education, rites, and much more. As a result, this folk song is capable of informing the entire society about their religion, culture, and social standards. *Binti* is just one example; in West Bengal alone, there are at least 100 different varieties of folk music, each of which is unique to a different region. Our oral literature is so rich and diverse that, if correctly taught, it has the potential to transform the educational system, particularly in terms of eradicating inequity in Indian education.

The present National Educational Policy (NEP-2020) of India's vision and mission are aligned with the education system we discussed. Its goal is to turn our homeland into a "vibrant knowledge society" by ensuring that everyone has access to a high-quality education. To this end, NEP-2020 has made a significant change in the school education system, replacing the old 10+2 system with a 5+3+3+4 framework. Primary education has received the most attention in this newly established system. In contrast to the previous 10+2 framework, the proposed structure incorporates the age range of 3-6 years within the educational pyramid. The primary goal is to reinforce the foundation of Early Childhood Care and Education (ECCE) as well as the overall development and enhancement of the educational framework.

The Socio-Digital Knowledge System (SDKS) paradigm is based on the NEP-2020 proposal for mother-tongue education. However, the implications of this paradigm are being hampered by inequities in the Indian educational system. As a result, the model is being developed in such a way that it may be able to address those inequities. But, before we go into that paradigm, we must first acknowledge the disparities in our educational system, which have gotten even worse as a result of the pandemic.

Inequality in education: A challenge in implementing SDKS

Inequality is such an expression that covers almost all the problems regarding education in India (Gindra 2020; Kishore and Jha 2020). Provisionally, we may refer, particularly for India, to three rigorous areas of inequality, i.e., (a) economic inequality, (b) socio-ethnic inequality, and (c) smart-service centric inequality.

a) *Economic Inequality*: Economic dissimilarity is the biggest problem for the Indian societies and education system too. It is reported that in India before the Covid-19 pandemic 35% of people of the rural population was in poverty. It is expected that the percentile will reach 50.9% to 55.87% and for urban people at 39.08% to 42.4% in FY 2021-22.

It has been assessed that 77% of the total national wealth belongs to the top 10% of the population (Kwatra 2019). It is also observed that 28% of the total population of the country is middle class, whereas 14% is lower middle class and around 3% is upper middle class (Ramanathan and Ramanathan 2019).

MHRD, Government of India, reported in 2018 that at the different levels the school dropout rates were as follows: 4.13% of students at the primary level, 4.03% at the upper primary level, and 17.06% at the secondary level. According to the expected increase in the poverty rate, it is estimated that around and over 62% of the school students would be dropout at the school level in 2020-2021, where one of each eight students is a dropout in the midway of secondary education. Majorly girls leave education for marriage and boys due to support for their families.

Census of India in 2011, estimated that 3.9% of the total child population are laborers. In line with the poverty and dropout expectancy, the post-pandemic child labor population will be well greater than what Census 2011 estimated.

According to MSOPI, in India, the present literacy rate is 69.3%, where males are 78.8% and females are 59.3%. As of Census 2011 estimate, 71% of households with 2/3 members are with two rooms or less (74% in rural and 64% in urban areas).

b) Socio-Ethnic Inequality: In nine Indian states, 84% of total crimes are targeted at Dalit people, where the normal crime rate is 0.29%. According to National Crime Record Bureau, these nine states have 54% of the total Indian SC population. The tribal population of India is 8.61%. The literacy rate among the tribal peoples in India is 6%. The minorities in the country are 19.3% of the total population.

Language is one of the greatest causes of inequality. According to the latest census data, India has 1369 rationalized mother tongues and 1474 'unclassified' languages relegated to the 'other' mother tongue category. However, only 22 languages are scheduled in the Indian constitution. This situation is problematic. For example, there are 91 Mother tongues in West Bengal. 88% of the total population is Bengali. Rest 90 languages cover only 12% of the total population of West Bengal. [Present reality shows that one foremost reason behind "children's low attendance and poor performance in school is the problem of comprehension since the language in which they are taught (Hindi) is foreign to them," whereas Draft National Policy on Education (**DNEP**) mentioned in 2016 that "the medium of instruction be the mother tongue or regional language up to class 5 as a mandatory provision." This linguistic inequality causes "a high dropout rate among tribal children, and by Class 5, 50% of them leave school, and by Class 10, 80% drop out. According to some statistics, out of 100 tribal children, only 20 manage to appear in high school examinations and only eight of them pass".

Gender inequality: A study shows that 20% of students drop school after primary education. 70% of them are girls (Siddhu 2011). West Bengal, at present, covers a 70.16% literacy rate over its total population, where males are 79.89% and females are 59.73%. At the Indian level, the difference is: males are 78.8% and females are 59.3% in the rural area and 89.67% and 79.92% respectively in the urban area.

c) Smart Device Centric Inequality:

- 79% of students in India have smartphones. A smartphone cannot be a suitable device for online learning.
 - Only 17% of students can reach laptops and only 4% of them can afford tablets.
- 59% of the students surveyed follow online classes over WhatsApp and Zoom, whereas only 30% provided an official online platform for schools or colleges.

Methodology

With these inequities in mind, the study will primarily employ semiotic methods to apply the SDKS model and achieve the aforementioned objectives, as semiotic theories

may be applied to a wide range of cultural contexts. Since this research is focused on the universal concept of education for all through the localized expressional value of folk culture, semiotic instrumentation is expected to play a role in the thought's design and implementation. The semiosphere idea proposed by Lotman (1990) provides the theoretical depth and richness needed to evoke the dimension and concept of folk-semiotic language education.

On the one hand, the proposed methodological point of view is responsible for and capable of categorizing the ability of social groups, such as people and tribal groups in Bengal, to adapt emerging educational techniques via electronics through the use of the semiosphere. It is also responsible for applying structural semiotics, such as establishing an iconic link between indigenous content and extrapolated contemporary content, i.e. the use of metaphors within a semiotic boundary, and so on. With this methodology, it would be easy to adjust for educational gaps or other inequities. This would also allow folk or other indigenous cultures to accept the establishment of the current glocalized platform-driven sign system, as well as the shift of the pre-located semiosphere, as required for the convergence of the approaching sign ecosystem.

Regardless of socioeconomic differences, phenomenological awareness of Indian cultures, utilizing GLOCAL knowledge development, and concealing addicted smart device usage may be able to attend the post-digital wave for the Indian next generation. SDKS is an example of a model that ensures human-technology hermeneutic interactions. It also ensures that all individuals have access to education as part of Google's Next Billion Users (NBU) strategic initiative. GOOGLE, on the other hand, will run as a virtual republic, whereas SDKS instills digitalism in society but does not push for commercialization. Hence, SDKS will essentially (a) re-evaluate the values of students' cognitive development and (b) provide socio-digital support to them to address the issues, particularly the gap between Indian communities with all of their indigenous elements and the NBU-centric digital manifestation of the educational system.

SDKS will develop a Speaker-Hearer Nexus (SHN) at its core, which will turn local indigenous linguistic expressions into a new expression inside a globalized platform-driven area with a complex sign system. Expression Multiplex (EM) is the term referring to this new expression space. EM can be conceived of as an atomic shell of communication in the new reality. Even though a subject is always super-active in this inter-space movement, each linguistic component of EM can travel between worlds since a subject is a living creature with free will, desire, and wish. The mass capacity of a subject with these emotional aspirations transforms an EM into a Hybrid Space. Therefore, in the present digital mode of communication, the mode of production of language implies that the language itself is multiplied by infinite interactions, by times in the space of EM.

We have purposefully defined this linguistic space of EM as translingual, in which the mode of production is dependent not only on traditional monetary transactions, but also on transactions in which the object of the transaction is invisible, such as invisible money in EMI operations, the use of private information, and the use of an individual's time in transactions. Although some communities survive, the realm of translingualism is elaborated and extended across them, as defined by Chatterjee as the "inner domain" (1991). As a result, the inner domain of the translingual space for linguistic communities is the same as the outer domain. As a consequence, the diverse roles of translingualism in EM supplement the core interactional qualities and concept of context in SHN. As a result, SHN's internal value system has mostly vanished, albeit some exterior domains retain their primacy.

Within the SHN area, the optimal speaker-hearer nexus provides interpretant. The interpretant is linked to a sign that has another working nexus (signified-signifier). If we look at Barthes' Myth via the macro assumption of SHN, we can see that it produces second-order meaning or signification. The following are the principles of the second-order meaning of signification:

a. First Phase :

The macro premise of SHN:

- I. Basic Interactive Module.
- II. Rhetoric Module.

b. Second Phase:

Ideal Speaking in Macro premise of SHN:

- i. Basic dualist speaker-hearer nexus with the concept of "true" and "false".
- ii. The journey from Basic Interactive Module to Rhetoric Module.
- iii. Basic dualist speaker-hearer nexus with organizational truth.
- iv. The emergence of mass media consumable true-false dichotomy, expressive MYTH.

The advent of social networking - the explosion of linguistic data and events – is a NEW REALITY, in which human communication and comprehension are limited. In terms of communicational easiness, the enormous increase in expression reliability and expression-based allocation of utterance leads to pandemonium. It allows rather it instigates always switching from one expression to another expression paradigmatically associated with each other not by equivalence but by the domination of the mode of production in translingualism or transculturalism where the translingualism is another universality measure for the ethnic groups playing in the same ground of translingualism (occupied in the collective human mind). This space exhibits:

- Lacking the ideal speaker-hearer nexus
- lacking to hold the basic semiosis
- Contextlessness
- Since it takes expressions from the default paradigmatic field governed by the power, Constraints on the linearity of discourse thus syntactic rules lack temporality
- Unspecific interaction between real and virtual
- Shadowing the basic assumptions in semiosis, the sign has collapsed, Myth is over-generated, meaning also is over-generated arbitrarily

The indigenous cross-semiospheric transaction of educational materials or linguistic data is highlighted in this model to decipher the complicated communication so that the massive rupture in the local SHN caused by globalized EM can be mended.

Discussion

To perpetuate the history of cultural exchange beyond semiotic barriers, folk societies employ and adapt the contents of their social knowledge. The children are the primary members of a semiotic barrier in the case of Educational Childhood (supposedly this group includes Nursery/Kindergarten through Class IV) with insufficient exposure to digital education. The study has worked on such a human cluster as a notionally bare sphere of knowledge to find a semiotic border, following Piaget's (1971) model of cognitive development.

SDKS: Model Building

Piaget (1971) identified four distinct stages in a child's cognitive development: I Sensorimotor (0-2 years), (ii) Pre-operational (3-7 years), (iii) Concrete-operational (8-11 years), and (iv) Formal-operational (8-11 years) (ages 12 and up). According to this paradigm, a child in the Indian schooling division's class V/VI can think abstractly because the "formal operational stage" begins around the age of 12. In a statement titled "Children in a Digital World," UNICEF stated that early childhood education must be centered on nature and the environment. The usage of digital devices from a young age may pose several health risks. With both estimates in mind, we propose that in SDKS, there may be three separate age groups of students who will be exposed to partial and full digital education. Take into account the following:

- *Educational childhood age* (Nursery/Kindergarten to Class IV): At this age minimum exposure will be given to digital education and maximum exposure will be given to the learner's folk and native culture.
- *Major educational developmental age* (Class: V to XII): Partial to moderate or advanced exposure to digital education will be given at this level. Digital education will not only bring the outer world knowledge to these learners, but it will also provide them a stage where they will connect their own culture and knowledge with the outer world in a successful way.
- *Higher or advanced educational stage* (Undergraduate, Postgraduate, and Research): Complete exposure to digital education will be provided. This stage will also encourage them to do their research on the path of broadening the community-based semiospheres.

The implementation of this three-stage formula would also help to keep the balance of the teacher-student ratio. In this proposed model, knowledge has become more inclusive; the behavioral pattern of human beings, their practices, culture – everything has found its place within the system of knowledge.

SDKS: Implementation and Analysis

Execution of SDKS largely depends on the socio-digital support of those students who are not even capable to buy a device. Socio-digital support includes free distribution of educational devices (specially built for digital education with global content) and building awareness and grooming to fit them into smart digital platforms.

Thus, to emphasize more EQUALITY and LIBERTY in terms of educational service to establish this model in digital education, we may customize the two spectrums we mentioned to provide socio-digital support and services to the students and researchers. The steps we would have adopted to fulfill the gap between the socio-economic crisis and the digital drive in the education system in India, in particular, are as follow:

a) Identification:

- i. Identification and quantification of school-going children of the lower-income group, and age-wise academic clustering (i.e. Educational Childhood (Nursery/ Kindergarten to Class IV).
- ii. Major Educational Developmental Age (Class: V to XII).
- iii. Higher or advanced Educational stage (Undergraduate, Postgraduate, and Research).
- iv. Cross identification, e.g. a student belonging to educational childhood living below the poverty line needs critical support.

b) *Provision of Support:*

- i. Critical support: Complete welfare, Beginner's fund allocation (financial support for the extreme cases of poverty in early childhood).
- ii. Moderated support: Scholarship and digital device support (Scholarship/ financial support throughout the academic life and Production and distribution of Tablet with android version 11.0 for offline and online content).
- iii. Partial support: Scholarship OR digital device support.

While the paper is still in its early stages, it is confident that the proposed SDKS model will improve and increase access to comprehensive early childhood care and education, especially for the poorest children. It will also ensure that all young people and adults' educational and life-skills requirements are met by ensuring equal access to appropriate learning and life-skills programs. Increase educational quality across the board and ensure that everyone achieves recognized and quantifiable learning outcomes, notably in reading, numeracy, and critical life skills.

References

- Bhul, M. (2018). jOno SikkhaY loko SoNgit- bikaS o gurutto. In P. Ray, & A. Dutta Ed.), *obhibEkti: Sikkha, Sahitto o SOMaj (Expression: Education, Literature and Society)* (pp. 80-91). Maharastra: Laxmi Books Publication.
- Dundes, A. (1965). *The Study of Folklore*. USA: Prentice-Hall: Indiana University Press.
- Gindra, K. (2020, April 12). *Problem faced in progress of education in India*. Retrieved May 21, 2021, from *India Today*. Available on: <https://www.indiatoday.in/education-today/featurephilia/story/problems-faced-in-progress-of-education-in-india-1666068-2020-04-12>
- Hossain, H. (1982). *The East India Company and the textile producers in Bengal*. Oxford University Press.
- Kishore, R., & Jha, A. (2020, August 1). *Mapping education inequalities*. Retrieved November 25, 2021, from *Hindustan Times*. Available on: <https://www.hindustantimes.com/india-news/mapping-education-inequalities/story-xhTIIYty7kF7MNqxnOyGtO.html>
- Kwatra, N. (2019, April 24). *The anatomy of India's middle class*. Retrieved June 5, 2021, from *Mint*. Available on: <https://www.livemint.com/news/india/the-anatomy-of-india-s-middle-class-1556088919798.html>
- Lotman, Y. (1990). *Universe of the Mind*. Bloomington and Indianapolis: Indiana University Press.
- Montare, A. (1994). Knowledge Acquired from Learning: New Evidence of Hierarchical Conceptualization. *Perceptual and Motor Skills*, 79(2), 975-993. Available on: <https://doi.org/10.2466/pms.1994.79.2.975>
- Mukherjee, S., & Ghosh, S. S. (2022). *Semiotic Treatment of Folk Education with the Implication of Socio-Digital Knowledge System*. In D. Mishra, & S. Samanta, *Digitalization of Culture Through Technology* (pp. 62-67). London: Routledge Press.
- Piaget, J. (1971). The theory of stages in cognitive development. In D. R. Green, M. P. Ford, & G. B. Flamer (Ed.), *Measurement and Piaget*. New York: McGraw-Hill.
- Ramanathan, S., & Ramanathan, R. (2019, May 6). *Why urban design will be critical for India's cities*. Retrieved August 1, 2021, from *Hindustan Times*. Available on: <https://www.hindustantimes.com/columns/why-urban-design-will-be-critical-for-india-s-cities/story-j7vZ8kjqPjqyvQD6YQrr5I.html>

- Shahed, S. M. (1993). Bengali Folk Rhymes: An Introduction. *Asian Folklore Studies*, 52(1), 143-160.
- Siddhu, G. (2011). Who makes it to secondary school? Determinants of transition to secondary schools in rural India. *International Journal of Educational Development*, 31(4), 394-401. Available on: <https://doi.org/10.1016/j.ijedudev.2011.01.008>
- Tagore, R. (1929, April-July). Ideals of Education. *The Visva-Bharati Quarterly*.

Contacts

Soumya Sankar Ghosh
Assistant Professor
VIT Bhopal University
Madhya Pradesh
India
soumya.sankar@vitbhopal.ac.in

Sibansu Mukherjee
Director
Society for Natural Language Technology Research (SNLTR)
West Bengal
India
sibansu.nltr@wb.gov.in