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Dear GLOKALde Readers,

With pleasure, we present to our readers GLOKALde Volume 9, Issue 2. In the October 2023 issue of GLOKALde, authors from Turkey and India contributed two papers. We are grateful to our authors for their insightful contributions to our publication.

The first article, entitled '**MOOCS: Northern And Global South Views In The Light Of Fichte's Triad**' was written by Dr. Abdulvahap SONMEZ and Dr. Nilgun OZDAMAR. Using Fichte's Triad as a theoretical framework, the researchers were able to map the benefits and drawbacks of MOOCs in this study. The global south's perspective on MOOCs is represented by the thesis section, whereas the north's perspective on MOOCs is represented by the antithesis section. The authors also provided a fresh viewpoint on MOOCS in the synthesis section by combining the thesis and antithesis on the subject.

The second article, entitled '**Influence of Sign Language Based Content on Education of Deaf and Hard of Hearing Learners of Nios in ODL Context**' was written by Dr. Rajiv Kumar SINGH. The study found that the introduction of Indian Sign Language (ISL) as a language subject in Open and Distance Learning (ODL) had a positive impact on Deaf and Hard-of-Hearing learners. The study surveyed secondary and senior secondary students enrolled in NIOS. The findings suggested a need for more learning content in ISL video format, especially for science subjects, and more job-oriented education. There was also support for ISL to be introduced as a language course at the senior secondary level.

Our next issue will be out in April 2024, and we hope to stay in touch and meet then.

Cordially,

Editors of GLOKALde

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## MOOCS: NORTHERN AND GLOBAL SOUTH VIEWS IN THE LIGHT OF FICHTE'S TRIAD

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### ABSTRACT

An informative, comprehensive abstract of 200 to 250 words must also be submitted and typed on OpenCourseWare, Open Education Resources, and Massive Open Online Courses which are means of "Openness" in education and have lately been atrociously criticized for serving so-called neo-colonial goals of developed countries. In this study, we successfully map the pros and cons of MOOCs by applying Fichte's Triad as a theoretical framework. The thesis section symbolizes the Global South's approach to MOOCs while the antithesis part stands for the North and the way MOOCs are viewed there. By synthesizing the thesis and antithesis on MOOCS, we offer a new perspective on MOOCS in the synthesis part.

**Keywords:** Openness, OpenCourseWare (OCW), Open Education Resources (OER), MOOCs, Neocolonialism, Fichte's Triad, hegemony.

### INTRODUCTION

In recent years, there has been a heated debate among researchers and educators about whether Open Educational Resources, Open Learning Materials, and Massive Open Online Courses constitute a "new learning paradigm" or a "digital neo-colonial form of Western ambitions toward the East" (or Northern ambitions towards the Global South). Based on this question, it was tried to determine the status of Open Learning Materials, MOOCs, and the global perspectives on MOOCs by using Fichte's Triad (Thesis, Antithesis, and Synthesis) theoretical perspective in the study. Also, the purpose, types, and characteristics of MOOCs both globally and in Turkey are described in a developmental context.

In today's digital society, where information is rapidly produced and consumed over networks (Castells, 2004), the evolution and transformation of traditional learning and teaching methods and pedagogies shaped by the industrial revolution are inevitable in line with the requirements of the age. In this sense, perhaps the newest paradigm in the field of education, following the provision of distance education, is the idea of openness as a creative concept. Due to its close relationship with Information and Communication Technologies (ICT) in the field of education, every development that influences education in technology also affects the reconsideration, definition, and content of the concept of openness.

When considering openness in education, it encompasses several aspects. It includes the absence of prerequisites for admission to educational institutions (freedom of entry), the absence of time constraints for learners to complete the given program (freedom of time), the ability to learn independent of location (freedom of place), the ability for learners to learn at their own pace (freedom of pace), the diverse presentation of programs and content to learners (freedom within the program), and unrestricted access to learning resources for individuals without any barriers (open access) (Mulder, 2015). Additionally,

Otto Peters (1988) defines openness as a learning environment that is integrated into everyday life, allowing free access to resources and education while removing barriers.

Another dimension of openness is the creation and availability of technology that removes barriers to the dissemination of information, knowledge, and scientific research in the digital age. The concept of openness recognizes that science is the common heritage of all humanity, and as knowledge is shared, it multiplies and strengthens the advancement of science. Particularly in the late 1960s, when software companies refused to share their source code, researchers encountered difficulties in accessing certain research and information, leading to the need for open-source software (Kurşun, 2016, p. 667). As noted by Schuwer, Genuchten, and Hatton (2015), some researchers attribute the origins of software openness to Richard Stallman and the GNU Project's initiatives in 1983, while others recognize Linus Torvalds' release of the first version of Linux in 1991 (p. 81). Regardless of the specific starting point and historical event, notable software such as Mozilla Firefox, Linux, and Moodle has emerged, capable of competing with the best in their respective sectors. In particular, the challenges in the field of software were eased by the introduction of Creative Commons (CC) licenses in 2002, which facilitated the sharing of scientific research by providing ease of use and a flexible approach to copyright (Kurşun, 2016, p. 667).

### Open Education in The World

Open Learning Materials (Courses) embody a philosophy and model of the digital society, characterized by an open-source coding mindset that enables unrestricted access, utilization, intellectual property, acquisition, use, modification, and sharing, all within flexible and defined rules. It aims to assist individuals in their learning, conducting research, and self-development. The concept is based on the principles of equality, diversity, participation, quality, and effectiveness, which have initiated and sustained the Openness in Learning Movement (Mulder, 2015). The Open Source/Course Movement, which embodies such noble ideals, has garnered significant global attention. MIT's "intellectual philanthropy" policy (Odom, 2013, p.2) played a significant role in the emergence of a new paradigm by openly providing course materials on the Internet to all people, primarily in higher education. According to Mulder (2015), these values, such as equality, diversity, participation, quality, and effectiveness, are intrinsically related to the philosophy of openness, driving and perpetuating the Open Learning Movement. Following MIT's OpenCourseware initiative, other educational institutions also started contributing to the movement. Carnegie Mellon University began sharing limited but higher-quality educational content on the Open Learning Initiative (OLI) platform. In 2007, Yale University initiated the AllLearn collaboration with Oxford, Princeton, and Stanford Universities. Subsequently, Columbia University launched the Fathom initiative (similar to AllLearn), which, despite its fee-based nature, contributed to the further development of quality initiatives (Rhoads, Berdan, & Toven-Lindsey, pp. 89-90). Highlighting the importance of institutions opening their resources to the public, Walsh (2011) predicts that the Open Learning Movement will gain momentum and emphasizes that opening existing resources to the public is just the beginning (p.236).

Walsh's wise foresight began to materialize in 2008 with Dave Cormier and Bryan Alexander coining the term MOOCs (Massive Open Online Courses) and the first MOOC took place in 2008 with the work of George Siemens and Stephen Downes on Connectivism. Connectivism also expresses the fundamental elements underlying MOOCs. Odom (2013) states that Siemens described Connectivism as an amalgamation of chaos, network, complexity, and self-organization theories. The 'c' in cMOOCs stands for Connectivism. Connectivist MOOCs, in fact, embody the principles of openness the most in terms of learning methods and materials. They represent a digital-age learning approach where learners engage in both individual and collaborative production. David Wiley defined Open Educational Resources as resources that are freely accessible, and users have the 5R rights over these resources (Schuwer, Genuchten, & Hatton, 2015, p.82). The 5R framework refers to the ability to retain, reuse, remix, revise, and redistribute Open Educational Materials and resources (Özdamar et al., 2017, p.190). Interacting with learning materials, making additions, making necessary modifications, and creating a collective consciousness through group work and activities contribute to the dissemination and ownership of knowledge, which is humanity's common heritage on the path to scientific advancement. In 2011, Sebastian Thrun and Peter Norvig's course on Artificial Intelligence attracted 160,000 participants, capturing the attention of the world (Wildavsky, 2014, p.74). This led to the establishment of Udacity, followed by Coursera, MITx, and edX platforms. Although they are mostly fee-based, behaviorist MOOCs (xMOOCs) have gained significant popularity (Schuwer, Genuchten, & Hatton, 2015, p.82). These types of MOOCs (xMOOCs) allow learners to progress directly without providing excessive flexibility and a wide range of choices. Course materials such as instructional videos and

lecture notes are used, and assessments are conducted at the end of the course to provide certification. Rodriguez (2012) notes that xMOOCs incorporate behaviorist or cognitive-behaviorist pedagogy due to these characteristics.

The initial emergence of MOOCs in 2008 was characterized by cMOOCs (Connectivist MOOCs), which emphasized collaboration, group work, flexible learning pathways, and sharing. These cMOOCs were generally produced through individual efforts and reached a small number of learners. However, later MOOCs that emerged in 2011 transformed into xMOOCs (eXtended MOOCs), which adopted a more structured, linear approach, focused on individual study and assessment, and reached a larger number of people within institutional frameworks. Perhaps the difference between these two types of MOOCs can best be explained through Rolfe's (2015) analogy, as relayed by Kernohan, which distinguishes between "open at the door" and "open in the heart" (p.53).

MIT's OpenCourseWare (OCW) initiative, supported by UNESCO, the UN, and many foundations, diversified and expanded under the name Open Educational Resources (OER). Initially, cMOOCs and later xMOOCs attracted a large number of learners from different countries. According to Schuwer, Genuchten, and Hatton (2015), the number of resources published under Creative Commons open licenses, which are based on open-source coding, increased from 50 million in 2006 to 882 million in 2014. In 2017, this number was reported to have reached 1,471,401,740. The increase in the number of participants in MOOCs within the Open Education Movement gained momentum due to the COVID-19 pandemic that the world has been grappling with since December 2020. According to Christof Rindlisbacher from Class Central, searches related to MOOCs began to display a rapid increase and fluctuations starting from March 14, 2020. Additionally, utilizing data gathered from platforms such as Coursera, EdX, and FutureLearn, the top 100 most popular courses were ranked for the period between March 15 and May 15, 2020. The most preferred courses were "Health and Well-being" from Yale University, "Introduction to Computer Science" from Harvard University, and "Machine Learning" from Stanford University. Additionally, when looking at the languages of the top 100 courses, it can be observed that 97 courses are in English, two courses are in Spanish, and one course is in French. Moreover, out of the mentioned top 100 courses, 27 are provided by Harvard University (Rindlisbacher, 2020).

### **Open Education Mobility in Turkey**

The Open Education (Resource) Movement in Turkey is categorized into three groups (Kursun, 2016): Initiatives planned by the Open Course Materials Consortium under the umbrella of the Turkish Academy of Sciences (TÜBA), institutional-based initiatives, and individual initiatives (p. 674).

The first serious work in Turkey to establish a policy and generate resources for national open course materials was carried out in 2007 when 45 universities came together. However, despite the efforts of these universities, only a limited number of course materials were created due to reasons such as copyright and accreditation, which hindered the full participation of academics. As mentioned on the Turkish Academy of Sciences website, Ankara University, Atılım University, Başkent University, Eastern Mediterranean University, Gazi University, Hacettepe University, Middle East Technical University, and Sabancı University have open course portals. When examining the courses offered by the eight universities (Ankara University, Atılım University, Başkent University, Eastern Mediterranean University, Gazi University, Hacettepe University, Middle East Technical University, and Sabancı University) that provide open education resources, it can be observed that the most offered courses belong to the field of Natural Sciences, and PDF is the most commonly used course material. Additionally, except for Gazi University, it is evident that full access to the open education resources of the other seven universities is available (Baysal, Çakır, & Toplu, 2015, pp. 487-488).

Anadolu University and Atatürk University are the universities that initiated the MOOC movement in Turkey. In addition to these, Yaşar University, Koç University, UniversityPlus, and Khan Academy offer MOOCs in Turkish on different platforms (Özdamar, 2017, p. 201). Anadolu University (AKADEMA), Atatürk University (AtademiX), and Middle East Technical University (Bilge-İş), which have embraced the MOOC model and offer courses on their MOOC platforms, have taken the concept of openness one step further in Turkey. Anadolu University continues the process of digitizing a portion of the existing library data not only to reach university students but also all learners. In the Open Library, library materials such as Turkish classics, rare works, local and national newspapers and magazines that hold significant importance in social memory, and archive videos and books of Anadolu University Open Education Faculty are made available to learners through a user-friendly interface, with the option of

audio narration for some works. The Open Library service aims to provide both barrier-free living and lifelong unlimited learning. Another open service provided to learners by the Open Education System is the Open Course Platform, launched in the Fall semester of 2022. Course materials, which are the accumulation of forty years of the Open Education System, are made available to learners free of charge.

However, despite all efforts, the Open Education Resources Movement has not received sufficient acceptance and widespread adoption in Turkey. According to Aydın (2015), the barriers to the Open Education Movement (OEM and MOOCs) in Turkey include copyright and intellectual property issues, faculty motivation and support, legal limitations, support from decision-makers, and the acceptance of non-formal learning (certification of prior learning). In addition to these, language barriers, non-recognition of previous experiences and certifications, lack of promotion of ODL (Open and Distance Learning), resulting in a negative reputation, lack of legal regulations, lack of knowledge on how to implement, and infrastructure deficiencies contribute to the lack of deserved attention for MOOCs specifically and the Open Learning Movement in general in Turkey (Aydın, 2017, p. 75).

## **FICHTE'S TRILOGY: A THEORETICAL PERSPECTIVE**

Johann Gottlieb Fichte holds a significant place in the history of philosophy, as there exists a connection between Kant's critical philosophy and Hegel's absolute idealism (Taber, 1993, p. 68). Fichte is known for his triad of thesis, antithesis, and synthesis. Although this triad has its foundation in Kant's philosophy, Fichte was the first philosopher to truly employ it (Brentano, 1998, p. 102). The first component of Fichte's triad, the thesis, as described by Dagobert D. Runes (1972), refers to proposals that attempt to provide a logical explanation for the current state of affairs and engage in explanatory discourse (p. 317). In this article, the Open Educational Resources thesis is presented, which stands in opposition to traditional educational philosophy and involves the design of environments that promote broad participation, free access, easy availability, and reduction or elimination of time and space constraints, while advocating for fairness and equality. The antithesis, on the other hand, aims to refute a defended thesis or negate a stated positive condition, encompassing ideas and tools (Runes, 1972, p. 14). This article presents the antithesis by showcasing the ideas of individuals and institutions who view nearly all types of educational innovations, activities, and support emerging from Europe and North America with skepticism, considering them as new instruments and methods of a modern exploitation policy. The final component of Fichte's triad is the synthesis. Synthesis represents a philosophical process that emerges from the combination of thesis and antithesis, giving rise to a new formation (Runes, 1972, p. 310). Although the synthesis stage is a combination of the thesis and antithesis, it is distinct from both and signifies alienation. In this study, the synthesis process will be carried out by considering both thesis and antithesis perspectives to determine the future of Open Educational Resources from a new perspective.

### **Thesis: A New Paradigm in Online Learning**

Open Educational Resources enable education to transcend privilege and become a service accessible to everyone, akin to the invention of the printing press, which took knowledge out of the hands of a privileged few and distributed it to the masses. It allows a learner in the remotest corner of the world to receive instruction from a renowned professor, even if they don't speak the same language, through the use of subtitles (Wildavsky, 2014, p. 75). According to Wildavsky (2014), New York Times columnist Thomas L. Friedman argues that Open Educational Resources are the only means by which we can open the minds of a billion people to solve the world's problems. The sole obstacle for someone in a remote location seeking quality education is the lack of access to an internet-enabled device.

Hollands and Tirthali (2014) state that universities aim to achieve six things through the use of OCW (OpenCourseWare), OER (Open Educational Resources), and MOOCs (Massive Open Online Courses): expanding the institution's reach and access to education, building and sustaining quality, reducing expenses or increasing revenue to boost the economy, enhancing educational outcomes for both on-campus students and learners participating in MOOCs, fostering innovation in learning and teaching, and conducting research on learning and teaching processes. These objectives are pursued by universities providing education services at the local and national levels. It is important to note that universities such as MIT, Harvard, Yale, Oxford, and Cambridge, which are influential in both education and educational policymaking, determine intellectual trends and set standards for quality in international education. These institutions, which were previously accessible only to a select few with specific



intellectual and sometimes financial qualifications, have opened up intellectual elitism to a global audience through MOOCs.

Traditional learning culture has become inadequate in university education in this digital 21st century, where knowledge is rapidly produced and consumed. Learning has transcended the constraints of time and space, with the ability to access learning content and resources when and where needed taking precedence. Lifelong learning has become a cultural norm, facilitated by various devices and different forms of learning such as e-learning, m-learning, u-learning, and seamless learning. The importance of the learning environment has emerged as a key factor, surpassing the emphasis on learning methods alone. Massive Open Online Courses (MOOCs) excel in meeting these needs. The provision of learning opportunities for all global citizens, harnessing the potential of evolving technologies in the most effective, efficient, and engaging manner, and cultivating a culture of lifelong learning unrestricted by time and place are explicitly stated as essential in the 2014 UNESCO report and the United Nations Sustainable Development Goals (King, Pegrum, & Forsey, 2018). As Aydın (2017) highlights, in Asian countries such as China, Malaysia, and Japan, MOOCs are supported by governments to promote widespread access to education, enhance existing educational practices, and foster lifelong learning initiatives (p. 60).

MOOCs contain arguments that can facilitate socio-economic development not only for underdeveloped and developing countries but also for other nations (Stratton & Grace, 2016). Bonk et al. (2015) indicate an increased utilization of Open Educational Resources in countries experiencing economic downturns or undergoing dramatic systemic changes, such as Russia (p. 362). Certain skill-building MOOCs facilitate the acquisition of certifications, thereby easing employment prospects and enhancing quality. In its 2012 commission recommendations on access to scientific information and the preservation of scientific knowledge, the European Commission asserts that opening up science and scientific knowledge will lead to increased quality, a decrease in the number of similar studies on the same topic, improved quality, and strengthened intellectual property rights (European Commission, 2012). Keeping research and finished scientific studies openly available on networks will promote knowledge sharing, greater awareness of relevant research, and potentially increased citations (Wohlraabe & Birkmeier, 2014).

### **Antithesis: MOOCs are Trojan Horses**

According to Wickens and Sandlin (2007), as cited in Altbach and Kelly's *Education and Colonialism* (1978), three types of colonialism are discussed. The first type is classical colonialism, where one country invades and governs another country or territory. In internal colonialism, the colonizing country selects and trains a specific group (compradors) within the colonized country or region. They ensure that this group assumes power and enables the continuation of colonial exploitation. Lastly, there is neocolonialism, which aims to achieve exploitation from the bottom up through indirect assistance and the opportunities provided by technology, rather than direct intervention or the use of compradors. Despite the passage of time and technological advancements, the classifications of exploitation mentioned by the authors remain valid. Neocolonialism, the last type mentioned, represents contemporary studies on hegemony.

Neo-colonialism refers to the indirect continuation of colonial activities by former colonial powers and newly joined countries, who seek to maintain their hegemony in the post-colonial era through contemporary means and ideas. The practices presented by the ruling powers, such as aid, equality/democracy, and care/attention, serve no purpose other than preserving existing power and hegemonic balances (Fleming, 2005). Particularly, aid provided under the pretext of change and development can serve neo-colonial ambitions. The World Bank carries out educational policies and reforms in line with neoliberal capitalist principles (Anwaruddin, 2014). Initiatives and programs related to literacy and education, promoted, supported, and financed by international organizations like the World Bank and UNESCO, may appear innocent but carry the neocolonial aspirations of countries and institutions that seek to control global culture and commerce (Wickens and Sandlin, 2007). The support, initiatives, and opportunities provided to trigger, facilitate, or enable cultural, economic, and educational globalization serve individualism, free-market economy (neoliberalism), and consequently neocolonialism (Rizvi, 2007, 257).

Those who argue that Open Educational Resources (OER), particularly Massive Open Online Courses (MOOCs), are a new form of Western mindset and colonizing policies (neocolonialism) (Taskeen, 2019;

Andreotti, Stein, Ahenakew, and Dallas, 2015; Knox, 2016; Cottom, 2015; Altbach, 2014; Piron, 2018; Sadler, 2011; Wickens and Sandlin, 2007; Anwaruddin, 2014; Rizvi, 2007; Siltaoja, Juusola, and Kivijärvi, 2019) emphasize the issue of who produces, provides, and controls these resources. Institutions, organizations, and countries that aim to use, produce, and disseminate OER and MOOCs are dependent on the technological, pedagogical, and infrastructural capabilities of the initial OER-producing institutions and countries (Altbach, 2014). For example, when it comes to creating OER related to Africa, it can be done through the utilization of existing OER platforms (such as EdX, Coursera) with the universities' own budgets and efforts, collaboration with European institutions or organizations, or solely financed and implemented by European institutions and universities (Taskeen, 2019). Regardless of the method of OER production, except for the limited initiatives of some small universities, the methodology and theorization are predominantly carried out by "Western intellectuals." Generally, Open Educational Resources, and specifically MOOCs, heavily rely on the knowledge, experience, and pedagogy of American academia, with some influence from European academia. They are generally published in English.

The fact that MOOCs, which target learners worldwide, impose a particular structure and ideology on a global scale, represents an inherent paradox (Knox, 2016). Since MOOCs embody the philosophy, pedagogy, and national knowledge of a specific academic tradition, they can indirectly establish cultural hegemony through the dissemination of MOOCs (Altbach, 2014). This implies the standardization of learners and the imposition of the "ideal student" model created by Western-centric thinking upon all learners (Knox, 2016, p.109). MOOCs prioritize Western-style individualism, focus more on outcomes than processes, and prioritize European values (Cottom, 2015, p.9).

One of the criticisms raised by scholars in the field of science is that MOOCs tend to be elitist and, in their quest to democratize knowledge and empower individuals, they overlook different languages and cultures, thereby exhibiting certain neocolonial characteristics (Wildavsky, 2014, p.76). The predominance of English in MOOCs, with limited availability of other languages, makes it increasingly difficult for international learners, who are not proficient in English, to benefit from these resources (Stratton & Grace, 2016). Language is one of the tools for establishing hegemony over other cultures through open educational resources. However, even if these resources (especially MOOCs) are translated into local languages, the methodology and Eurocentric discourse would remain largely unchanged, offering little variation (Altbach, 2014). Moreover, this situation may diminish interest in local languages (Adam, 2020). As Florence Piron points out, if the Open Education Movement operates solely through platforms that prioritize the values and knowledge of the Global North, along with its philosophical and political perspectives, it will reinforce the hegemony of the Global North over the Global South (Piron, 2018). Another concern raised by scientists is the possibility of monopolization resulting from Open Educational Resources (OERs). OER platforms, despite aiming for democratization and embracing diversity, can potentially suppress alternative forms of knowledge production and contribute to monopolization in the field of science, given their powerful resources (Adam, 2020; Altbach, 2014).

In order for the Open Education Movement, which aims to bridge the knowledge gap, democratize knowledge, and provide quality education worldwide, to be successful, it relies on the necessary technology and internet infrastructure. Piron (2018) highlights the challenge of electricity and internet connectivity in many parts of the world, particularly in significant regions of Africa. In such contexts, rather than facilitating learning, the Open Education Movement is expected to deepen the digital divide and exacerbate the knowledge gap. Warschauer (2003) argues that since open educational resources rely on information technology, the digital divide between those who have access to these resources and those who do not will widen.

### **Synthesis: Both of you have valid reasons. But when we bring you together?**

Instead of viewing the Openness Movement, which has ushered in a new paradigm in education, as either flawless or completely dismissing it due to certain shortcomings, it is crucial to examine both its positive and problematic aspects as a whole. By doing so, we can work towards the desired outcome through continuous improvements and regulations.

There are several perspectives on the decolonization of education, including proposals for individual change, the correction of systemic flaws, the creation of a new and local system that includes a return to local values, as well as the notion of shifting the focus from European values. (Taskeen, 2019, p.369). The Openness Movement in education should be recognized for its commitment to equality and diversity, despite the well-intentioned negative observations made by the researchers mentioned in the



antithesis. At the beginning of the Open Education Movement's support process with open materials, UNESCO emphasized the importance of considering different languages and cultures, as well as valuing diversity, as reflected in the Paris Declaration (UNESCO, 2012). Although the Udemy initiative established in Turkey and relocated to Silicon Valley operates for profit, it has a structure that takes cultural diversity into account (Taskeen, 368). In addition to US-based OERs, the number of platforms offering OERs in Europe have also been increasing. Among them, OpenupEd can be cited as an example that aims to cater to and reach a wide range of diverse learners through its multilingual approach (OpenupEd, 2014).

A review of the literature reveals a general consensus that the number of OER participants in underdeveloped and developing countries is lower than that in developed countries (Stratton & Grace, 2016). However, this observation overlooks the lack of electricity, technological infrastructure, and broadband internet access in other parts of the world. If Asian and African countries are provided with opportunities similar to North America and Europe, it is hoped that the homogeneity in participation numbers will change.

For the Openness Movement to achieve its true purpose, its epistemology and pedagogy must evolve in a manner that is free from any form of hegemony and caters to different languages and cultures. It should be acknowledged that the phenomenon of OERs within the Open Education Movement is a process-oriented structure. The Openness Movement, which will be shaped by experiences, will adapt and strive to reach every learner in line with evolving technology and global conditions. The criticisms currently faced by OERs will serve as valuable lessons for their future development and progress. Universities that have a say in the OER field are the leading universities in the United States and Europe (Stracke & Bozkurt, 16). The fact that these universities, with years of experience and expertise, are also pioneers in OERs may raise concerns, but once language, culture, and centralization issues are addressed, their initiatives will be significant for the future of humanity. Their desire to spread their knowledge and expertise to all corners of the world, once the challenges are resolved, will be of great importance.

In analyzing the issue of persistence in Open Educational Resources (OERs), particularly in OER courses, it would be advantageous to shift the focus from solely evaluating those who enroll, complete courses, and receive certificates. Instead, a new paradigm should be embraced, one that recognizes the benefits and knowledge acquired by learners at various stages, allowing them to exit courses once they have acquired valuable information and potentially developed their skills. Additionally, Jordan (2015) states that OERs have a completion rate of around 10%, but in shorter and more rapidly graded OERs, the completion rate is slightly higher. Therefore, it appears that implementing adjustments in line with the new paradigm, such as reducing course duration and implementing automated assessment methods, can help alleviate the issue of low persistence.

Despite all the drawbacks, recent studies have created a strong sense of optimism that Open Educational Resources (OERs), especially OERs, can serve as an alternative education and development model for underdeveloped and developing countries (Stratton & Grace, 2016). It is evident that OERs tailored to the language, culture, beliefs, and expectations of relevant countries will benefit all of humanity. Furthermore, Open Educational Resources and OERs can be used in blended classroom practices to support formal education in situations that necessitate interruptions, such as pandemics or conflicts (King, Pegrum, & Forsey, 2018).

## **RESULT**

The possibilities provided by openness and the openness movement will continue to enrich and facilitate human life with the contribution of technology. It is not possible to confirm or refute all the negatives surrounding the concept of OERs and the impact of technology on education, but it should be noted that OERs are neutral in nature. They will take shape and serve the ideals that align with the chosen epistemology and pedagogy. Furthermore, the current inequalities in education are not caused by OERs or the opportunities they bring, but rather stem from past practices (Taskeen, 2019, p. 368).

As previously stated, technology and the learning environments and materials developed in parallel with it inherently do not carry beliefs, culture, or prejudices. It is the individuals and institutions involved in these developments or their implementation who imbue them with these values. Therefore, in order to rid MOOCs and OERs of the suspicion of exploitation, it could be beneficial for them to be prepared while considering the language, culture, and socio-economic conditions of the respective countries.

Moreover, the designers, educators, and system experts who design these environments and materials should also take into account the readiness levels of the relevant country. This way, relevant countries will be provided with learning environments and resources that reinforce their own cultures while enabling the residents to engage with universal values. Striking a balance between local and universal values will alleviate people's concerns. Furthermore, since potential groundbreaking new learning technologies in teaching and learning are expected to experience similar fates, the suggested recommendations for MOOCs and OERs are also recommended to be applied to them.

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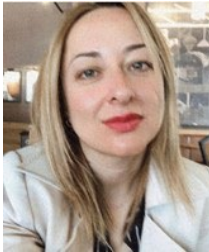
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## INFLUENCE OF SIGN LANGUAGE BASED CONTENT ON EDUCATION OF DEAF AND HARD OF HEARING LEARNERS OF NIOS IN ODL CONTEXT

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### ABSTRACT

This impact analysis study is done to understand Deaf and Hard-Of-Hearing learners' perspectives and opinions about learning contents in Indian Sign Language (ISL) medium and online videos, as well as their experience of a newly introduced secondary-level course by the National Institute of Open Schooling (NIOS), i.e., ISL as a language subject. For the first time in any part of the world, Indian Sign Language as a language subject is being offered in the Open and Distance Learning (ODL) context at the school level. The findings of the study are based on analysis of data collected using a survey tool. The survey was administered to the enrolled learners on NIOS at the secondary and senior secondary levels. The data analysis reveals a favorable impact of NIOS initiatives while using Indian Sign Language for the education of Deaf and Hard-Of-Hearing learners. It also posits that there is an emergent need to prepare and ensure the availability of learning content in ISL video format, particularly in topics related to science subjects. It also shows that a more job-oriented education, tailored to the present employment market, is also essential, as is hand-holding. There was also unanimous support for ISL to be introduced as a language course at the senior secondary level.

**Keywords:** Indian Sign Language, Learning Content, Deaf and Hard of Hearing Learner, NIOS.

### INTRODUCTION

Over the past years, major progress has been made with regard to policies and implementation practices in expanding access to education. However, many people with disabilities are still being left behind in education. Still, Worldwide people with disabilities are lowly represented with regard to literacy rates compared to people without disabilities (UIS, 2018; United Nations, 2018). With regard to completion of primary, secondary, and further education, children with disabilities also fared less compared to children without disabilities. As per the report, around 33 million children with disabilities are out of school in low- and middle-income countries (Grant Lewis, 2019). While there is the mandate to accomplish Sustainable Development Goal 4 towards achieving quality education for all, it would not be possible without ensuring quality education reaches to children with disabilities and other marginalized groups worldwide.

The National Education Policy 2020, which was officially approved by the Government of India on July 29, 2020, towards making a way for a transformational shift in reform both in school education and higher education, recognized the critical role of education in the lives of persons with disabilities. NEP, 2020 talks about the provision of high-quality equitable, and inclusive education to ensure that all students with diverse learning needs realize their full potential. Further, it is suggested that to facilitate learning for all students, with special emphasis on Socio-Economically Disadvantaged Groups (SEDGs) including girls and transgender students, the scope of school education will be broadened to facilitate multiple pathways to learning involving both formal and non-formal education modes. ODL Programmes



offered by the National Institute of Open Schooling (NIOS) and State Open Schools will be expanded and strengthened to meet the learning needs of young people (NEP, 2020).

The NEP has very aptly incorporated the recommendation of the Rights of Persons with Disabilities (RPwD) Act (2016) and endorses its implementation. These include the use of sign language in deaf education and in the media, in order to provide accessible information to deaf sign language users. In the new National Education Policy (NEP 2020), Indian Sign Language is clearly highlighted, with the following provisions:

“Indian Sign Language (ISL) will be standardized across the country, and National and State curriculum materials developed, for use by students with hearing impairment. Local sign languages will be respected and taught as well, where possible and relevant”. (NEP, 2020).

“NIOS will develop high-quality modules to teach Indian Sign Language and to teach other basic subjects using Indian Sign Language” (NEP,2020).

Towards addressing the deaf and hard of hearing learners and especially addressing the concern of NEP, 2020, NIOS has taken various measures including the development of a sign language dictionary, the development of ISL videos at secondary and senior secondary levels and live personal contact program on ISL to resolve the queries from learners. The paper discusses the impact of ISL content on the education of deaf and hard-of-hearing learners in NIOS.

## **NIOS AND INITIATIVES FOR THE EDUCATION OF DEAF LEARNERS**

The National Institute of Open Schooling (NIOS) was established as an autonomous body in 1989 to cater to the needs of a heterogeneous group of learners up to the pre-degree level. It has pioneered in offering sustainable, inclusive learning with universal and flexible access to quality school education and skill development through Open Basic Education, Secondary Education, Senior Secondary, and Open Vocational Education and Training (OVET) programs through Open and Distance Learning (ODL) mode. (NIOS, 2021)

The National Education Policy (NEP) 2020 also envisages that education is the foremost primary measure to achieve economic and social mobility, inclusion, and equality. It highlights inclusive practices by making corresponding changes in curriculum, pedagogies, continuous assessment, and student support systems to ensure quality education.

In consonance with the national education policies and its own vision and mission, NIOS seeks a way forward to remove barriers to learning and participation that can hinder or exclude pupils with special educational needs. NIOS works with the vision of promoting inclusion through different academic and vocational programs for all, for a better, inclusive, and financially independent society. In order to do this NIOS has taken several initiatives, especially for the education and skilling of deaf and hard-of-hearing learners –

- In an ongoing process, the development of ISL videos in different subjects at the secondary level and senior secondary level has been completed and ISL videos in the remaining subjects are under process. All the developed ISL-based content is available free for all on the YouTube channel of NIOS.
- NIOS has been delivering a one-hour live program in Indian Sign Language twice a week on PM e-Vidya 10 TV Channel for awareness of ISL and educational learning content in ISL based on NIOS curriculum, across the country.
- As the first education board in India, NIOS has introduced the Indian Sign Language as a first language subject at the secondary level. The course materials of ISL as a language subject have been developed with the unique aim of facilitating deaf and hard-of-hearing learners to learn in their first and preferred language and understand deaf culture.

It is well established that inclusive practices in education ensure quality education without discrimination to any learner. It fulfills diverse needs in a responsive and supportive manner. Such an inclusive environment benefits not only the learners but also forms a strong foundation of social inclusion and accessible environments as a whole. Taking a broad view of the inclusion of people with disabilities in the educational system, the provision of support in the form of learning content and support classes using cutting-edge technology is regarded as an indicator of positive key practices for a wide range of disabilities.



## OBJECTIVE OF THIS STUDY

The study aims to provide granular data and analysis of the information collected from the learner in line with the following objectives -

- To find out the awareness about the availability of ISL-based learning content developed by NIOS,
- To know the learner's opinion on the quality of ISL-based learning content developed by NIOS,
- To know the learner's opinion on the usefulness of ISL as a language subject at secondary and senior secondary level courses of NIOS,
- To know the directional impact of ISL-related initiatives on the learner's enrollment status.

## STUDY DESIGN

The existing study is an impact analysis of initiatives taken where a questionnaire-based survey tool was used on the enrolled learners at secondary and senior secondary levels in NIOS's education system. The study was directed towards the main aim of knowing the impact of learning content in Indian Sign Language (ISL) medium, online videos, and a newly introduced course at secondary level, i.e., ISL as a language subject, on deaf and hard of hearing learners. The purposive random sampling used for sample selection and sample belongs to the NIOS.

## SAMPLE COMPOSITION

The sample consists of 38 respondents, out of which 22 were enrolled at the secondary level and 16 were at the senior secondary level. It can be visualized through Figure 1.

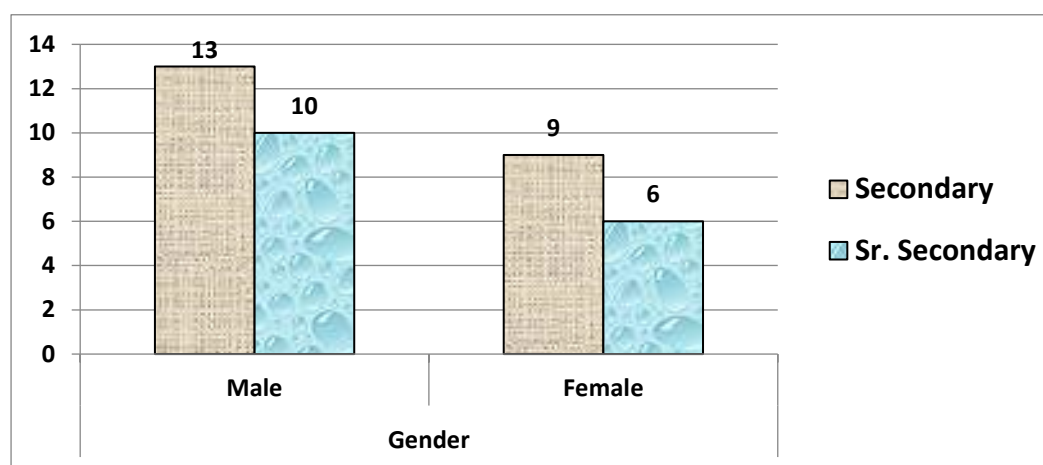


Figure 1.SAMPLE COMPOSITION

## TOOL EMPLOYED FOR DATA COLLECTION

The data was collected through a close-ended questionnaire with a rating scale, consisting of 21 questions and one open-ended question to collect the experience and views of respondents if they wanted to share more. The questionnaire was shared with 65 learners on Goggle Form and received 38 responses.

## MAJOR FINDING OF THIS STUDY

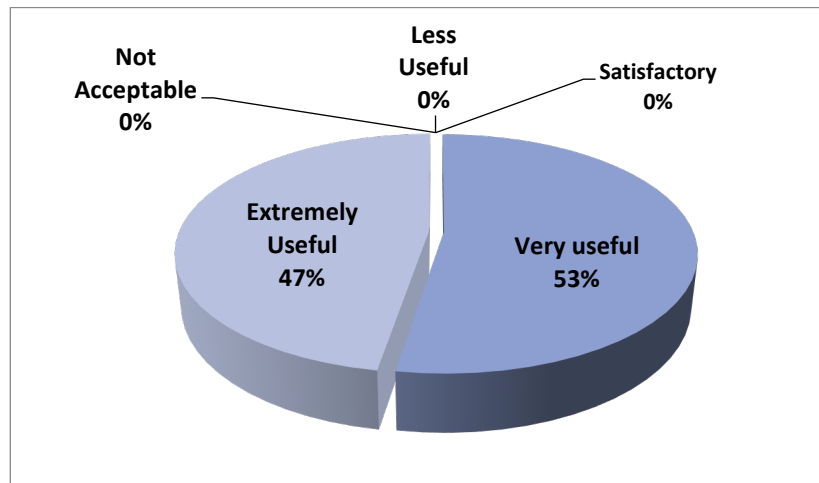
The current Impact Assessment Study drew conclusions from the responses of 38 NIOS Learners enrolled in secondary and senior secondary level courses. As learners' education is the focus area of all the ISL-based initiatives, their opinion that shows their awareness, enthusiasm, and positive interest in the ISL-related initiatives has been analyzed. This will also help in decision-making and planning

strategies for future development. The detailed analysis done on the collected information in the different layers is as follows:

- **Usefulness and availability of developed ISL contents among learners:**

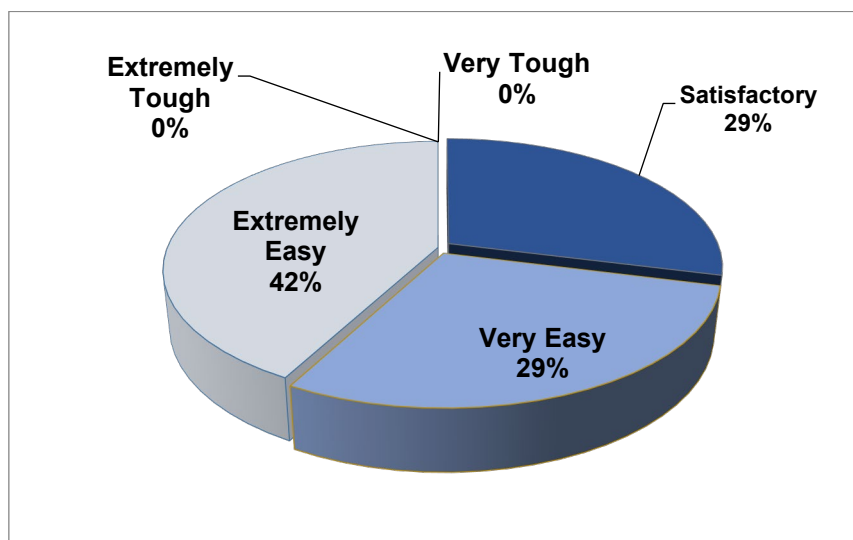
The pictorial representation shows the positive impact of ISL learning content that is reflected in their opinion about the usefulness of ISL learning content and how easily it is available to the learners. Data shows that out of 38 respondents, 100% (Extremely useful + Very useful) (in Figure 2) are in support of the usefulness of ISL content.

Overall data shows that developing and providing learning content in ISL has developed interest and awareness about ISL among learners.



**Figure 2. USEFULNESS OF ISL CONTENT**

Data presented in Figure 3 shows that 42% of the total participants says that the contents are Extremely easy to find on the web portal and YouTube channel of NIOS.



**Figure 3. AVAILABILITY OF ISL LEARNING MATERIAL**

➤ **ISL content quality:**

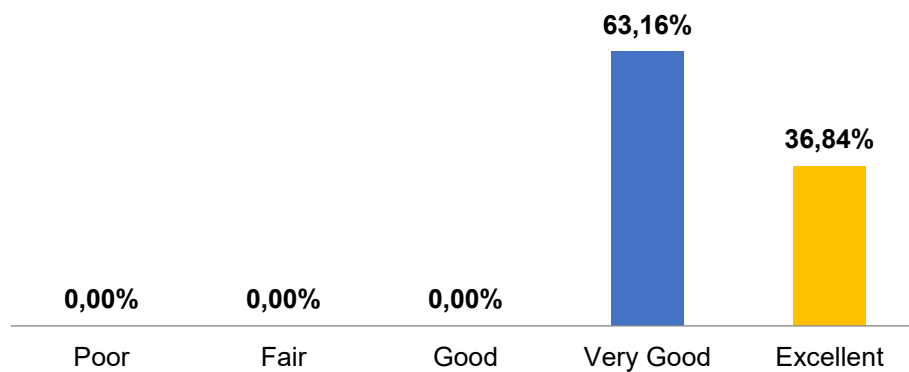
The data in Table 1 indicates that, from the total collected responses, 76.32% of learners agree that theoretical contents are explained very well, but only 21.05% agree that practical experiences provided in the available ISL videos are up to the mark or sufficient.

Table 1 also indicates that images and text ratio are well represented to some extent; that is, 57.89%. These findings demonstrate learners' keen interest in and observation of learning content, as well as the positive impact of NIOS initiatives.

**Table1. QUALITY OF ISL CONTENTS**

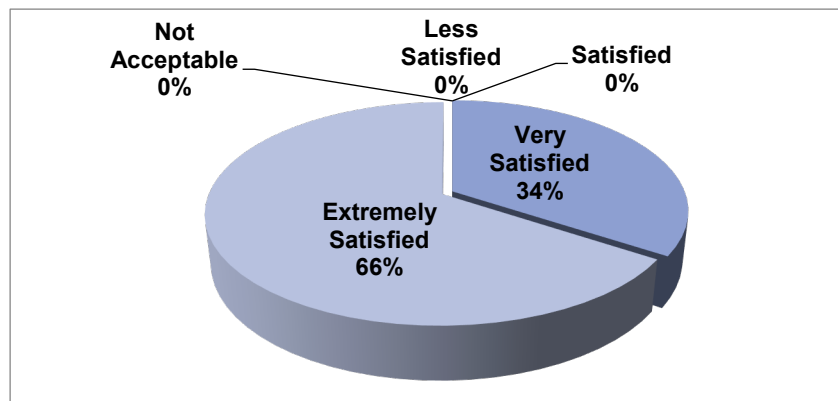
Statement	Agree	Disagree	Total
Do you think the ISL videos provide the right amount of theoretical experience?	76.32%	23.68%	100.00%
Do you think the ISL videos provide the right amount of practical experience?	21.05%	78.95%	100.00%
Is the ratio of text contents and images well balanced in learning contents provided as ISL video?	57.89%	42.11%	100.00%

The presented graph in Figure 4 indicates a positive sign about content flow and presentation in the developed ISL videos, with 63.16% of learners responding as Very Good, 36.84% responding with Excellent, 0% responded with poor, 0% fair and 0% with good.



**Figure 4. CONTENT FLOW AND PRESENTATION IN ISL VIDEOS**

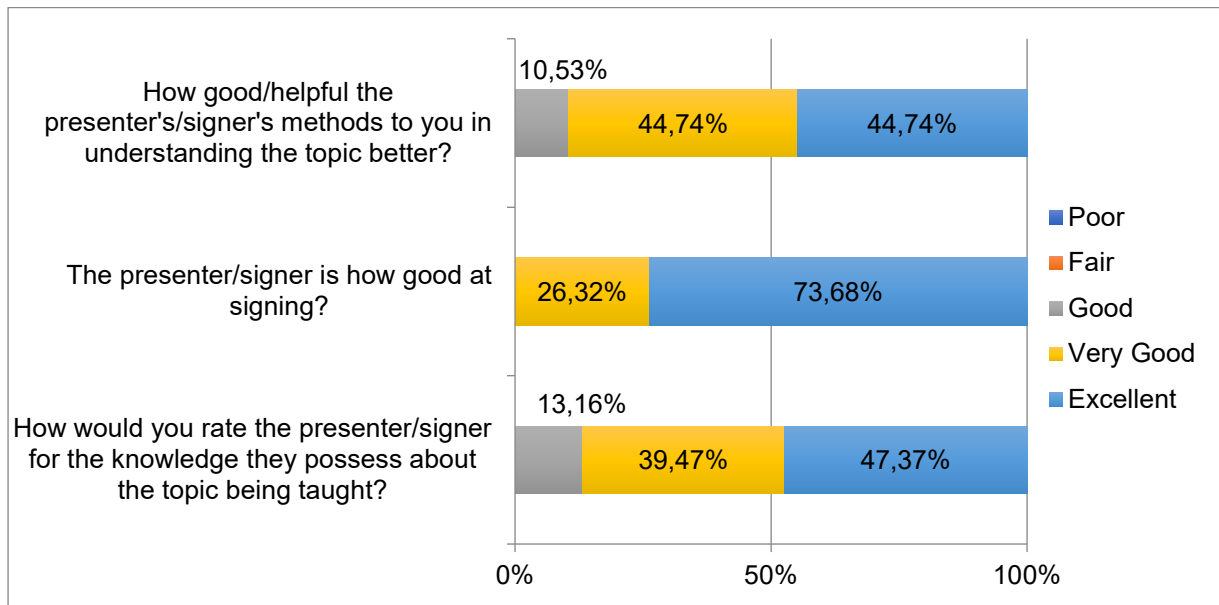
Overall, 66% of learners are Extremely Satisfied with the ISL-based learning content and even if no one gives any negative remarks, that shows a positive indication for the efforts made in the area of education with ISL.



**Figure 5. OVERALL QUALITY OF ISL VIDEOS**

➤ **Signing quality in ISL videos:**

The data depicted in Figure 6 clearly supports the signing quality of signers and rates them as Excellent (73.68%). The very similar responses registered about the knowledge of the signers and their method of presenting any topic.



**Figure 6. SIGNING QUALITY IN ISL VIDEOS**

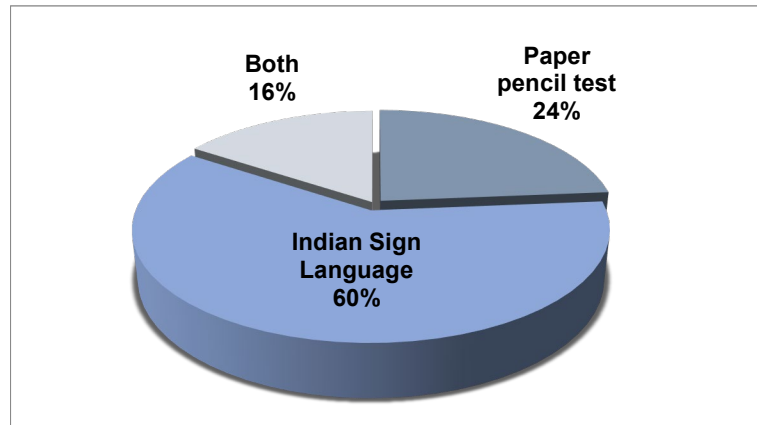
➤ **Learners study habit and interest:**

- Data in Table 2 indicates the habit as only 18.42% of learners spend 6 to 12 hours a week reading their course books. That is very low in comparison to 57.89% of learners who prefer watching ISL video-based learning content for the same time duration. The data table shows that learners prefer ISL videos over reading books, which indicates the positive influence of ISL and the need to develop more ISL video content in other subjects.

**Table 2. STUDY HABIT**

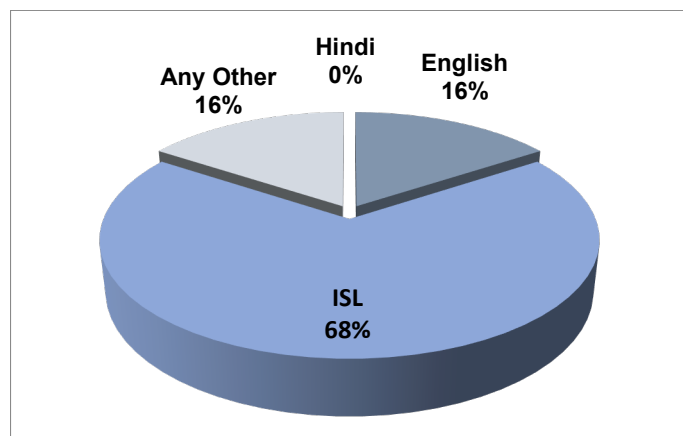
		< 2hr	>2hr to < 6hr	>6hr to <12hr	>12hr to <16hr	More than 16hr
<b>1</b>	How often do you read books related to your syllabus in a week where ISL videos are available?	39.47%	42.11%	18.42%	0.00%	0.00%
<b>2</b>	How often do you watch ISL learning content related to your syllabus in a week?	0.00%	0.00%	57.89%	42.11%	0.00%

- The Figure 7 shows that learners 60% learners preferred medium of examination is Indian Sign Language.



**Figure7.PREFERRED MEDIUM OF EXAMINATION**

- The data presented in Figure 8 shows that 68% of total learners as participants of this study prefer Indian Sign Language as their first language subject.



**Figure 8. PREFERRED FIRST LANGUAGE SUBJECT**

- Overall, the data presented in Figure 7 and 8 shows that learners are really enthusiastic and very much interested in using ISL as their medium of examination, and prefer ISL as their first language subject. It may be considered a positive indicator of ISL-related initiatives.

➤ **Learners 'feedback on newly introduced and to-be-introduced courses/programs:**

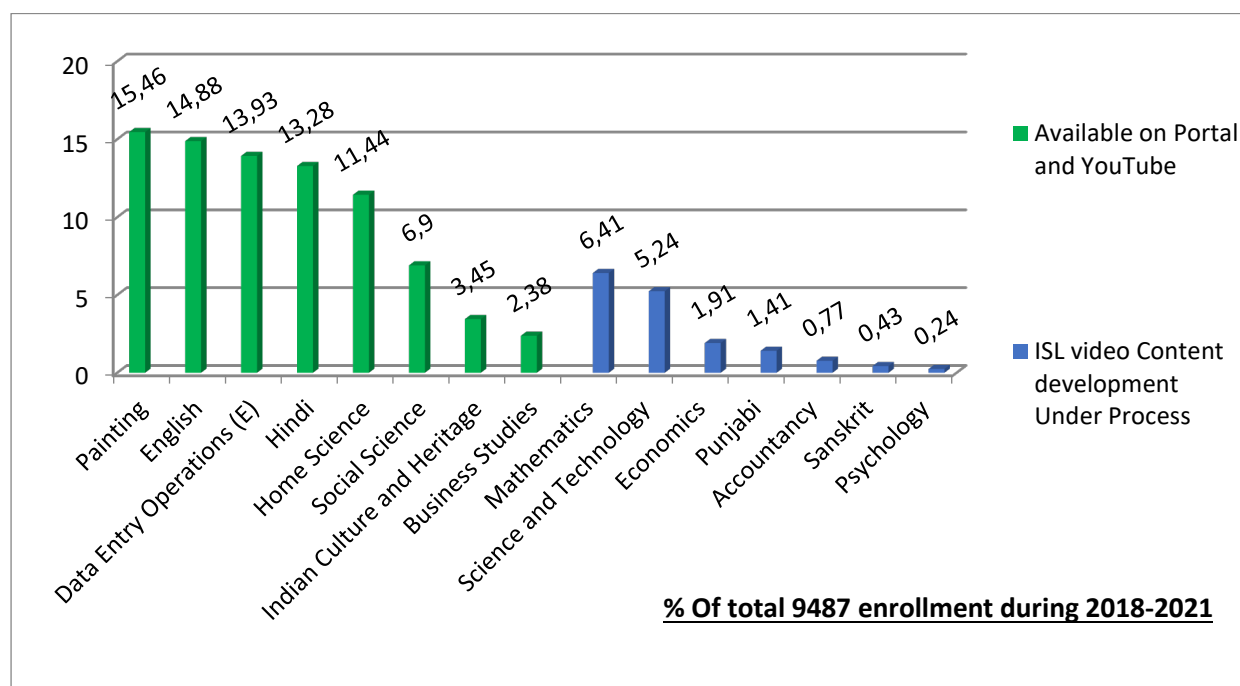
The data in Table 3 shows the learners' responses to the newly introduced program and plan to be introduced. It clearly indicates the fulfillment of learner interest and their needs as 76.32% say that the newly introduced ISL course as a language subject at the secondary level is Extremely Useful for them and similar types of response are recorded in support of the program to be launched, that is ISL as a subject at the senior secondary level (68.42%) and CCRM (73.68%). It also shows their positive interest in these initiatives and how they are welcoming these steps.

**Table 3: FEEDBACK ON NEWLY INTRODUCED AND TO BE INTRODUCED COURSE**

	Not Acceptable	Less Useful	Satisfactory	Very Useful	Extremely Useful
How useful is the newly introduced ISL subject as a language at secondary level for the education of deaf and hard of hearing students?	0.00%	0.00%	0.00%	23.68%	76.32%
How useful would it be to introduce an ISL subject as a language at senior secondary level for the education of deaf and hard of hearing students?	0.00%	0.00%	0.00%	31.58%	68.42%
NIOS is introducing a job-oriented course on Customer Relationship Management in Indian Sign Language. What a useful thing would it be, in your opinion?	0.00%	0.00%	0.00%	26.32%	73.68%

➤ **Overall impact:**

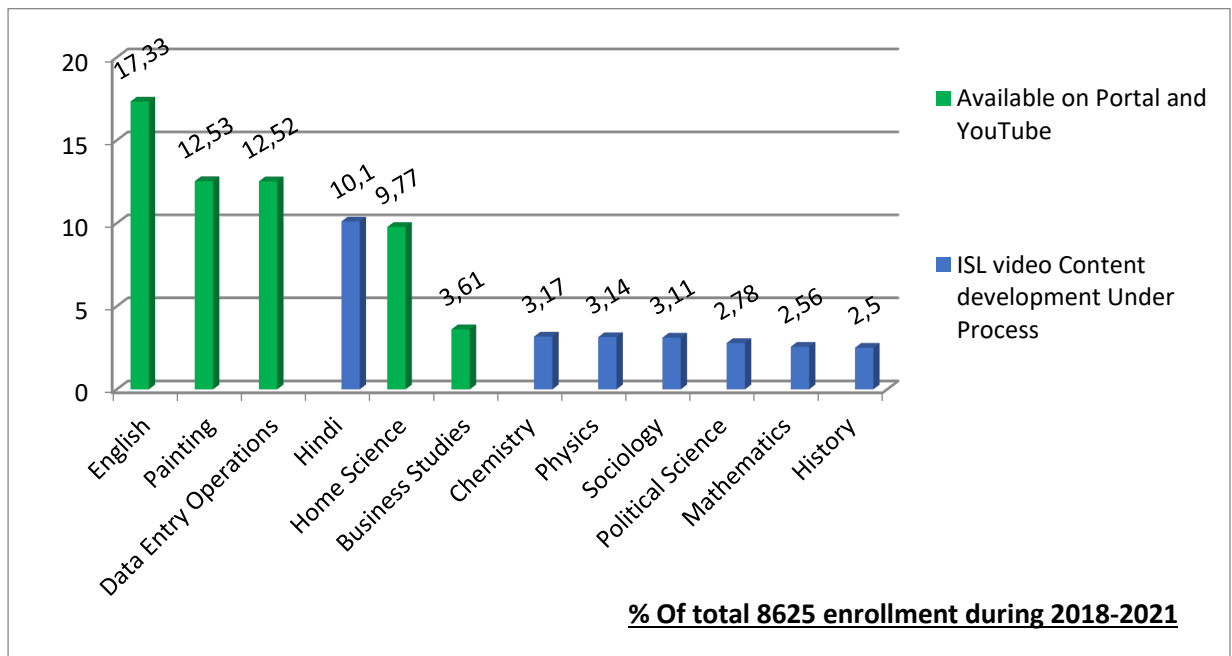
- The presented in Figure 9a shows that enrollment of learners are high in the subjects at secondary level courses where learning contents are developed and available to the learners through portal and YouTube channel of NIOS in comparison to the other subject where contents are in under development. For example, enrollment in subject like painting and English are high in comparison to the Sanskrit and psychology where learning content in ISL format are under development.



**Figure 9a. ENROLLMENT OF LEARNERS WITH HEARING IMPAIRMENT AT SECONDARY LEVEL**

- The presented in Figure 9b shows that among total 8625 enrollment of learners the highest percentage of enrollment in the subjects at senior secondary level courses was in English i.e., 17.33% while lowest was 2.5% in History. It shows that learners opted the subject more where learning contents are available on portal or YouTube.





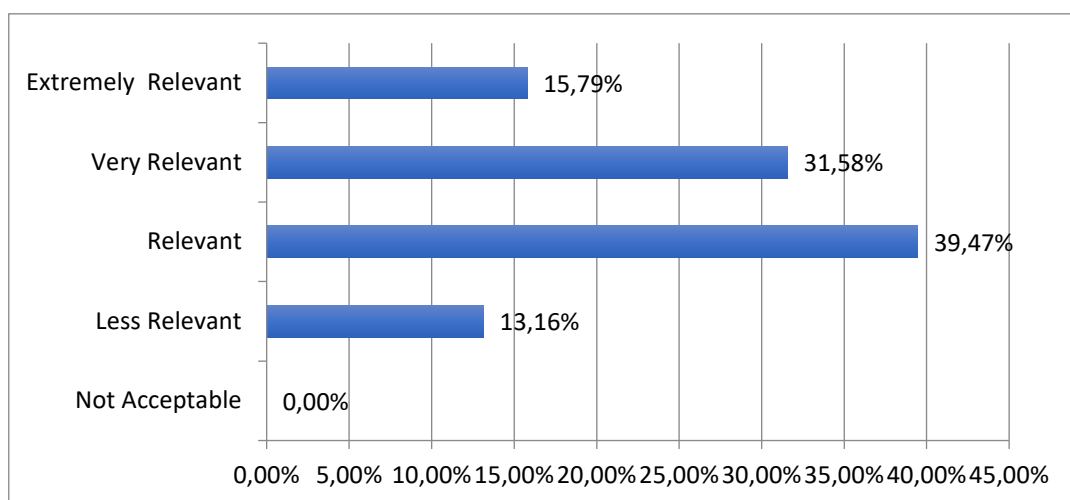
**Figure 9b. ENROLLMENT OF LEARNERS WITH HEARING IMPAIRMENT AT SR. SECONDARY LEVEL**

The overall impact of all the initiatives taken was also assessed, and the reflection of all initiatives regarding ISL and collected response-based results shows a very positive indication that is supported by the increased enrollment pattern of deaf and hard-of-hearing learners. It can be visualized in Figures 9a and 9b.

### AREA OF IMPROVEMENT

Data shows that there is a need and scope for improvement to make these initiatives more effective.

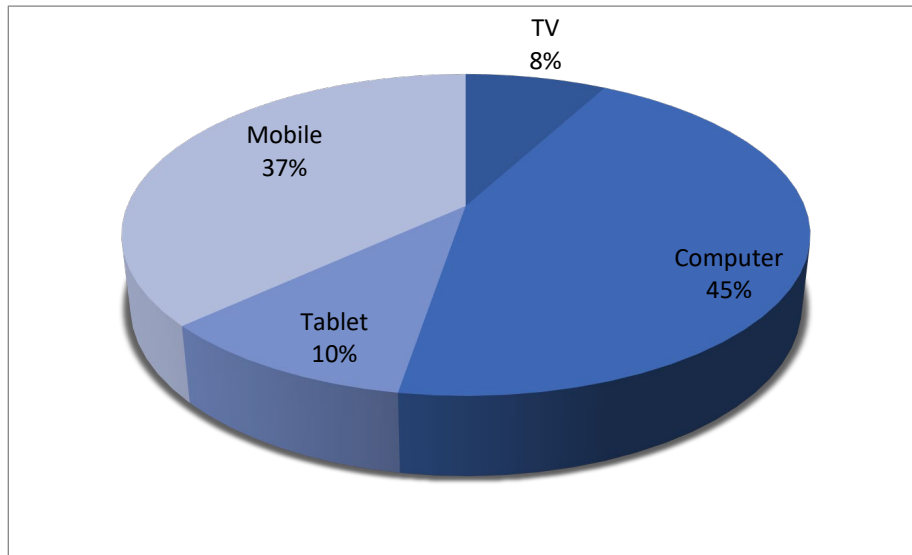
- Need to disseminate information about the availability of ISL-based learning content – The responses of around 47.37% of learners show that there is scope to disseminate the information and spread awareness about “How a learner can get these ISL contents easily?”
- Figure 10 shows that there is a need to improve the quality of images used in ISL video content. While 15.79% of learners are extremely relevant, the remaining 13.16% say that images are less relevant and therefore should be taken care of to improve the learning video quality.



**Figure 10. IMA Figure 10: Images used in The ISL Videos**

- Data shown in Figure 11 shows that most of the learners prefer desktop computers to

watch ISL based learning videos (45%), but 37% use mobile phones and 10% use tablets as their preferred devices. Therefore, images and animation selection may be considered and used accordingly, which is mobile and tablet friendly.



**Figure 11. PREFERRED DEVICE TO WATCH ISL VIDEOS**

## CONCLUSION

Taking a broad view of the inclusion of people with disabilities in the educational system, the provision of support in the form of learning content and support classes using cutting-edge technology is regarded as an indicator of positive key practices for a wide range of disabilities.

In this regard, NIOS has taken several initiatives, especially for the education and skilling of deaf and hard-of-hearing learners through providing educational support in the form of learning content and new academic and job-oriented courses in ISL. The study was undertaken to understand how various initiatives such as developing ISL videos in different subjects at secondary and senior secondary level and further introducing Indian Sign Language as a language subject are benefiting deaf and hard-of-hearing learners. This also enables NIOS to explore gaps and priorities to make deaf education better and more meaningful.

As of now, it may be small steps that have been initiated by the NIOS, but its positive impact has been visible now which is reflected in the increasing trend in enrollment of deaf and hard of hearing learners. The analyzed data in this study indicates the learners' awareness, their study habits, their educational needs, and their opinion on ISL content and program quality, which shows their positive interest in the initiatives taken by the NIOS in the domain of ISL. Deaf Education particularly, research based on sign language-based education is a very new area, particularly in the case of developing and third world countries and such kinds of studies can be undertaken in these countries to understand the educational needs of deaf and hard-of-hearing learners.

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