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RESEARCH PAPER

Conceptualizing Literacy Domains for Setting their Implications in The 21st Century

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ABSTRACT

This research paper intends to conceptualize the literacy domains and their intersection through a proposed sphere in today's interconnected world. In the present era of the 21st century, those nations are valued who have a higher level of literacy. The literacy level of a country determines its success in different fields, like employment, health, citizenship behavior, etc. Literate people are able to participate or contribute to their society at an optimal level. In the future, strong nations will be those who have the strength of literate individuals, whose productivity and worth will be determined by the strength of their knowledge. Complementary perspectives regarding literacy domains are discussed by reviewing literature. Basic Literacy/Functional literacy, Civic/Social literacy and Digital literacy are explained in detail. It will help in the development of insight for setting various strategies, including educational interventions, community-based programs, and employing technological tools to enhance the phenomena of literacy. This Research suggests that conventional description of literacy i.e., 3R, needs to be reconsidered by following the calls of international forums.

| **KEYWORDS** | Basic Literacy, Digital Literacy, Functional Literacy, Health Literacy, Social Literacy |

Introduction

Literacy plays a pivotal role in fulfilling the aspirations of every society. It helps to eliminate poverty, supports the uplifting of the economy, and provides individuals the chance to equip themselves with the skills necessary for leading a productive and meaningful life. Literacy helps make a difference by working towards the survival and advancement of a society. Kick &Busch (2001) point out that the literacy level of a country has a positive impact by influencing the growth of the overall standard of living. Literacy enhancement has been a top priority challenge in the modern world. International forums like "The Convention on the Rights of Children" (CRC), "No Child Left Behind, Every Child Matters", "Millenium Development Goals" (MDG s), "Sustainable Development Goals" (SDGs), and several others have laid great emphasis on the attainment of literacy target.

Literacy breaks down the barriers of space, time, and culture. When literacy is used as a source of transmission of culture, education is prioritized as literate people would then be able to play their valuable role in fulfilling the aspirations of the nation.

The term literacy possesses different meanings and practices. The definition of literacy is often seen on a narrow canvas but it is presently not as simple as the previous

one i.e.,3Rs. A broader concept of literacy further needs to be considered and established. The drive of this research is to offer a conceptual framework of literacy domains in diverse fields, i.e., functional, social, digital and health.

Pakistan National Education Policy (2009) indicates that the benefits of literacy are greater in economic and social sectors as compared to the personal development of individuals. A nation's economic growth relies significantly on literacy since it provides individuals with the knowledge and abilities they need to use and navigate the latest technology. In the field of economy, literacy contributes towards a higher level of productivity at a mass level. Dockx et al (2020) believe that literacy helps to lift individuals out of poverty. Hence, it favors the individuals to become active participants in the community for its economic growth. Similarly, there are wider social and health benefits of literacy, for example by helping achieve social inclusiveness at a greater level.

It is imperative to foster critical innovation in individuals for a shift to a more sustainable society. This research paper intends to examine the concepts and domains of literacy. For this purpose, literature was reviewed to conceptualize and endorse literacy domains, considering them significant in formal, non-formal, and informal learning settings. The four main domains of literacy are discussed in detail as a research methodology. This research paper reveals the functional, digital, social and health-related dimensions of literacy and their intersection to build a wide literacy sphere.

Literature Review

UNESCO (2017) confirms literacy as "the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts" (Montoya,2018). It seems appropriate to consider literacy as a tool for meaningful participation in society. Globally, the population is expanding, and technology is overcoming all kinds of barriers, making it essential for us to be able to interact and connect with those around us.

Literacy is the foundation of meaningful progress in every society. It is not a single construct; rather, it is the node of multiple areas, including citizenship, health, and education. (Zua,2021., Samerski,2019). As a component of the learning process, it helps towards social reconstruction, self-reliance, and learning livelihood skills. Even though illiteracy does not equal ignorance, that is where our attention should be directed. For those who cannot read or write, there could be alternative paths offered to them for joining global citizenship.

Several forms of literacy covering major areas of life help to counter issues related to local, provincial, national, and global fronts in a successful manner. Lutnaes (2021) explains that in order to foster innovation and shift to a more sustainable society, we need to build a literate environment. The research methodology of this research paper is a review of significant literature that conceptualizes and endorses literacy domains and their intersection.

The fundamental component of education is literacy. People who are literate are better equipped to learn new things, interact with academic material, and refine their analytical and critical thinking skills. Literacy and economic empowerment are closely intertwined. Zua (2021) indicates that a literate person can more efficiently acquire information about his/her career or business. In today's knowledge-based economy, literacy skills are essential for landing a job and moving up the corporate ladder in a number of different professions, which makes the literate eligible to avail more

opportunities in society. Literate people have better access to job choices, higher earning potential, and better career prospects as compared to those with poor literacy skills.

Literacy plays a dominant role in personal development by expanding an individual's horizon, boosting their capacity for self-expression, and promoting lifelong learning. Literate people can discover a variety of perspectives, cultures, and ideas through reading, which promotes their self-development and provides them with a wider perspective on the world. It is also an essential component of efficient communication and social interaction. Reading and writing skills allow people to communicate clearly, share knowledge, and take part in fulfilling activities both online and offline. The ability to traverse the digital world while engaging in social activities are all made possible by literacy.

Domains of literacy

Every individual, organization, and society set their own perspective of literacy according to their requirements or vision (Kucer & Silva, 2012). Commonly, people think of literacy as a set of solely technical coding and decoding abilities. They consider literacy as a distinct quality that can be identified as either being present or missing. To analyze how people with a variety of relevant personal and social resources interact with written material in society, it is necessary to interpret it as a collection of social practices rooted in broader social goals and cultural expectations. (Bentahar, & O'BRİEN,2019).)

Basic Literacy/Functional literacy

The conventional concept of literacy includes reading, writing and numeracy as basic literacy skills. Khuluvhe (2021) states that a person is functionally literate if he is able to participate in all the activities that require literacy (reading, writing, and mathematics), for him and his community to function well. Without these foundational competencies, individuals could face issues in their respective fields.

The capacity to read and understand written texts is referred to as reading literacy. It includes understanding the meaning of the words, sentences, and paragraphs as well as deciphering and analyzing the data provided in a document. Writing and reading have the same nexus of abilities and expertise, which contributes to their complementary growth. Kim(2020) is of the view that writing is an essential part of conventional literacy.

Knowing and managing your assets are a part of financial literacy. Numeracy and financial literacy are closely related and both require the use of mathematical computation techniques. It provides guidance for setting aside money for investments and savings, and making sound financial decisions. Individuals who are financially literate have the capacity to understand financial systems and to make wise decisions about their money and resources. Individuals deal with money issues on a daily basis (such as mortgages, personal loans, and travel expenses), and numeracy is a critical component that can help people make assessments and decisions about these crucial life issues (Hong et al ,2020).

The National Assessment of Adult Literacy (NAAL, 2017) identifies three types of literacy in the United States; **Prose**: the ability required to find, read and utilize information from transcripts like news articles, editorials, pamphlets and informative resources, **Document**: the knowledge and skills required to locate, read, and apply non-continuous texts in a variety of settings, such as, pay counterfoils, travel routes, resumes, atlases, tables, and food and medicine tags, and **Quantitative**: the information and capacities needed to recognize and carry out calculations using numbers, either sequentially or individually. It

includes cheque book settlement, calculating perks, filling forms, and calculation of amount etc. (Nurgiyantoro, Lestyarini & Rahayu,2020).

Functionally illiterate people find it hard to mix in social groups dominated by literate people. This can impact their social life negatively. They are not able to access written or printed means of communications and social media (Silavwe, Mwawa, & Mkandawire, 2019). Bennett et al (2018), believe that individuals who are functionally illiterate are more likely to be uneducated, poor, and to be excluded from opportunities for active involvement in society and the workforce. They usually adopt certain attitudes that hinder them in getting acquainted with basic necessities of life.

Civic/Social literacy

Literacy is considered a social activity. Every group or society uses the term literacy in their own way, under their own social identity and needs. Literacy as a component of the education process works towards social reconstruction, self-reliance, and learning livelihood skills. Social literacy denotes the capability to understand, interpret, and successfully engage in social interactions, relationships, and the broader social environment. Holme (2004) views social literacy as a skill that is required by society, keeping in view the understanding of that specific society and the individual's place in it.

Social literacy includes learning social and emotional competencies, communication and interpersonal skills, training, empathy and conflict resolution, etc. It leads to civic responsibility, social awareness, effective communication, teamwork skills and active involvement in community projects and initiatives. Promoting cultural awareness and understanding is the core subject of social literacy.

The focus on individualism is a threat that sways people away from being concerned about the care and well-being of others, therefore social protection systems, including education can play a tremendous role in protecting and saving the lives of people. Such an activity that the learners repeatedly undergo can be effective if certain messages are conveyed at the right time and appropriate level.

Social literacy can be developed by identifying effective interventions, applying best practices, and collaboration among stakeholders, including educators, researchers, policymakers, and community organizations, for sharing knowledge, resources, and expertise. It can be enhanced by engaging the target groups in community service activities and by providing resources and support for literacy initiatives and community-based programs. Providing and promoting opportunities for social interaction and collaboration can increase the chances of enhancing the understanding of diverse perspectives and experiences.

The impact of culture and community must also be taken into account when analyzing how environmental factors influence the development of literacy skills.

Digital literacy

According to the European Literacy Policy Network by Montoya (2018), literacy refers to "the ability to read and write at a level whereby individuals can effectively understand and use written communication in all media (print or electronic), including digital literacy". Similarly, the working definition given by UNICEF (2019) regarding digital literacy involves the knowledge, skills, and attitudes that permit individuals to

flourish in the digital world by keeping themselves safe according to their age, culture and content.

Digital literacy is the capacity to utilize computers for research, content creation, and communication in order to engage in healthy activities at home, school, workplace, and society (Fraillon et al, 2020). It can be considered as an individual's capacity to use computer applications or some other digital mediums to gather and utilize (Teräs, 2022) and also to employ and share information (Greene et al, 2014). In simple words, it is the efficient application of technology.

Digital literacy as a capability allows a person to live practically, acquire adequate knowledge, and give their own input in the digital world. It involves the skills and knowledge essential to effectively steer, appraise, and produce digital content, by making use of proper expertise. It comprises knowledge and skills about using digital devices, directing online podiums, critically evaluating material found on the internet, and connecting efficiently through digital modes (Reddy, Sharma & Chaudhary, 2020). Several other labels, including digital capability, digital literacy, computer literacy, and ICT literacy have been used to describe people's ability to operate requests on computers and other digital devices (Fraillon et al, 2020 ., López et al (2022).

Media literacy is the ability to disparagingly assess media messages from a variety of sources, including television, social media, ads, and news. It involves understanding the methods employed in the development of media, identifying bias or false information, and establishing a critical viewpoint towards it.

Combining digital literacy and artificial intelligence (AI) AI literacy refers to possessing the fundamental skills required to live, learn, and operate in our digital environment by effective use of artificial intelligence (Steinbauer et al., 2021). The use of digital media has created complications, leading modern societies towards erosion of democratic domains by extraordinarily covering the personal, social, political and economic aspects of life (Ng, D et al,2021) However, being able to use new technologies is a prerequisite to succeeding in this digitalized era.

Kanchev et al (2016) elaborate that digital literacy does not only refer to the use of the internet but also to the critical evaluation skills and collaborative competencies that may need to be developed in the learners. Sánchez, Santiago & Sánchez (2021) present the view that schools should initiate programs to develop digital literacy skills in both students and teachers.

Digital literacy encompasses several benefits. It provides opportunities for individuals to use digital platforms to attain benefits and avoid negative outcomes in all areas of life (Nascimbeni & Vosloo, 2019). It empowers the learners to get access to information (Yustika & Iswati,2020), participation, and freedom of expression, and to increase the employability of future citizens. While digital literacy aids people in navigating the evolving online world, similarly, media literacy is the capacity to judgmentally appraise, analyze and comprehend media communications.

Health Literacy

Health literacy is considered as the capability of people to assess, comprehend, proceed and smear health-referenced evidence in making health-related choices to augment their well-being (Kostareva et al,2020). Rikard et al (2016) explain health literacy as "an individual's capacity to obtain, process and understand basic health information

and services needed to make appropriate health decisions". It involves comprehending basic health vocabulary, reading and interpreting health-related constituents, and being able to steer healthcare systems successfully. It authorizes people to regulate their health by making well-versed choices. A person's ability to contextualize health knowledge for their well-being and to make decisions based on a thorough assessment of what those decisions would mean for them "in their own world" is known as health literacy.

Three types of health literacy are explained by Nutbeam (2000), cited from Frisch et al (2012): *functional health literacy* (being able to use health information by applying reading and writing skills), *interactive health literacy* (using advanced cognitive literacy skills to interact, interpret and apply information related to health concerns) and *critical health literacy* (critically analyzing health-related information by using advanced cognitive skills).

Mental health

Understanding mental health and realizing its significance as a crucial element of overall health are made possible by health literacy. Health literacy can also affect decisions about diet, exercise, sleep, and substance use that have an impact on mental health. People with more knowledge are more likely to adopt good habits that promote mental health (Kågström, Juríková & Guerrero,2023). People can learn numerous coping mechanisms, stress reduction approaches, and self-help tools through health literacy, which enables them to successfully handle stresses and difficulties they face on a daily basis (Nielsen et al.,2017). It can improve a person's capacity for communicating their thoughts, feelings, and needs, which will expand their mental and emotional health. A sense of control and self-efficacy are fostered by health literacy, and these traits may help to improve mental health.

Health and well-being are significantly impacted by literacy. Literate people are better able to acquire and comprehend health information, adhere to medical advice, and make prudent choices regarding their health. Promoting preventative care, and illness management, are all dependent on health literacy (Vamos, et al.,2020). Individuals who have adequate knowledge of their health may make informed choices about it. They can actively participate in healthcare by making judgements with regard to treatment options, preventive measures, and lifestyle modifications if they have an improved knowledge of medical facts. Advanced health literacy is associated with better health outcomes for the individuals. They are more likely to adopt healthy habits, follow treatment plans, take their medications as prescribed, and seek out preventive care. This can result in fewer hospitalizations, better chronic condition management, and overall better health.

Health literacy encourages individuals to engage in preventive care measures. With increased awareness of the importance of preventive care, individuals are more likely to take proactive steps to maintain their health and detect potential health issues at early stages when treatment is often more effective. They can take an increased interest in their healthcare by making decisions regarding treatments, preventive measures, and lifestyle adjustments with better comprehension about medical information.

Health literacy is important in developing skills in the learners to face, fight and cope with health challenges. The need for health literacy was recognized with great emphasis during the recent outbreak of the COVID-19 epidemic, when people around the world had to survive by following safety and health measures. During that period, it was realized that the survival of societies depends upon a healthy population (UN, 2020).

Health literacy can also contribute to reducing the burden of nations regarding the spread of different diseases.

Improving health literacy can contribute to reducing health disparities among different populations. By ensuring that everyone has access to understandable health information and resources, regardless of their socioeconomic status, education level, or cultural background, health literacy helps to bridge the gap between disadvantaged communities and healthcare services**.**

Health literacy also has the potential to reduce healthcare costs. When individuals understand their health conditions and treatment plans, they are less likely to experience medication errors and unnecessary hospitalizations. By promoting preventive care and early intervention, health literacy can also help prevent expensive complications associated with poor management**.**

Methodology

The research is qualitative in nature. In order to gather contemporary perspectives regarding the literacy sphere, data was collected from the available literature by employing an eclectic approach. Eclecticism is a conceptual technique that derives ideas from a variety of theories, approaches, and concepts.

Results and Discussion

The intersection of the domains of literacy: There is a likelihood that individuals equipped with certain domains of literacy will perform better in their personal, social, and professional lives. A strong individual-society relationship is developed by considering the literacy sphere, which leads to the wellness and empowerment of individuals as well as societies. By focusing on the dimensions of literacy, Sustainable Development Goals can be attained, whether they are regarding reducing poverty (Dockx et al (2020), promoting good health & well-being (Rikard et al,2016., Nutbeam, & Lloyd,2021), or targeting quality education (Kucer,2014).
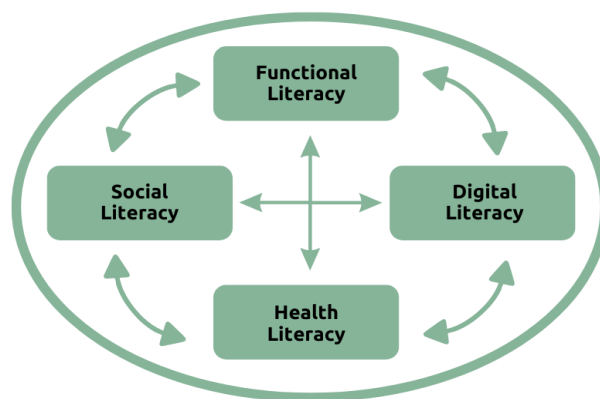

Figure 1. Intersection among the 4 main domains of literacy.

Table 1
Relationship among different literacy domains.

Domains of literacy	Intersection of both dimensions of literacy
Functional--Social	The development of "literate language" in students is greatly influenced by social circumstances created through interactions (Rohde, 2015). Success in learning to read, write, and compute has substantial ties with social and cultural experiences. Instead of a sequential list of separate elements, Rohde (2015)

	viewed literacy as a dynamic process of skills and circumstances. It can be followed by people learning basic and social literacies by indulging in community service activities.
Functional--Digital	Young children use digital media and technologies in their daily lives at home and school for reading, writing, and communicating (Kumpulainen, Sairanen & Nordström, 2020). There is a significant correlation between numeracy and digital skills (such as computer tasks), those with lower numeracy skills are less likely to utilize computers and the internet than those with better functional competency. In a similar vein, a lower use of ICT is linked to a lack of math-related skills.(Hong et al,2020)
Functional--Health	The conceptualization of functional health literacy is strengthened by a health-education model that emphasizes the provision of information (Fairbrother et al., 2016). Health and well-being are significantly impacted by literacy as literate people are better able to acquire and comprehend health information, adhere to medical advice, and make prudent choices regarding their health. Furthermore, preventative care and illness management are also dependent on functional literacy. (Vamos, et al.,2020).
Social--Digital	Digital literacy may be incorporated in the context of specific laws, social norms, and practices (Pangrazio & Sefton, 2021). Technological tools to embrace social literacy may be employed through the use of social media and online platforms. They would develop positive social connections and educate users about responsible citizenship (Milenkova & Lendzhova, 2021).
Social--Health	Health literacy as a social practice seeks to accomplish its goals by emphasizing the social elements that influence well-being (Samerski, 2019). Civic literacy helps individuals be aware of health concerns by involving decision-making processes refined through social channels (Rikard et al, 2016). The social perspective of literacy aligns with the field of health promotion and has encouraged individuals to espouse healthy behaviors, stay away from unhealthy ones, and have control over their health (Benathar, 2019).
Digital--Health	Digital health literacy is a super predictor of health (Van et al, 2022). It deals with the use of computers and the Internet by applying health-related knowledge from the digital ecosystem (like the Internet) in various situations (Hang Wong, 2021). Digital health literacy is associated with the exploration of media's impact on making healthy choices regarding nutrition and fitness and avoiding unhealthy activities.

All domains of literacy are interconnected. There is no one-to-one encounter; rather, several literacies can proceed together, for example, social, health, and digital (enhancing health literacy by using digital devices for social well-being (Sieck et al., 2021).

Implications of literacy domains in daily life

Literacy covers all facets of life, having an impact on technological integration, civic engrossment, personal enablement, communication, and health. It starts with an individual's personal development and moves towards societal improvement.

Health and well-being are significantly impacted by literacy. Literate people are better able to acquire and comprehend health information, adhere to medical advice, and make prudent choices regarding their health. Promoting preventative care and illness management are also dependent on health literacy.

The smooth operation of democratic societies depends on a literate populace. Understanding one's rights, taking part in civic affairs, and making wise decisions are all made possible by literacy. Citizens can use it to analyze political issues, critically evaluate information, and participate in public dialogue. Being literate gives people the ability to stand up for themselves, claim their rights, and pursue their objectives. It encourages freedom, self-assurance, personal empowerment, and self-determination. People can actively change their lives and make informed choices if they are literate enough. In the modern era, there has been a growing demand for digital literacy. In order to use the internet and digital tools and interact on online platforms, one must be competent in the use of technology and have adequate information literacy skills. Furthermore, digital

literacy makes it possible for individuals to take advantage of technology, including access to online resources, communication tools, and e-commerce.

Digital literacy is not a fixed construct; therefore, it may be incorporated in the context of specific laws, social norms, and practices (Pangrazio & Sefton, 2021). Digital life challenges invoke individuals to ascertain social interaction to deal with the complexities of life and help to understand how technological advancements have effects on society (Littlejohn, Beetham, & McGill, 2012).

Discussion

Enhancing literacy in a globalized society is the need of the day. The provision of individuals' access to literacy is a global agenda for the implementation of Sustainable Development Goal 4 (United Nations, 2022). There is a likelihood that individuals equipped with certain domains of literacy would perform better in their lives. By establishing the wide concept of literacy a strong individual-society relationship is developed, which can lead to the wellness of individuals as well as societies. This idea is supported by Lutnaes (2021) who holds the view that building a literacy environment is critical in order to establish sustainable societies.

While living in the 21st century, there is a need to broaden the canvas of literacy and hence move forward by accepting the challenges of the fast-paced world. The present idea of literacy is transformed into "pluriliteracies" in order to satisfy the demands of the knowledge society (Cinganotto & Cuccurullo, 2019).

In 1979, the world literacy rate was 68%, now after 45 years this digit has turned into 86% (UNICEF,2021). It should be noted that this just includes the population who knows how to read, write & numerate. The demands, challenges and requirements of the 21st century have altogether changed as compared to past centuries. It is time to club and sharpen an individual's capabilities for playing an effective role throughout the globe. In order to make the literacy process effective, it is important to interconnect different dimensions of literacy, as Kucer &Silva (2012) point out, being literate means being able to learn effectively, and efficiently in consideration of linguistic systems, cognitive aspects, developmental aspects, and sociocultural facets.

Information distribution and individual choice serve as the main tenets of the conventional understanding of health literacy. It compares people's understanding to the requirements of the healthcare system and promotes a patient's "shortfalls" or "risk approach" as individuals with poor literacy scores are assumed to be at risk of receiving improper healthcare (Nutbeam,2008).

Social and digital literacy may be incorporated in the context of specific laws, social norms, and practices to ascertain social interaction. It will help to understand how technological advancements have an effect on society (Ke, et al., 2021). Media-literate individuals are better equipped to consume media sensibly and evaluate the information they come across. The ability to traverse the digital world while engaging in community activities is all made possible by literacy. The use of social media and online platforms for developing positive social connections and engaging to educate users about responsible online behavior and digital citizenship has proven to be very effective.

Citizens who are health literate can evaluate health information critically. Health-literate people are better able to communicate with healthcare experts. They are capable of comprehending, asking pertinent questions, getting answers to their questions, and

actively participating in conversations regarding their health (Nutbeam & Lloyd, 2021). Steering the complex healthcare system can be challenging, particularly for individuals with limited health literacy. By improving health literacy, individuals gain the ability to obtain and comprehend health information, locate appropriate healthcare services, and comprehend health policies. This empowers them to access timely and appropriate care, reducing delays and improving health outcomes.

It is imperative to realize the effects of literacy on society to find out its implications on individuals, communities, societies and the world at large. All stakeholders including theorists, educators, researchers, policymakers, and community organizations may be engaged for the development and advocacy for integrating literacy domains in their respective policies. Resources and support may be allocated for literacy initiatives by identifying effective interventions and establishing collaboration among stakeholders to share various viewpoints and experiences. It is also essential to improve literacy skills by promoting universal access to high-quality education.

Conclusion

Literacy helps to recognize, comprehend, interpret, create, and communicate in a dynamic world that is becoming increasingly digital, text-mediated, and rich in information. Compounding different domains of literacies can provide support for the stakeholders in the fields of learning, teaching, policy-making, professional business, research, and community (local, national, and global) level exercises. Globally, there is a dire need to foster all domains of literacy to achieve sustainable development goals (SDGs) for a prosperous world. Formal, non-formal, and informal modalities may be employed to foster the literacy sphere. Standards of literacies may be defined and strategies including educational interventions, community-based programs, and technological tools need to be enhanced for this purpose.

Enhancing literacy is a global agenda driven by global organizations. For this purpose, there is a need to expand the literacy canvas and redesign, reconsider, and adopt the domains of literacy worldwide. The eclectic approach regarding literacy needs to be focused on addressing all areas of human development. Literacy levels and standards may be framed to identify and segregate the competency level of individuals, which may reflect their capability to perform specific tasks at a certain level.

Recommendations

It is suggested that by employing the wide concept of literacy a strong individual-society relationship can be established for the wellness of individuals as well as societies. While living in the 21st century, there is a need to broaden the canvas of literacy and hence move forward by accepting the challenges of the fast-paced world. Domains of literacy may be reconsidered, redesigned and adopted worldwide. This eclectic approach regarding literacy needs to be focused on addressing all areas of human development. Literacy levels and standards may be framed to identify and segregate the competency level of individuals, which may reflect their capability to perform specific tasks at a certain level.

References

Anwar, M. A., & Naveed, M. A. (2019). Developments in Information Literacy in Pakistan: Background and Research. *Pakistan Library & Information Science Journal, 50(2).*

Bennett, S. V., Gunn, A. A., Gayle-Evans, G., Barrera, E. S., & Leung, C. B. (2018). Culturally responsive literacy practices in an early childhood community. *Early Childhood Education Journal, 46, 241-248.*

Bentahar, A., & O'BRİEN, J. (2019). Raising students' awareness of social justice through civic literacy. *Journal of social studies education research, 10(1), 193-218.*

Buckingham, D. (2020). Epilogue: Rethinking digital literacy: Media education in the age of digital capitalism. *Digital Education Review, (37), 230-239.*

Burnett, C., & Merchant, G. (2019). Revisiting critical literacy in the digital age. *The Reading Teacher, 73(3), 263-266.*

Cinganotto, L., & Cuccurullo, D. (2019). Rethinking literacy in the 21st century: A pluriliteracies approach to CLIL. *Lublin Studies in Modern Languages and Literature, 43(3).*

Dockx, Y. J., Molenaar, E. A., Barten, D. J. J., & Veenhof, C. (2020). Discriminative validity of the Core outcome set functional independence in a population of older adults. *BMC geriatrics, 20(1), 1-12.*

Fairbrother, H., Curtis, P., & Goyder, E. (2016). Making health information meaningful: Children's health literacy practices. *SSM-population health, 2, 476-484.*

Fraillon, J., Ainley, J., Schulz, W., Friedman, T., & Duckworth, D. (2020). Preparing for life in a digital world: IEA international computer and information literacy study 2018 international report (p. 297). *Springer Nature.*

Frisch, A. L.,Camerini, L., Diviani, N., & Schulz, P. J. (2012). Defining and measuring health literacy: how can we profit from other literacy domains? *Health promotion international, 27(1), 117-126.*

Greene, J. A., Seung, B. Y., & Copeland, D. Z. (2014). Measuring critical components of digital literacy and their relationships with learning. *Computers & education, 76, 55-69.*

Greenhow, C., & Lewin, C. (2016). Social media and education: Reconceptualizing the boundaries of formal and informal learning. *Learning, media and technology, 41(1), 6-30.*

Han Wong, B. L., Clemens, T., & Brand, H. (2022). Digital health literacy as a super determinant of health: More than simply the sum of its parts. *Internet Interventions, 27.*

Holme, R (2004) Literacy: An Introduction , Published by: *Edinburgh University Press Pages: 280 https://www.jstor.org/stable/10.3366/j.ctvxcrfdf pg 240-248 .*

Hong, J., Thakuriah, P. V., Mason, P., & Lido, C. (2020). The role of numeracy and financial literacy skills in the relationship between information and communication technology use and travel behaviour. *Travel Behaviour and Society, 21, 257-264.*

Kågström, A., Juríková, L., & Guerrero, Z. (2023). Developmentally appropriate mental health literacy content for school-aged children and adolescents. *Cambridge Prisms: Global Mental Health, 10, e25.*

Kanchev, P., Hajdinjak, M., Georgiev, E., Apostolov, G. (2016). *Are Digital Natives Digitally Literate? Insights from a National Representative Survey 2016*, Bulgaria.

Ke, L., Sadler, T. D., Zangori, L., & Friedrichsen, P. J. (2021). Developing and using multiple models to promote scientific literacy in the context of socio-scientific issues. *Science & Education, 30(3), 589-607.*

Khuluvhe, M. (2021). Adult illiteracy in South Africa. Pretoria: South African Department of Higher Education and Training. *www.dhet.gov.za*

Kickbusch, I. S. (2001). Health literacy: addressing the health and education divide. *Health promotion international, 16(3), 289-297.*

Kim, Y. S. G. (2020). Interactive dynamic literacy model: An integrative theoretical framework for reading-writing relations. Reading-writing connections: *Towards integrative literacy science, 11-34.*

Kostareva, U., Albright, C. L., Berens, E. M., Levin-Zamir, D., Aringazina, A., Lopatina, M., ... & Sentell, T. L. (2020). International perspective on health literacy and health equity: Factors that influence the former Soviet Union immigrants. *International Journal of Environmental Research and Public Health, 17(6), 2155.*

Kucer, S. B., & Silva, C. (2012). *Teaching the dimensions of literacy. Routledge.*

Kucer, S. B. (2014). Dimensions of literacy: A conceptual base for teaching reading and writing in school settings. *Routledge.*

Kumpulainen, K., Sairanen, H., & Nordström, A. (2020). Young children's digital literacy practices in the sociocultural contexts of their homes. *Journal of Early Childhood Literacy, 20(3), 472-499.*

Littlejohn, A., Beetham, H., & McGill, L. (2012). Learning at the digital frontier: a review of digital literacies in theory and practice. *Journal of computer assisted learning, 28(6), 547-556.*

López, J. R., Ornelas, M. L., Morales, K. F., & Sandoval, J. O. (2022). A concept approach among three types of literacy: computer literacy, technological literacy and information literacy. *Texto Livre, 14.*

Lutnaes, E. (2021). Framing the concept design literacy for a general public. *https://doi.org/10.7577/formakademisk.4639*

Milenkova, V., & Lendzhova, V. (2021). Digital citizenship and digital literacy in the conditions of social crisis. Computers, 10(4), 40. *https://doi.org/10.3390/computers10040040*

Montoya, S. (2018, October). Defining literacy. *In GAML fifth meeting (pp. 17-18).*

Nascimbeni, F., & Vosloo, S. (2019). Digital literacy for children: Exploring definitions and frameworks. Scoping Paper, 1. August 2019 *UNICEF Office of Global Insight and Policy Fabio Nascimbeni, Universidad Internacional de La Rioja Steven Vosloo, UNICEF*

National Education Policy (2009), *Ministry of Education, Govt of Pakistan, Revised August 2009.*

Nielsen, L., Shaw, T., Meilstrup, C., Koushede, V., Bendtsen, P., Rasmussen, M., ... & Cross, D. (2017). School transition and mental health among adolescents: A comparative study of school systems in Denmark and Australia. *International Journal of Educational Research, 83, 65-74.*

Ng, D.T.K, Leung,J.K.L.,Chu,S.K.W., & Qiao,M.S. 2021. https://doi.org/10.1146/annurev-publhealth-090419-102529 Conceptualizing AI literacy: An exploratory review. Computers and Education: Artificial Intelligence, 2, 100041.

Nutbeam, D., & Lloyd, J. E. (2021). Understanding and responding to health literacy as a social determinant of health. Annu Rev *Public Health, 42(1), 159-73.*

Nurgiyantoro, B., Lestyarini, B., & Rahayu, D. H. (2020). Mapping junior high school students' functional literacy competence. *Cakrawala Pendidikan, 39(3), 560-572. (The National Assessment of Adult Literacy (NAAL) 2017*

Paakkari, L., Inchley, J., Schulz, A., Weber, M. W., & Okan, O. (2019). Addressing health literacy in schools in the WHO European Region. *Public health panorama, 5(2-3).*

Pangrazio, L., & Sefton-Green, J. (2021). Digital rights, digital citizenship and digital literacy: what's the difference?. *Journal of new approaches in educational research, 10(1), 15-27.*

Reddy, P., Sharma, B., & Chaudhary, K. (2020). Digital literacy: A review of literature. *International Journal of Technoethics (IJT), 11(2), 65-94.*

Rikard, R. V., Thompson, M. S., McKinney, J., & Beauchamp, A. (2016). Examining health literacy disparities in the United States: a third look at the National Assessment of Adult Literacy (NAAL). *BMC public health, 16, 1-11. DOI 10.1186/s12889-016-3621-9*

Rohde, L. (2015). The comprehensive emergent literacy model: Early literacy in context. *Sage Open, 5(1), 2158244015577664.*

Samerski, S. (2019). Health literacy as a social practice: Social and empirical dimensions of knowledge on health and healthcare. *Social Science & Medicine, 226, 1-8.*

Sánchez-Cruzado, C., Santiago Campión, R., & Sánchez-Compaña, M. T. (2021). Teacher digital literacy: The indisputable challenge after COVID-19. *Sustainability, 13(4), 1858.*

Selwyn, N. (2016). Education and technology: Key issues and debates. *Bloomsbury Publishing.*

Sieck, C. J., Sheon, A., Ancker, J. S., Castek, J., Callahan, B., & Siefer, A. (2021). Digital inclusion as a social determinant of health. NPJ *digital medicine, 4(1), 52.*

Silavwe, A., Mwawa, T., & Mkandawire, S. B. (2019). Understanding the Concept of Functional Literacy by Selected Residents of Lusaka District of Zambia. *Journal of Lexicography and Terminology (Online ISSN 2664-0899. Print ISSN 2517-9306)., 3(2), 1-30.*

Steinbauer, G., Kandlhofer, M., Chklovski, T., Heintz, F., & Koenig, S. (2021). A differentiated discussion about AI education K-12. KI- *Künstliche Intelligenz, 35(2), 131-137.*

Teräs, M. (2022). Education and technology: Key issues and debates: Neil Selwyn. *Bloomsbury Academic, London and New York, 2022, 222 pp. ISBN 978-1-3501-4554-2*

UN Report (2020) Everyone Included: Social Impact of COVID -19*, Department of Economic and Social Affairs*

Vamos, S., Okan, O., Sentell, T., & Rootman, I. (2020). Making a case for "Education for health literacy": An international perspective. *International journal of environmental research and public health, 17(4), 1436.*

van Kessel, R., Wong, B. L. H., Clemens, T., & Brand, H. (2022). Digital health literacy as a super determinant of health: More than simply the sum of its parts. *Internet interventions, 27*

UNESCO,(2023)*Information Literacy,* UNESCO

UNESCO.(2017).Incheon Declaration and SDG4 – Education 2030 Framework for Action, UNESCO

Yustika, G. P., & Iswati, S. (2020). Digital literacy in formal online education: A short review. *Dinamika Pendidikan, 15(1), 66-76.*

Zua, B. (2021). Literacy: Gateway to a World of Exploits. *International Journal of Education and Literacy Studies, 9(1), 96-104.*