

Digital Competence to Bridge Transactional Distance in Distance Education

Anshoo Rajvanshi¹, Hitendra Singh Rathore²

¹PhD Scholar, Department of Sociology, Banasthali Vidyapith, Rajasthan

²Head, Department of Sociology, Banasthali Vidyapith, Rajasthan

Abstract

Utilising primary data and a stratified random sampling method, this study explores the proficiency of Open and Distance Learning (ODL) students in navigating digital resources and their intrinsic motivation for academic growth. Data collected from 390 IGNOU students, via stratified random sampling, includes undergraduates enrolled from 2016 to 2021 and postgraduates from 2018 to 2021. The study emphasises the crucial importance of fostering an interactive and engaging learning environment for the development of affective skills, countering transactional distance. It underscores the pivotal role of ICT in bridging gaps and promoting meaningful social interactions in distance education programs, thus enhancing holistic growth and employability.

Keywords: Distance Education, Affective Skills, Employability, Digital Proficiency

1. Introduction

In traditional employability frameworks, the focus has long been on cognitive skills, emphasising specialised knowledge. Similarly, Open and Distance Learning (ODL) has historically prioritised technical or discipline-specific skills for future employability. However, in the expeditiously evolving landscape of Industry 5.0, characterised by the convergence of human capabilities with advanced technologies such as AI, automation, and the Internet of Things, the significance of affective skills for employability has become inescapable. Affective skills, encompassing emotional intelligence, empathy, adaptability, resilience, and effective communication, are indispensable for navigating the complexities of Industry 5.0. In an environment where human-machine collaboration is the norm, individuals with high emotional intelligence excel at managing relationships, comprehending their coworkers' needs and motivations, and cultivating a positive work environment that encourages innovation and productivity. Moreover, empathy empowers employees to predict customer preferences and customise solutions that resonate with their emotional needs, thereby enhancing customer satisfaction and loyalty (Bandaranaike, S. & Willison, J., 2015).

These skills prepare students for diverse careers, fostering resilience, ethical thinking, empathy and strong communication skills. 21st-century higher education increasingly emphasises nurturing the affective domain, recognising its role in transforming student learning experiences into meaningful lifelong skills, much needed to thrive in an ever-evolving global context (Wong, 2020). In the 21st century, global scenario is characterised by rapid technological advancements and global interconnectedness, individuals must possess multifaceted abilities to navigate diverse cultures, industries, and challenges. Thriving in this

dynamic landscape requires adaptable mindsets, effective collaboration, and the capacity to continuously learn and innovate to stay relevant and competitive.

Affective skills constitute of emotional and social attributes crucial for workplace effectiveness, including self-management, interpersonal engagement, and teamwork. They are instrumental in complementing cognitive abilities, enhancing individual potential. Deficiencies in affective skills manifest in negative attitudes, lack of cooperation, and unprofessional behaviour, highlighting their importance in employment contexts. Consequently, while technical competencies remain essential in the era of digital transformation, employers are increasingly valuing affective skills alongside cognitive competencies during the recruitment process (Bloom, 1956; Krathwohl, Bloom & Masia, 1973). They are distinctly recognising the indispensable value of affective skills in fostering innovation, enhancing teamwork, and ensuring organisational success.

Researchers in the field of future employability have underscored the relevance and necessity of affective skills, employing terms such as 'emotional work-readiness', 'work readiness', 'generic attributes', 'graduate employability', 'work preparedness', 'people qualities', and 'people skills' (Bandaranaike & Willison, 2015; Baharin & Hanafi, 2020).

1.1. The objective of ODL

The socialisation process in higher education typically fosters the development of both cognitive and affective skills, enabling individuals to adapt and perform effectively in societal and professional contexts. However, ODL operates on asynchronous, individualised, and self-paced learning models, where learners are removed in space and time from the teacher and peers. Unlike traditional education, where learners gather in physical classrooms for face-to-face instruction. It provides accessible from home with no geographical barriers and cost-effective education without age or time constraints for acquiring new qualifications, updating existing ones, or undergoing retraining. It caters to individuals unable to pursue full-time traditional education due to various reasons (Gunawardena & McIsaac, 2001; Saykılı, 2018)). By enrolling in ODL one can study while doing a job to equip oneself with qualification and skills to negotiate rapidly evolving career requirements, or nurture a family and equip oneself with opportunities for social mobility fostering intrinsic motivation (Deci & Ryan, 2000). This motivation is evident in diverse ways among ODL students. Firstly, their initial enrollment in courses reflects a personal drive to pursue knowledge and achieve academic goals autonomously. Subsequently, their commitment to self-study demonstrates a genuine passion for learning beyond external pressures. Moreover, their capability to manage time and sustain motivation amid various demands underscores an inherent drive to improve skills and knowledge. Ultimately, their persistence in undertaking further studies reflects a deep-seated aspiration for personal and professional development, highlighting the intrinsic motivation that propels them forward in their educational journey.

1.2. Evolution of ODL

ODL was introduced as an alternative strategy to augment and expand the conventional system of higher education. Incorporating the Social Constructivist and Connectivist theories of learning to introduce new learning experiences and paradigms, it has evolved from early correspondence education using print-based materials to leveraging various technologies, including the internet, multimedia resources, and interactive simulations (Dewey, 1938). The proliferation of multimedia resources has enriched learning experiences, offering diverse materials tailored to individual preferences (Garrison, 1985; Siemens, 2005).

Advancements in information and communication technology (ICT) have revolutionised knowledge dissemination in ODL, making high-quality content accessible to learners worldwide. ICT-enabled ODL provides unparalleled flexibility, allowing learners to access educational content and engage in learning activities at their own pace and convenience. Asynchronous communication channels enable self-directed study and collaborative learning, democratising access to education and fostering lifelong learning. Governed by ICT in the 21st century, ODL now utilizes virtual platforms for teaching, fostering continual innovation. Internet-based technologies have vastly improved accessibility, cost-effectiveness, and pedagogical models like Open Education Resources (OER) and Massive Online Open Courses (MOOCs), establishing ODL as mainstream education.

Challenges of Transactional Distance

ICT has undoubtedly narrowed the geographical gap and facilitated virtual interactions in ODL, the notion of 'transactional distance' persists (Moore, 1993). The concept, introduced by Michael G. Moore in the 1970s, refers to the psychological and communication gap between learners and instructors in ODL settings, impacting learner autonomy and overall learning experience. It informs effective instructional design and support strategies in ODL contexts.

Psychological distance in distance education arises from the perceived emotional and social separation between learners and instructors. In ODL, the level of social presence, which refers to the extent individuals feel the presence of others in a mediated environment, is often lower due to the absence of non-verbal cues and real-time interactions. It includes feelings of isolation, alienation, and detachment, driven by factors like limited face-to-face interaction and asynchronous communication modes.

This reduced social presence exacerbates the communication gap. Unlike traditional settings, distance education's reliance on asynchronous communication may impede meaningful exchanges and peer collaboration, contributing to a sense of detachment and impersonality in the learning experience, hindering meaningful interaction, collaboration, impacting interpersonal skill development (Weidman, 2006).

The theories on education and social integration from Emile Durkheim, hailed as the 'father of sociology', provide valuable insights into the concept of transactional distance, despite his lack of direct address of this contemporary notion in distance education. Durkheim emphasised the role of education in fostering social cohesion and solidarity, relevant to the challenges of transactional distance. While distance education may pose hurdles to social integration, Durkheim's ideas suggest that promoting interaction and community building among learners can mitigate these challenges, aligning with his vision of education's role in fostering collective consciousness (Smith, 2014). Transactional distance in distance education disrupts the mechanisms of social integration by limiting face-to-face interaction and shared experiences, thus hindering the development of a sense of social being among learners.

According to Mead, individuals develop a sense of self through social interactions, particularly through the process of taking on the perspective of others, or "role-taking." In face-to-face interactions, individuals receive immediate feedback and cues from others, facilitating the development of social bonds and a sense of belonging (Mead, 1934). In contrast, transactional distance in distance education limits the richness and immediacy of communication, making it difficult for learners to engage in meaningful interactions and develop a sense of social being.

According to sociologist Dr. Alan Tait, transactional distance remains a pertinent issue in contemporary distance education despite technological advancements. Tait emphasises that while ICT has enabled greater accessibility and flexibility in ODL, it has not fully addressed the social isolation and disconnection

that learners may experience in virtual learning environments. The physical separation and reliance on mediated communication channels can impede the development of interpersonal relationships and collaborative learning experiences. Learners may struggle to establish rapport with instructors and peers, hindering their sense of belonging and community in the virtual learning environment. Tait underscores the importance of fostering social connections and nurturing a sense of social being for mitigating the adverse effects of transactional distance and promoting meaningful social interaction and engagement among learners (Tait, 2003).

1.3 Sense of Social Being

The concept of 'sense of social being' from sociological perspectives underscores its essential role for individuals to navigate social interactions, comprehend their societal roles, and cultivate a collective identity. This concept encompasses a feeling of belonging, personal identity, and shared experiences within social groups or communities, reflecting an individual's subjective awareness of their place in society and their interpersonal connections (Muhl, 2018).

Sociological theories, such as symbolic interactionism and social identity theory, explain how individuals shape their social being through interactions with others and group affiliations. Symbolic interactionism, developed by George Herbert Mead, highlights the role of symbols, language and meaning in shaping individual's perceptions of identity and social relationships. According to this perspective, individuals cultivate a sense of belongingness and social identity by internalising the norms, values, and expectations of the social groups. They interpret and respond to symbols and social cues to negotiate and construct shared meanings, roles, identities and sense of belonging within social groups (Blumer, 1969).

Social identity theory, as posited by Henri Tajfel and John Turner, examines how individuals construct their self-concept through their affiliation with social groups. In accordance with this theory, individuals classify themselves and others based on their group memberships, shaping their perceptions of themselves, others, and their conduct in social settings. Through social identification and belonging to groups, individuals derive a sense of belonging, affiliation, and social validation, thereby influencing their overall sense of social existence (Tajfel & Turner, 1979).

From sociological perspectives, it becomes evident that fostering social connections and nurturing a sense of social being is crucial for mitigating the adverse effects of transactional distance and promoting meaningful social interaction and engagement among learners. In distance education settings, transactional distance can hinder the development of sense of social being due to limited social interaction, absence of social context, and emotional detachment. The attribute is vital for shaping interpersonal relationships and emotional well-being. Therefore, in ODL it is pivotal to address these challenges and foster a supportive learning environment conducive to social connection and engagement (NEP, 2020).

2. Research Objective

Reducing transactional distance and promoting interactive learning environments to nurture interpersonal skills and foster a stronger sense of social belonging. Given their intrinsic drive, distance education students are expected to enthusiastically engage and efficiently utilize the wide range of interactive methodologies facilitated by advancements in ICT. Therefore, it is crucial to assess students' accessibility and adaptability towards ICT tools and platforms to ensure equitable participation and effective utilization of resources. Moreover, the higher education system in India is structured to serve an anticipated total population of 139.64 crores in 2020, equivalent to about 17.7% of the world's population. Within this

demographic, approximately 90 crores, that is 64.6%, live in rural areas, encompassing nearly 6 lakh villages. ODL enrollment represents 11.04% of the overall enrolled population. Furthermore, the rural as well as the urban population displays a range of socioeconomic statuses, leading to unequal access to digital resources across the entire populace. By identifying and addressing barriers to access and technology proficiency, policy makers and educators can enhance students' learning experiences and promote inclusivity in distance education environments. In light of these considerations, a study was undertaken to evaluate ODL students' proficiency in navigating digital resources.

2.1. Limitations and Scope of the study

Respondents, enrolled at IGNOU, were contacted via WhatsApp or Telegram due to unknown locations and potential life responsibilities. This excludes learners without smartphones or not on these platforms. The survey aimed to increase representation by allowing all postgraduate or undergraduate students at IGNOU to participate. Furthermore, it is important to note that full representation of the entire population is not claimed, as some individuals may lack access to WhatsApp or Telegram or may have missed the communication. This and similar limitations beyond the researcher's control, may have unintentionally influenced results.

The questionnaire specifically targeted smartphone users engaged on WhatsApp or Telegram, reflecting the study's emphasis on workplace readiness. This approach was considered suitable due to their access to course materials and social interaction through these platforms.

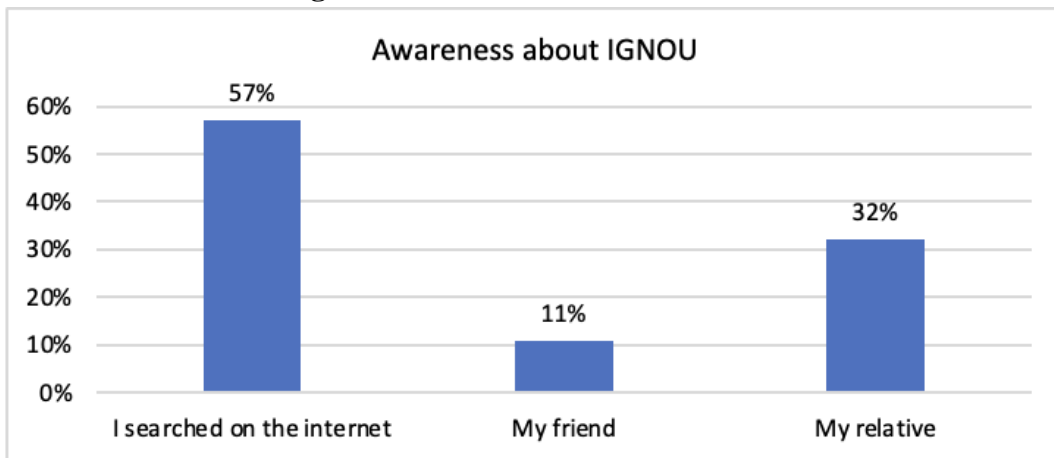
3. Research Methodology

To assess ODL students' proficiency in navigating digital resources, data was collected from 390 students, using stratified random sampling, pursuing under graduation and post graduation from Indira Gandhi National Open University (IGNOU). At IGNOU, UG admissions remain valid for 6 years, UG respondents were enrolled from 2016 to 2021, while PG admissions last 4 to 5 years based on specialization, hence PG respondents were enrolled from 2018 to 2021.

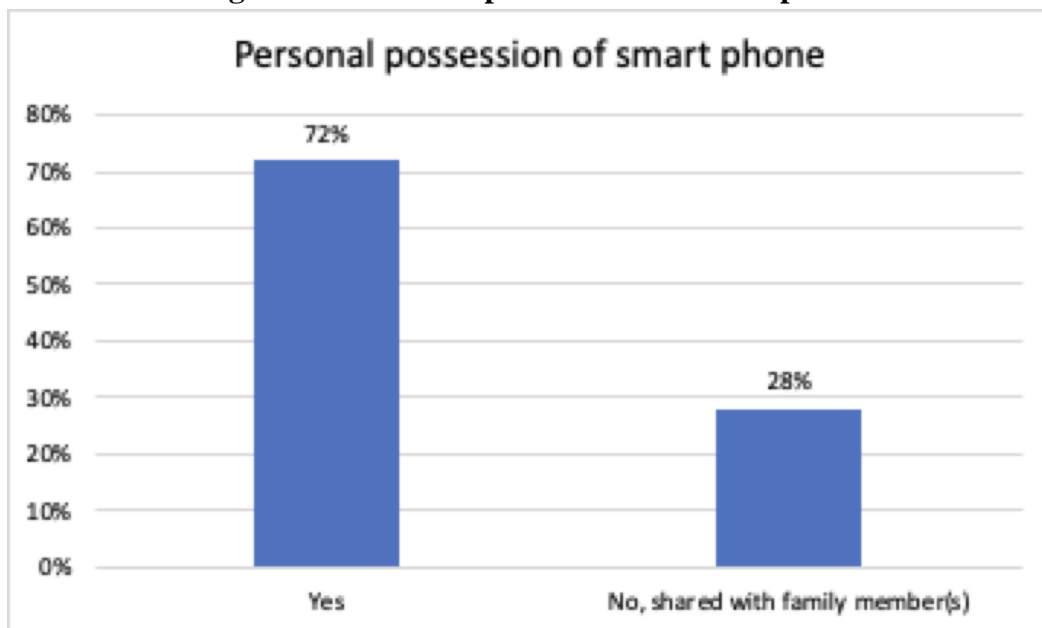
The original questionnaire developed comprised of a total of 67 items. Only the items indicating respondents' proficiency in utilizing digital resources were considered for this study, aligning with the focus on assessing ODL students' ability to navigate digital tools and platforms. On the selected items percentage method was employed for data analysis.

4. Data Analysis

Data analysis aims to uncover patterns and trends to gain insights into ODL students' intrinsic motivation and their proficiency in navigating digital resources.

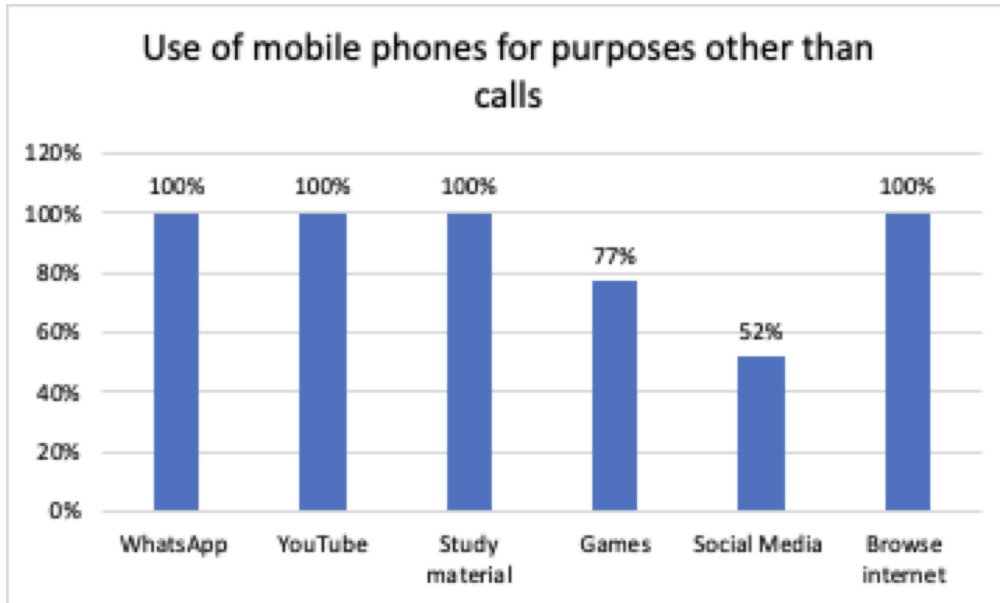
Figure 1.1: Awareness about IGNOU

As presented in figure 1.1, data from the respondent sample group indicates that 57% independently discovered the option of ODL with IGNOU through internet searches, while 32% were informed by relatives and 11% by friends. This underscores how ODL addresses barriers to higher education, with over 50% of the population demonstrating self-driven motivation for personal growth and employability.

Figure 1.2: Personal possession of a smart phone

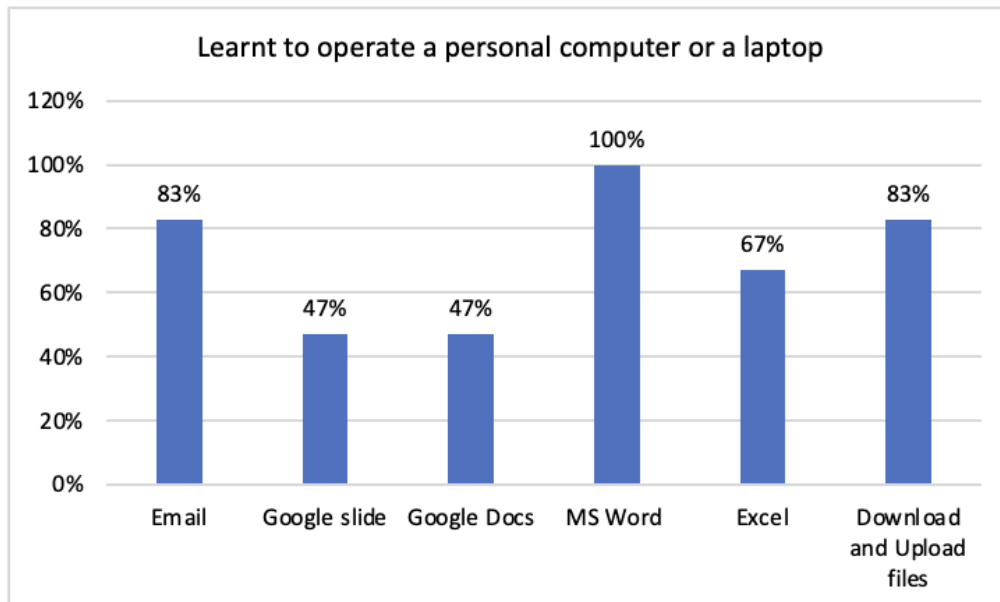
As presented in figure 1.2, 72% of respondents own a smartphone personally, while 28% share one with family member(s), reflecting their access to advanced technology. Additionally, the entire sample group has access to internet facilities, indicating that even those who share a smartphone still utilize internet services on the device.

Figure 1.3: Use of mobile phones for purposes other than calls



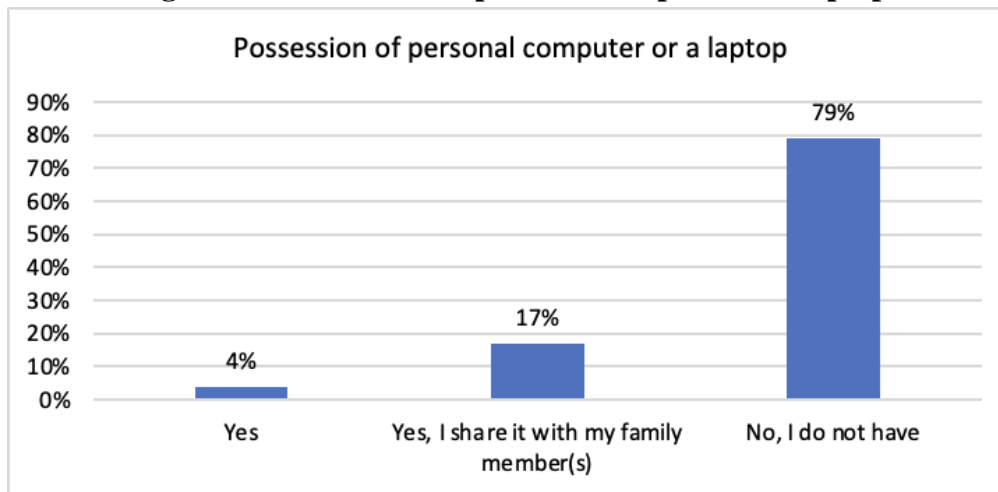
As presented in figure 1.3, the entire sample group utilizes mobile phones for WhatsApp, YouTube, and accessing study materials. Additionally, 77% use them for gaming, and 52% for social media. This suggests the sample population is proficient in using smartphones and essential applications for distance interactions. Furthermore, respondents, who are members of student WhatsApp or Telegram groups, participated in the survey by accessing the shared link within these groups.

Figure 1.4: Learnt to operate a personal computer or a laptop



As presented in figure 1.4, 83% of respondents are proficient in using email, 47% in Google Slides and Google Docs, 67% in Excel, and 73% in downloading and uploading files; all are skilled in operating MS Word. This indicates the sample group's competence in basic computer applications crucial for facilitating distance interactive learning.

Figure 1.5: Possession of personal computer or a laptop



As presented in figure 1.5, 4% of respondents possess a personal computer or laptop, while 17% share one with family member(s), and 79% lack personal access to such devices. This suggests that mobile applications would be a more viable option for the target group.

Conclusion

ODL students exhibit remarkable intrinsic motivation, transcending geographical barriers and resource limitations in pursuit of academic excellence. Their unwavering commitment to self-improvement and professional growth fuels their resilience and success in navigating the challenges of distance education. The study reveals that, they actively engage with interactive methodologies, leveraging advancements in ICT to showcase their proficiency in navigating digital resources and their commitment to learning. Furthermore, in professional contexts, the significance of social interactions in shaping workplace competence and success is undeniable. Sociological theories underscore the pivotal role of social interactions in shaping individual behaviors and sense of social being within social contexts. By fostering collaborative environments and facilitating meaningful social interactions, distance education programs have the potential to enhance learners' social being, fostering a sense of belonging and promoting holistic growth and learning outcomes.

References

1. Baharin, N.L. & Hanafi, W.N.W. (2020) Work Readiness Skills And Career Self-Efficacy: A Case Of Malaysian Private University. 9th International Economics and Business Management Conference. DOI: [10.15405/epsbs.2020.12.05.84](https://doi.org/10.15405/epsbs.2020.12.05.84) [accessed Mar 31 2023].
2. Bandaranaike, S. & Willison, J. (2015). Building capacity for work-readiness: Bridging the cognitive and affective domains. *Asia-Pacific Journal of Cooperative Education*. 16. 223-233. Available at: <https://files.eric.ed.gov/fulltext/EJ1113547.pdf>
3. Bloom, B.S. (1956) *Taxonomy of Educational Objectives, Handbook: The Cognitive Domain*. David McKay, New York.
4. Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. Englewood Cliffs, NJ: Prentice-Hall.

5. Deci, E. L., & Ryan, R. M. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78.
6. Dewey, J (1938) *Experience and Education*, New York: Macmillan.
7. Garrison, G. R. (1985). Three Generations of Technological Innovation in Distance Education. *Distance Education*, 6(2), 235-241.
8. Gunawardena, C.N. & McIsaac, M.S. (2004). Distance Education. In *The Handbook of Research for Educational Communications and Technology*. Edited by David H.
9. Krathwohl, D.R., Bloom, B.S., Masia, B.B. (1973). *Taxonomy of Educational Objectives, the Classification of Educational Goals. Handbook II: Affective Domain*. New York: David McKay Co., Inc.
10. Mead, G. H. (1934). *Mind, self, and society*. Chicago: University of Chicago Press.
11. Moore, M. G. (1993). Theory of transactional distance. In D. Keegan (Ed.), *Theoretical principles of distance education* (pp. 22-38). Routledge.
12. Muhl, J. (2018). Human Beings as Social Beings: Gerda Walther’s Anthropological Approach. In Antonio Calcagno (ed.), *_Gerda Walther’s Phenomenology of Sociality, Psychology, and Religion_*. Springer Verlag. pp. 71-84.
13. National Education Policy 2020: Policy document released by Government of India. Retrieved from https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English.pdf
14. Saykılı, A. (2018). Distance education: Definitions, generations, key concepts and future directions. *International Journal of Contemporary Educational Research*, 5(1), 2-17.
15. Siemens, G. (2005). Connectivism: A Learning Theory for the Digital Age . *International Journal of Instructional Technology&Distance Learning* , 2 (1).
16. Smith, K. (2014). *Émile Durkheim and the Collective Consciousness of Society: A Study in Criminology*. Anthem Press. <http://www.jstor.org/stable/j.ctt1gxp6jw>.
17. Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, CA: Brooks/Cole
18. Tait, Alan (2003). Reflections on student support in open and distance learning. *International Review of Research in Open and Distance Learning*, 4(1)
19. Weidman, John C. (2006) *Socialisation of Students in Higher Education: Organizational Perspectives*. Pp. 253-262 in Clifton C. Conrad and Ronald C. Serlin (Eds.), *The Sage Handbook for Research in Education: Engaging Ideas and Enriching Inquiry*. Thousand Oaks, CA: Sage Publications.
20. Wong, Su. (2020). Affective Characteristics for 21st Century Learning Environments: Do They Matter?. *International Journal of Interactive Mobile Technologies (iJIM)*. 14. 186. 10.3991/ijim.v14i12.1556