International Journal of Social Science And Human Research

ISSN (print): 2644-0679, ISSN (online): 2644-0695

Volume 06 Issue 10 October 2023

DOI: 10.47191/ijsshr/v6-i10-02, Impact factor- 6.686

Page No: 5826-5829

Microlearning: The Future of Learning from the Perspective of Business, Technology, Educational Psychology

Wigati[1], Tuti Iriani[2], Khaerudin[3]

[1,2,3] Fakultas Teknologi Pendidikan, Universitas Negeri Jakarta

ABSTRACT: The present generation's approach to learning is heavily influenced by a multitude of evolving domains, encompassing business, technology, and educational psychology. The impact of technology lies in its role as a medium and tool for delivering educational content, while educational psychology plays a pivotal role in devising strategies to facilitate students' comprehension and success in the learning process. Moreover, the realm of business and the professional world stands as one of the ultimate objectives and foundations of the learning experience. Consequently, the manner in which learning occurs exerts a profound influence on an individual's life; an effective learning methodology enhances cognitive processes, nurtures character development, hones skills, and ultimately culminates in success. Presently, there exists a global trend known as microlearning, tailored to align with the characteristics of modern individuals. This microlearning paradigm has emerged as a result of the synergistic influence stemming from the realms of business, technology, and educational psychology. This study delves into an exploration of the constituent components of microlearning, their origins within these aforementioned domains, their impact on the domains from which they originated, and their implications for future educational methodologies. Furthermore, this inquiry seeks to identify potential avenues for future research that further advance the field of microlearning

KEYWORDS: micro learning,

I. INTRODUCTION

Microlearning is defined as a concise method of delivering various types of learning activities within a brief time frame and with condensed content [(1).] Lengthy content can be fragmented and presented succinctly to enable rapid consumption, allowing this approach to be employed independently or in conjunction with other learning endeavors. Typically, microlearning sessions do not exceed a duration of 10 minutes [(2)]. Owing to its inherent advantages and adaptability, microlearning has emerged as a burgeoning and popular pedagogical model [(3)]. The annual growth rate of publications related to microlearning stands at an impressive 33.55%, with four primary areas of focus: (a) microlearning design, (b) the implementation of microlearning as a pedagogical method, strategy, or intervention, (c) the assessment of microlearning outcomes, and (d) the utilization of mobile devices for microlearning. Moreover, recent research indicates a continuous upward trajectory in the adoption of microlearning [(4)]. Given its succinct, interactive, and results-driven approach, microlearning is well-suited to meet the requirements of contemporary learners, characterized by shorter attention spans and a preference for receiving information in manageable, easily digestible formats. Modern students also favor flexible study schedules, eschewing the need for fixed class attendance in favor of "just-in-time" learning, enabling them to multitask as they see fit.

The conceptual foundation underpinning the emergence of microlearning can be traced back to the realm of educational psychology. A theory attributed to George A. Miller, known as "chunking" [(5)], postulates that the human short-term memory possesses the capacity to retain only 5-9 information chunks (typically seven plus or minus two), with each chunk representing a meaningful unit of data. Chunking proves to be efficacious in alleviating the cognitive load associated with incorporating items into working memory, among other functions. For instance, employing the chunking technique enables individuals to more effectively recollect lengthy sequences, such as 16-digit numbers, by initially dividing them into four groups, each containing four digits. This segmentation facilitates enhanced retention and recall of information, as it is structured more coherently within the cognitive framework. Similarly, within the domain of broader learning, information or instructional content can be organized, dissected, and subsequently disseminated in sequential stages [(6)].

The term "microlearning" made its inaugural appearance within the pages of an economics tome. Compiled by Hector Correa in 1963, the book, titled "The Economics of Human Resources" [(7)], delves into the realm of educational economics, aiming to establish correlations between economic principles and education. Within this context, a myriad of subjects, including sociology, demography, psychology, nutrition, and health, are integrated into the framework of the microlearning concept. Correa defines

microlearning as an exemplar of "simple skills, manual operations, and the manner in which individuals acquire these competencies after receiving instruction." Consequently, microlearning emerges as a strategic approach in human resource management, founded on the fundamental premise that the efficacy of learning experiences hinges not on their duration but rather on the acquisition of specific skills.

The subsequent impetus for the development of microlearning was provided by technological advancements, epitomized by the advent of the Nokia Communicator 9000 in 1996. This pioneering smartphone marked a watershed moment, boasting capabilities such as email and fax transmission, web browsing, and integrated camera functionality. These devices, in turn, facilitated the succinct exchange of information, enabling individuals to communicate and engage in learning endeavors with concise materials at their convenience, regardless of time and place.

In the contemporary landscape, the ubiquity of information has led to a narrowing of collective attention spans. Nevertheless, allocating a few minutes each day to acquire new knowledge remains essential, as this incremental process culminates in the development of tangible skills. Empirical evidence underscores the efficacy of small, easily digestible morsels of information as a superior method for acquiring and retaining knowledge [(8)].

II. METHODOLOGY

The data sources employed in this research encompass secondary data, including primary documents, secondary articles, and tertiary articles. In order to scrutinize this research topic and propose potential solutions, the collected data—comprising primary, secondary, and tertiary articles—underwent evaluation through the application of theoretical and conceptual frameworks. The findings of the qualitative data analysis are subsequently presented in a descriptive manner

III. RESULTS AND DISCUSSION

1. Components of Microlearning

The evolution of the microlearning concept is noteworthy [(9)]. It defines microlearning as a brief instructional approach that either augments the learning process or bolsters student performance. Additionally, it is characterized by its capacity for swift consumption, enabling it to function as a supplementary tool for other learning endeavors or as a standalone method. Furthermore, it has been posited that microlearning encompasses several supplementary attributes over time [(10)]. These attributes encompass interactivity, a focus on results, the utilization of diverse forms of learning assessment, integration of technology, and the provision of immediate feedback. These multifaceted descriptions converge to crystallize the definition of microlearning: a form of instruction that is succinct, interactive, outcome-driven, technologically integrated, and conducive to instant feedback through various assessment modalities.

As posited by [(9)], there are six key dimensions within microlearning that merit consideration, namely time, content, format, process, medium, and the type of learning. Microlearning, as an instructional resource, consists of two primary components, as elucidated by [(1)]: (a) the material or content, referred to as microcontent, and (b) accompanying activities, referred to as microactivities. The presentation of microcontent can encompass diverse activities such as problem-solving, gaming, quizzes, flashcards, video presentations, and text messaging. The overarching aim in structuring microcontent and microactivities is to enhance participant engagement and motivation. In accordance with [(2)], effective media for disseminating microcontent include succinct blogs, emails, videos, infographics, and podcasts.

2. Microlearning's Potential Impact on Business, Technology, and Educational Psychology

A notable transformation in education is already underway, ushering in more adaptable and versatile learning models. Within the technological realm, the progression of modern smartphones is poised to yield heightened capabilities in terms of connectivity, data storage, processing power, and display, thereby facilitating the creation of richer and more interactive microlearning content. Artificial intelligence (AI) technology is poised to assume a pivotal role in reshaping the delivery and global accessibility of microlearning. A pedagogical approach that demands personalization can be actualized through AI systems capable of analyzing students' preferences and aptitudes, furnishing learning material recommendations, and gauging student progress [(11).]

Furthermore, virtual reality (VR) and augmented reality (AR) technologies have the potential to offer immersive and interactive learning experiences. Within the microlearning context, these technologies can be harnessed to simulate specific scenarios or provide live demonstrations, thereby enhancing comprehension of the subject matter (An analysis of recent developments in augmented reality (AR) and virtual reality (VR) within the educational sphere).

In the realm of business, over time, microlearning has emerged as a prominent educational and training trend, with its impact on the corporate and economic landscape steadily gaining clarity. Microlearning affords employees the flexibility to tailor their learning experiences to their specific needs, thereby enhancing productivity through on-demand access to pertinent information. This sustained boost in productivity can, in due course, engender economic growth for the organization, and by extension, the nation's economy [(12)]. Moreover, the adoption of compact microlearning methodologies can yield cost efficiencies in system creation and maintenance, furnishing long-term economic advantages to the company. Notably, microlearning has engendered the

emergence of new markets in the form of e-learning platforms and online educational content providers, ushering in fresh business opportunities capable of exerting influence at both the local and global economic levels.

Hence, microlearning holds the potential to usher in transformative shifts in the operational dynamics of businesses and economies in the future. Companies adept at adeptly integrating this paradigm are poised to secure a competitive edge and make constructive contributions to overall economic expansion. Furthermore, stakeholders such as governments and educational institutions will play pivotal roles in fostering an environment conducive to the successful development and widespread adoption of microlearning [13][14].

Implications

The diminishing attention span observed in modern individuals renders traditional training methods increasingly ineffective. Influences stemming from ubiquitous smartphone usage and pervasive social media have fundamentally reshaped cognitive processes. Brief and focused instructional content holds the potential to engender heightened student engagement, facilitating the completion of learning or training activities while enhancing the transfer of knowledge and skills to practical application [15].

With regard to the roles of educators, even though pedagogical approaches such as microlearning empower students to assume a more self-directed learning stance, the presence of teachers or mentors remains imperative. In this evolved capacity, their primary function shifts away from that of the primary instructor, assuming roles as facilitators, collaborators, and providers of constructive feedback [16].

Similarly, stakeholders vested with the responsibility of formulating educational policies, including educational institutions, training entities, and governmental bodies, bear the onus of promoting the implementation and refinement of microlearning as an adaptive, responsive, and pertinent pedagogical approach. This concerted effort aims to forge a more cohesive alignment between education, real-world demands, and individual needs, thereby fostering enhanced opportunities for lifelong learning that are both more effective and comprehensive [17].

3. Future Research

In the realm of educational psychology, the foundational concept of chunking remains the primary basis for crafting microlearning content. In the future, opportunities for a more profound comprehension of the psychology of learning may pave the way for the design of more efficacious microlearning content. This includes the exploration of learning techniques that increasingly align with the cognitive processes of the human brain, thus enhancing the pedagogical efficacy of microlearning materials [18].

Within the business sector, the potential for heightened employee productivity, resulting from swift and precise access to information and training resources, stands as a valuable asset for companies. Such enhancements hold the potential to impact operational efficiency and a company's competitiveness within the market. The capacity to swiftly equip employees with new skills in response to evolving business and technological landscapes can yield a sustainable competitive advantage. Therefore, research avenues that facilitate tailored employee training, aligning with their specific needs, will contribute to the evolution of the business sector [19].

As a burgeoning business opportunity, the expansion of microlearning has engendered novel prospects within the educational technology sector. Companies proficient in the development of e-learning platforms, educational content, and services related to training and human resource development stand to experience significant growth.

In the technology sector, e-learning applications and platforms are poised to evolve toward greater sophistication, featuring elements such as artificial intelligence, robust analytics, and increasingly interactive learning experiences. The integration of virtual reality (VR) and augmented reality (AR) technologies into microlearning is expected to persist, furnishing more immersive and interactive learning environments. This, in turn, will enable more effective hands-on learning and simulations across a multitude of contexts.

CONCLUSION

The confluence of educational psychology, business, and technology will continue to exert reciprocal influences on the future development of microlearning. Microlearning is slated to become an integral component of both formal and informal education, facilitating continuous individual learning and development. Simultaneously, it will empower businesses to bolster their competitiveness while harnessing the ever-advancing landscape of technology to deliver enhanced learning experiences

REFERENCES

1) Kapp, K. M., & Defelice, R. A, 2019, Microlearning: Short And Sweet. American Society For Training And Development
2) Carla Torgerson, Sue Iannone, 2020, Designing Microlearning (What Works in Talent Development)
3) Kelvin Leong, Anna Sung, David Au, Claire Blanchard, 2021, A review of the trend of microlearning
4) Rajagopal Sankaranarayanan, Javier Leung, 2023, Microlearning in Diverse Contexts: A Bibliometric Analysis
5) George Armitage Miller, 1956, The magical Number Seven,Plus or Minus Two

6) Thalmann, Mirko; Souza, Alessandra S.; Oberauer, Klaus, 2019, How does chunking help working memory?. Journal of Experimental Psychology: Learning, Memory, and Cognition. 45 (1): 37–55. doi:10.1037/xlm0000578. ISSN 1939-1285. PMID 29698045. S2CID 20393039
7) Hector Correa, 1963, The Economics of Human Resources
8) Shail M S, 2019, Using Micro-learning on Mobile Applications to Increase Knowledge Retentionand Work Performance: A Review of Literature. Cureus 11(8): e5307. DOI 10.7759/cureus.5307
9) Theo Hug, 2005, Micro Learning and Narration Exploring possibilities of utilization of narrations and storytelling for the designing of "micro units" and didactical micro-learning arrangements
10) Rajagopal Sankaranarayanan, Javier Leung,2022, Microlearning in Diverse Contexts: A Bibliometric Analysis
11) Aditi Bhutoria, 2022, Personalized education and Artificial Intelligence in the United States, China, and India: A systematic review using a Human-In-The-Loop model, https://doi.org/10.1016/j.caeai.2022.100068
12) Dolasinski,2020, Microlearning: A New Learning Model
13) Emerson, 2018, Microlearning: Knowledge management applications and competency-based training in the workplace
14) Khan, corneil, 2021, Microlearning in the Digital Age
15) Lodge, 2019, The Role of Attention in Learning in the Digital Age
16) ERIC, 2018, Self-directed learning and the teacher's role, ISBN13: 978-2-490057-22-1
17) Supasitthimethee, 2018, Stakeholder involvement in teaching and learning, 2018, http://dx.doi.org/10.24908/pceea.v0i0.10620
18) Piwat Suppawittaya, 2021, The Comparison of Chunking Methods to Enhance the Cognitive Capacity of Short-term Memory to Retain Textual Information among High School Students, DOI:10.31098/ijrse.v3i1.502
19) Yimam, 2022, Impact of training on employee perfomance