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E-Learning in Higher Education Institutions: Understanding the Difficulties Faced by College Students

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ABSTRACT:

The rapid integration of e-learning into higher education, propelled by the Covid-19 pandemic since 2019, has highlighted enduring challenges and a steady adjustment process. Acknowledging the crucial importance of active student participation for successful knowledge acquisition. This research systematically reviews recent insights into the obstacles faced by students in online learning environments. Employing a systematic methodology involving targeted keyword searches and stringent document selection criteria, the study distilled insights from an initial pool of 7922 documents to a focused set of 81, ensuring relevance to higher education e-learning challenges. The analysis uncovers a multifaceted landscape of external and internal barriers, necessitating a holistic strategy encompassing organizational, technological, and pedagogical interventions. Essential initiatives include refining communication methods, strategic pedagogical planning, infrastructure investments, and fostering critical writing skills to cultivate an inclusive and engaging online learning milieu. Ultimately, collaborative efforts among educational stakeholders are imperative to surmount these challenges, emphasizing the interconnected nature of obstacles and the pressing need for cohesive strategies to enhance the quality and accessibility of global online education.

INTRODUCTION:

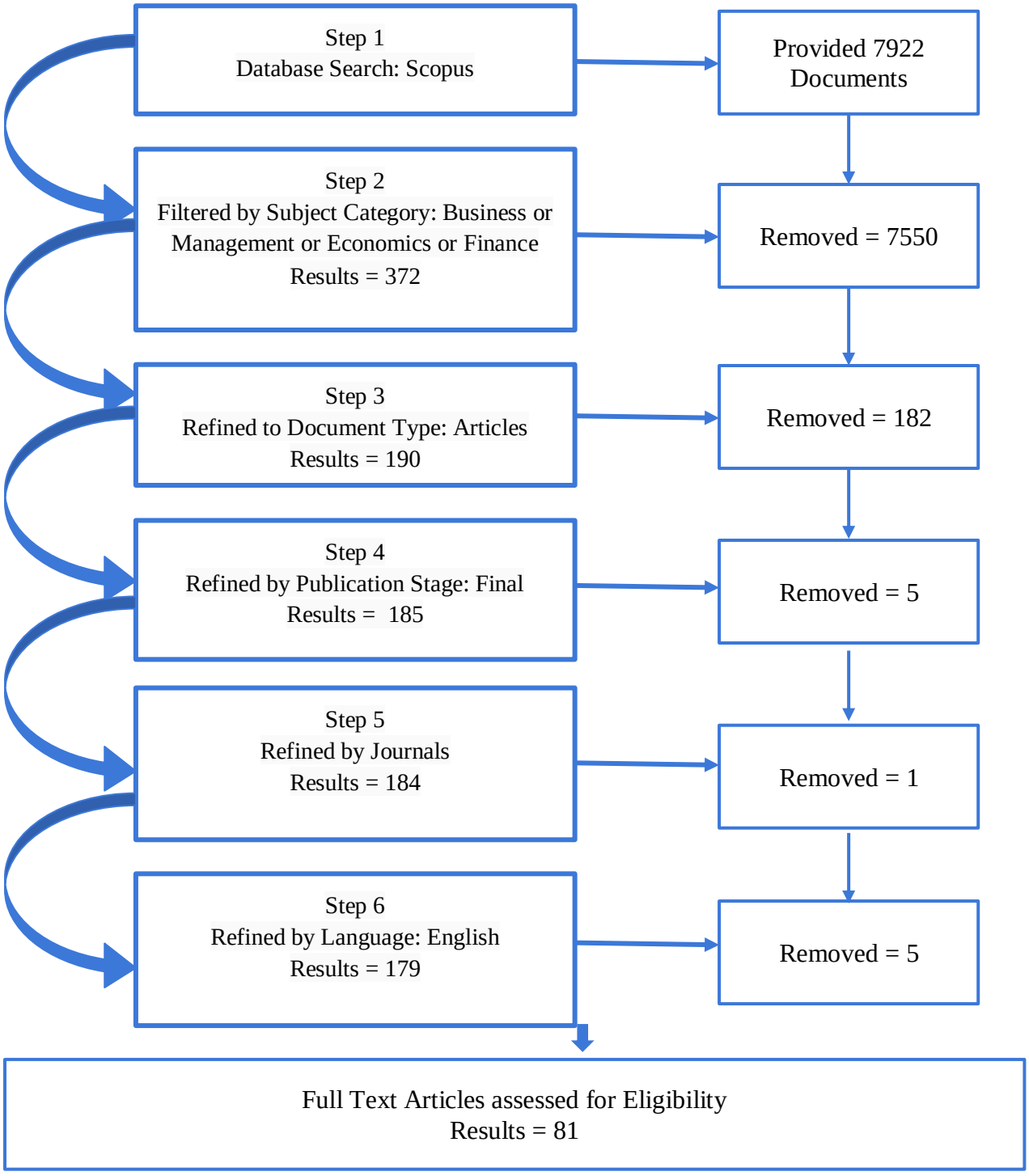
The inception of 'Distance Education' can be traced back to the mid-19th century when postal services and railway networks facilitated early forms of course delivery through correspondence, marking the origins of distance learning (Spector et al., 2014). This educational paradigm gradually evolved, incorporating various mediums such as mail, cable television, satellite, videotapes, and CDs (Whiteley, 2006). The integration of computers and the Internet ushered in a new era of time-space compression, eliminating the hindrance of physical distance (Anastasiades, 2002; Guilar & Loring, 2008). With the dynamic development of information and communication technologies (ICT), particularly the Internet, distance education became synonymous with e-learning, encapsulating technology-mediated, online collaborative, virtual, and web-based learning (Chee Meng Tham & Werner, 2005; Harasim, 2000). Open Educational Resources (OER) emerged as a concept coined by UNESCO in 2002, denoting educational resources accessible through free licensing or transfer to the public domain via information and communication technology (Głodowska et al., 2022). The advent of e-learning systems has offered numerous benefits for universities, including ubiquity, flexibility, rich information resources, real-time updates, ease of monitoring learning progress, convenience, cost and time efficiency (Pham & Huynh, 2017). However, ensuring the success of e-learning systems remains challenging, marked by issues like project failure, user acceptance, and effectiveness on learning outcomes.

The surge in e-learning adoption triggered by the Covid-19 pandemic since 2019 has brought to the forefront persistent challenges and the slow pace of adaptation within higher education, as highlighted in studies by (Alaidi et al., 2020; Guillermina Martinez Puma et al., 2022; Mseleku, 2020). In this context, recognizing the paramount importance of active student involvement for effective knowledge acquisition becomes crucial, a correlation supported by research from (Carini,R. , Kuh et al., 2006; Scull et al., 2020). However, the intricate transition from traditional face-to-face instruction to online learning introduces hurdles attributed to the varying effectiveness of teaching practices and student engagement, as noted by Ali et al., (2020).

In pursuit of understanding these complexities, this paper endeavors to review recent research, delving into the obstacles confronted by students amid the transformative impact of online learning in higher education institutions. This exploration encompasses a broad spectrum, ranging from the evolution of technology and challenges in its adoption to the evolving dynamics of student engagement within e-learning environments.

RESEARCH METHODOLOGY:

Figure 1. Filtration Process



The research methodology employed for this study involved a systematic and targeted search using specific keywords and Boolean operators. The search string used was "e-learning" OR "online learning" OR "Digital learning" OR "Internet based learning" AND "Problem*" OR "Issue*" OR "Constraint*" OR "Hurdle*" OR "Difficult*" OR "Obstacle*" AND "HEIs" OR "University" OR "College" AND "Student*". This comprehensive query was designed to capture relevant articles addressing the challenges associated with e-learning in higher

education institutions (HEIs) or universities and colleges. The initial search yielded a substantial pool of 7922 documents, covering a broad spectrum of information related to the specified subjects. The subsequent refinement of the search focused on specific subject areas, resulting in 372 documents related to Business (BUSI) and Economics (ECON). Further filtering based on document type (Article), stage of publication
(Final), source type (Journal), and language (English) narrowed down the dataset to 179 documents. Additionally, to ensure the relevance and quality of the literature, a final screening process was conducted through title and abstract reading, resulting in a selection of 81 documents for in-depth analysis. This rigorous methodology aims to retrieve, filter, and refine literature that specifically addresses the challenges faced by the students for e-learning in higher education settings.

DISCUSSION:

The literature review delving into the obstacles confronted by students in online learning encompasses a wide array of dimensions, considering diverse cultural and linguistic backgrounds. Examining these challenges unveils a complex tapestry that can be systematically analyzed under the overarching themes of Extrinsic and Intrinsic factors. The advent of online learning has reshaped the educational landscape, presenting both opportunities and challenges for students with varying cultural and linguistic backgrounds. A systematic review of the literature accentuates the multifaceted obstacles encountered by students, categorizing them into extrinsic and intrinsic challenges. These challenges span organizational, technological, and pedagogical aspects, illustrating the intricate nature of issues faced by students engaged in online learning. This literature review aims to explore these challenges, shedding light on both extrinsic and intrinsic factors that contribute to the complexity of the issue.

1. **Extrinsic Factors:**

1.1 Organizational Challenges:

Organizational challenges in online learning are multifaceted and deeply rooted in various elements that significantly influence students' satisfaction and engagement. Hannon & D'Netto, (2007) emphasize the pronounced impact of cultural differences on organizational perceptions, revealing that such disparities lead to mediocre satisfaction levels, especially affecting vulnerable individuals deprived of social contact during school closures. In a similar vein, Parahoo et al., (2016) shed light on the intricate relationship between university reputation, physical facilities, and faculty empathy, underscoring their substantial influence on student satisfaction within online settings. Furthermore, Ali et al., (2020) elucidate the emergent challenges precipitated by the COVID-19 pandemic, highlighting gaps in instructors' virtual interaction skills, quick fixes due to technological limitations, and critical issues pertaining to connectivity and equipment. Collectively, these insights accentuate the imperative of a deliberate pedagogical design and strategic interventions to address connectivity constraints and technological disparities, thereby enhancing the overall online learning experience.

1.2 Technological Hurdles:

Technological hurdles in online learning present persistent challenges that impact students across diverse contexts. Efthymiou & Zarifis, (2021) shed light on the enduring technological challenges faced by students, particularly in regions with limited internet connectivity. Their study advocates for the implementation of adaptable e-learning materials and student-centric instructional design as essential strategies to mitigate the adverse effects of unreliable infrastructure on effective online learning. In a broader global perspective, Qureshi et al., (n.d.) identify technical issues, including the absence of secure computers and limited access to personal computers, as substantial impediments to successful e-learning adoption in developing countries. This underscores the prevalent global disparities in technological preparedness, emphasizing the need for comprehensive strategies to bridge these gaps. The challenges accentuated by Choi et al., (2021) during the COVID-19 pandemic further underscore the importance of addressing technology issues, advocating for better teaching methods, and enhancing lecturer understanding of student struggles. These technological challenges, as discussed by (Loh et al., 2016; Stecuła & Wolniak, 2022), encompass frustrations with online technologies, difficulties in teaching practical subjects, and hindrances in collaborative learning, emphasizing the multifaceted nature of the obstacles that necessitate innovative solutions for an effective online learning experience. Efthymiou & Zarifis, (2021) bring attention to disparities in internet connectivity, emphasizing the necessity for adaptable e-learning materials, downloadable content, and student-centric instructional design to overcome regional infrastructure challenges.

1.3 Pedagogical Struggles:

Pedagogical struggles in the realm of online learning are multifaceted, as highlighted by various studies. Stecuła & Wolniak, (2022) delve into these challenges, encompassing difficulties in teaching practical subjects and the extended screen time required for online instruction. Their study underscores the significance of teacher preparedness, accessibility, and effective communication skills to mitigate drawbacks associated with e-learning. Loh et al., (2016) identify a lack of collaborative learning opportunities and obstacles in accessing e-learning materials, hindering effective group work. The evolving perceptions revealed in their study emphasize the imperative of addressing these obstacles for a more effective e-learning experience. Additionally, Packham et al., (2004) explore pedagogical challenges leading to e-learning withdrawal, highlighting intrinsic and extrinsic factors such as technical issues, course readiness, academic profile, family situation, and employment. This underscores the multifaceted nature of pedagogical struggles impacting student retention. Further contributions to the understanding of pedagogical challenges include (Bharucha, 2018) exploration of social media integration in India, advocating for increased adoption of social media tools by teachers, and Mihhailova, (2006) highlighting of low awareness of web-based learning specifics, emphasizing the need for increased information dissemination during traditional face-to-face courses. Lastly, Choi et al.,

(2021) emphasize challenges in technology, teaching methods, and lecturer understanding, advocating for blended learning approaches to address these complexities in the online learning landscape.

2. Intrinsic Factors:

2.1 Cultural and Linguistic Barriers:

In the realm of online learning, language barriers emerge as a substantial intrinsic challenge, particularly evident in the study by Qureshi et al., (n.d.) conducted in Pakistan. The impediment to student engagement and participation due to difficulties in understanding English emphasizes the imperative for a systematic approach and strategic technology integration to effectively tackle this challenge. Hannon & D'Netto, (2007) in the same context underscores how cultural differences impact perceptions of technology, accentuating language barriers, especially in understanding English, as a significant hurdle. Qureshi et al., (n.d.) further highlight the inhibiting effect of language barriers on students' active involvement in the Pakistani e-learning landscape. Bharucha, (2018) in the Indian context brings to light that students initially engage with social networking sites for socializing rather than educational purposes, stressing the crucial need for increased adoption of social media tools by teachers to enhance the educational experience. This collective body of research underscores the multifaceted challenges intrinsic to language and cultural aspects in the context of online education.

2.2 Personal and Socioeconomic Factors:

Dvorakova et al. (2023) highlight that female students face increased domestic duties during school closures, and issues such as privacy concerns, socioeconomic status disclosure, and self-consciousness induced by camera use are reported challenges. Pham & Tran, (2020) suggests that demographic variables like gender, age, program, experience, and major do not yield significant differences in the relationship between independent variables and e-learning outcomes. Additionally, Stecuła & Wolniak, (2022) emphasize the impact of students' personal factors, particularly for 'at-risk students,' which hinders effective engagement in online learning. In the broader context, students from vulnerable backgrounds, broken families, and specific demographic groups face additional challenges, including increased domestic duties, limited social contact, and language barriers (Qureshi et al., n.d.). Addressing these intrinsic factors necessitates collaborative efforts between educational institutions, policymakers, and communities to ensure equitable access and support.

2.3 Motivational and Engagement Factors:

Motivational and engagement factors in online learning are explored through various lenses in studies conducted by (Loh et al., 2016; Mihhailova, 2006) and Loh et al., (2016) observe that younger students exhibit a preference for traditional classroom experiences, attributing this preference to boredom and motivation loss in the online format. Conversely, older learners find comfort in the factors offered by e-learning. Mihhailova, (2006) highlights how limited exposure to personal computers and internet tools, compounded by economic constraints, adversely affects students' information and communication technology (ICT) skills, hindering their active participation. Choi et al., (2021) recommends flexible

course options, such as recorded classes, to cater to individual preferences and enhance flexibility. In the broader context, despite the acknowledged flexibility and cost-saving benefits of e-learning, students express concerns about maintaining engagement, collaborative learning opportunities, and motivation loss, particularly among younger learners. These challenges underline the importance of adopting innovative teaching practices, effective communication strategies, and a focus on individualized learning experiences to enhance overall engagement in online learning environments.

2.4 ICT Literacy and Preparedness:

In the realm of ICT literacy and preparedness in e-learning, a context outlined by studies conducted by (Mihhailova, 2006; Stecuła & Wolniak, 2022) reveals students' low awareness of web-based learning specifics, limited exposure to information and communication technology (ICT) tools, and economic constraints. This scenario significantly affects their active participation and overall success in e-learning environments. The implications drawn from this context emphasize the crucial need for concerted efforts aimed at improving ICT literacy among students. Additionally, the promotion of blended learning models and the enhancement of communication strategies emerge as essential measures to facilitate the seamless integration and widespread adoption of e-learning methodologies. These proactive steps can contribute to a more inclusive and effective educational landscape, ensuring that students are well-equipped to navigate and succeed in technologically mediated learning environments.

2.5 Student Retention and Success:

In the context of student retention and success in e-learning programs, as elucidated by Packham et al., (2004), older students, those not engaged in employment, and individuals with realistic aspirations tend to achieve success. However, various factors, including academic profile, family situation, employment, and the availability of study time, exert significant influence on student retention. The implications drawn from this context underscore the importance of implementing effective control mechanisms, transparent strategies, and tailored support systems. These measures are deemed essential to mitigate intrinsic barriers, fostering an environment conducive to enhanced student retention and success in the dynamic landscape of online learning. Through these proactive interventions, educational institutions can better cater to the diverse needs of students and contribute to a more supportive and sustainable e-learning ecosystem.

CONCLUSION:

In conclusion, a comprehensive review of the literature concerning the challenges faced by students in online learning reveals a nuanced landscape. External factors, including organizational complexities, technological obstacles, and infrastructure deficiencies, intricately intersect with internal challenges such as cultural, linguistic, personal, and socioeconomic barriers, as well as motivational and engagement factors, and ICT literacy and preparedness. A holistic strategy is imperative, necessitating intentional interventions at the organizational, technological, and pedagogical levels. Crucial initiatives involve the enhancement of communication and

interaction methods, purposeful pedagogical planning, investments in infrastructure, and the development of critical writing skills, all contributing to the establishment of an inclusive and engaging online learning environment. Noteworthy elements include the pivotal roles of faculty empathy, physical facilities, and the significance of human interactions. Ultimately, a collaborative effort involving educational institutions, policymakers, and students is essential to overcome these challenges and foster a more efficient and equitable global online education landscape. The integration of these findings underscores the interconnected nature of challenges and emphasizes the urgent need for cohesive strategies, resource allocations, and inclusive environments to enhance the quality and accessibility of online learning globally. The exploration through these literary works unveils a complex narrative where challenges intersect and amplify each other. For instance, insufficient infrastructure compounds cultural and linguistic barriers, giving rise to pedagogical challenges like diminished engagement and interaction. Furthermore, while technological solutions offer partial relief, they necessitate robust organizational and pedagogical frameworks for effective implementation.

LIMITATIONS AND FUTURE INSIGHTS:

While this review has significantly contributed to the existing literature, akin to any study, it is not without its limitations. Primarily, the authors of this study confined their search to the Scopus database, potentially overlooking articles indexed solely in Web of Science. Future research endeavors could enhance comprehensiveness by incorporating additional databases such as Web of Science, Dimensions, and others. Secondly, the search string and filtering techniques employed in this study might have led to the unintentional omission of some significant and pertinent articles. Subsequent studies could refine search parameters for a more exhaustive review. Moreover, future investigations may consider broadening their scope to include insights from other stakeholders, such as faculties and administrators engaged in online learning, to provide a more holistic perspective."

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