Rupantaran: A Multidisciplinary Journal
Vol. VIII: PP 17-33, February, 2024
ISSN(Print) : 2091-0061, ISSN (Electronic): 2738-9960
DOI: https://doi.org/10.3126/rupantaran.v8i01.65197
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Influence of Socioeconomic Factors on Access to Digital Resources for Education

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Abstract

Digital resources in education encompass a wide array of technological tools, online platforms, and digital content utilized to facilitate and enhance the learning process. They serve as invaluable supplements to traditional teaching methods, offering dynamic and diverse ways to impart knowledge, encourage engagement, and foster skill development among learners. This systematic review critically examines the influence of socioeconomic factors on access to digital resources for education by analyzing studies published between 2017 and 2024. The inclusion criteria prioritized empirical studies in English-language peer-reviewed journals or reputable conference proceedings, utilizing various research designs. The review involved a thorough search across databases like JSTOR, APA PsycNet, Wiley Online Library, ERIC, and Google Scholar. The study's analysis identified key themes, highlighting the profound influence of socioeconomic factors on technology access, engagement, and academic outcomes. The recurring theme of the digital divide emphasized disparities in device ownership, internet connectivity, and effective technology utilization. The nuanced exploration of parenting approaches, gender dynamics, and educational contexts added depth to understanding these influences. This study found the necessity for a holistic approach in educational planning, considering socioeconomic, cultural, and educational factors to effectively address challenges and disparities, ultimately fostering equitable access to digital resources in education.

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Keywords**:** Digital Resources in Education, Socioeconomic Factors, Systematic Review, Digital Divide, Equitable Access

Introduction

Digital resources in education encompass a wide array of technological tools, online platforms, and digital content utilized to facilitate and enhance the learning process (Aljawarneh, 2020). These resources include but are not limited to educational websites, interactive software, multimedia presentations, online libraries, virtual laboratories, and learning management systems. They serve as invaluable supplements to traditional teaching methods, offering dynamic and diverse ways to impart knowledge, encourage engagement, and foster skill development among learners (McKnight et al., 2016; Serajuddin, 2023).

In contemporary educational landscapes, the significance of digital resources cannot be overstated. They provide accessibility, flexibility, and scalability in delivering educational content across various subjects and levels of learning(Gordon, 2014). Through interactive simulations, virtual classrooms, and personalized learning modules, digital resources cater to diverse learning styles, accommodating individual pacing and preferences. Additionally, they often promote collaboration among students and enable educators to tailor instruction to meet specific learning needs, thus enriching the educational experience (Daniels et al., 2019; Palanivel, 2020).

Moreover, digital resources play a pivotal role in preparing learners for the demands of a rapidly evolving, technology-driven society(Alzubi, 2023). They facilitate the acquisition of digital literacy skills, critical thinking, problem-solving abilities, and information fluency, which are crucial competencies for success in the modern workforce. Embracing digital tools in education equips students with the proficiencies necessary to navigate an increasingly interconnected global environment, fostering a culture of lifelong learning and adaptability(Bennett & McWhorter, 2021).

Despite their immense potential, the equitable access to these digital resources remains a pressing concern. The digital divide, often perpetuated by socioeconomic disparities, poses a significant barrier to ensuring equal opportunities for all learners (Afzal et al., 2023; Helsper, 2021; Mollborn et al., 2022). Understanding the impact of socioeconomic factors on access to digital resources in education is essential to address the inequalities and enhance inclusivity within educational systems.

The digital divide encapsulates the unequal distribution and access to information and communication technologies (ICT) among different groups, primarily stemming from socio-economic disparities. It delineates the gap between those who have ready access to digital resources, such as computers, internet connectivity, and technological literacy, and those who lack these resources(van de Werfhorst et al., 2020; Van Dijk & AGM, 2017). This divide often mirrors

existing socioeconomic stratifications within societies, exacerbating disparities in educational, economic, and social opportunities(Gunawardena & Dhanapala, 2023).

Within the context of education, the digital divide profoundly impacts learning experiences and outcomes(Khasawneh, 2021). Socioeconomic factors like income, education level, geographic location, and cultural background significantly influence access to digital resources for educational purposes(Cochrane, 2020). Families with higher income levels tend to have better access to computers, high-speed internet, and various educational software or online platforms, providing their children with enhanced learning opportunities. Conversely, households with lower incomes or residing in underserved areas often face limited access to these resources, creating a substantial disadvantage in educational access and quality (Afzal et al., 2023; Cochrane, 2020; Hunsucker, 2021).

Furthermore, the digital divide intersects with educational disparities, contributing to unequal learning outcomes. Students from economically disadvantaged backgrounds encounter challenges in keeping pace with their peers due to insufficient access to digital tools and resources(Bach et al., 2018; Hunsucker, 2021). This lack of access can hinder their ability to complete assignments, engage with interactive learning materials, and develop digital literacy skills crucial for the modern workforce(Jury et al., 2017).

The relevance of socioeconomic factors in the digital divide becomes increasingly evident as educational institutions pivot towards digital platforms for teaching and learning. The disparities in access to digital resources exacerbate existing inequalities, widening the gap between students who can fully engage with digital learning opportunities and those who struggle due to limited access(Elliott, 2023). As such, understanding and addressing the influence of socioeconomic factors on access to digital resources for education becomes paramount in ensuring equitable educational opportunities for all students(Domina et al., 2021; Wang et al., 2023).

The primary objective of this systematic review titled "Influence of Socioeconomic Factors on Access to Digital Resources for Education" is to comprehensively investigate and analyze the impact of socioeconomic variables on the accessibility and utilization of digital resources within educational environments. This review aims to examine into the intricate relationship between socioeconomic factors such as income levels, educational background, geographical location, and societal disparities and the ability of individuals or groups to access and benefit from digital resources for educational purposes.

By systematically reviewing a wide array of literature and empirical studies, this review seeks to uncover the ways in which socioeconomic factors act as determinants of access to digital resources in educational settings. Through this exploration, the review intends to uncover disparities, patterns, and correlations that exist between socioeconomic status and the availability, usage, and effectiveness of digital tools and resources for learning and skill development. Again, the review aims to elucidate the consequences of these disparities on educational outcomes,

encompassing academic achievements, learning outcomes, skill acquisition, and overall educational success. It seeks to understand how variations in socioeconomic status might lead to differential access to digital resources and subsequently contribute to educational disparities among diverse student populations.

Methods and Materials

Article Selection Criteria:

The systematic review on the "Influence of Socioeconomic Factors on Access to Digital Resources for Education" adopted a comprehensive approach to identify relevant studies. Review process applied specific inclusion and exclusion criteria to ensure the relevance and reliability of the selected studies. Inclusion criteria required studies to be conducted and published between 2017 and 2024, capturing the most recent advancements in the field. The focus was on empirical studies, utilizing various research designs such as surveys, experiments, observational studies, or interventions, investigating the impact of socioeconomic factors on access to digital educational resources. Only English-language publications in peer-reviewed journals or reputable conference proceedings were considered to maintain consistency in language and ensure a standard level of methodological rigor and scholarly review.

Exclusion criteria aimed to uphold the integrity and specificity of the review. Non-empirical studies, including reviews, commentaries, editorials, and theoretical papers, were excluded to focus on research with direct empirical evidence on the influence of socioeconomic factors on digital resource access. Studies that did not specifically address the impact of socioeconomic factors on access to digital resources for education were also excluded, ensuring a clear focus on the specified subject matter. Non-English language publications were excluded to facilitate a uniform language of analysis, and full-text availability was a requirement for inclusion, allowing for a thorough assessment of methodologies and findings.

Databases and Sources Searched

This study employed a comprehensive literature search strategy across various databases and sources. The focus was on scholarly publications, including peer-reviewed journals and conference proceedings, using from the following key sources JSTOR, APA PsycNet, Wiley Online Library, ERIC, and Google Scholar.

This diverse approach to database and source selection ensured a thorough exploration of relevant studies, enhancing the robustness and inclusivity of the systematic review's findings.

Keywords and Search Terms

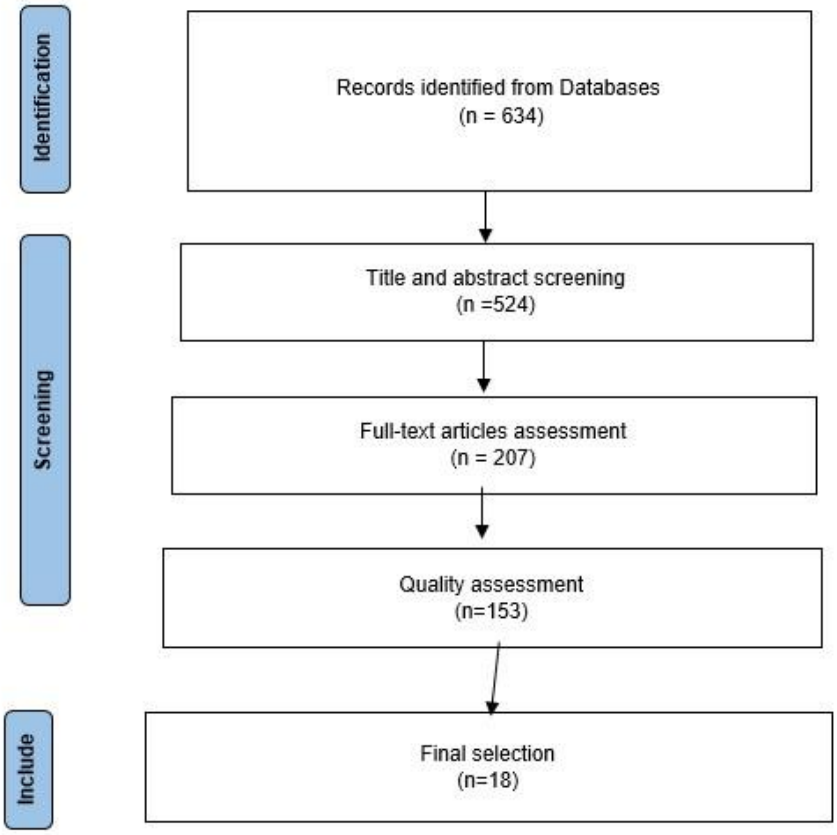
The chosen keywords covered socioeconomic influences comprehensively, incorporating terms such as "socioeconomic status," "income," "education level," and "economic disparities." Simultaneously, terms specific to digital resources, such as "e-learning," "online education," "digital access," and "educational technology," were integrated to pinpoint studies examining how socioeconomic factors impact access to digital educational tools. To hone in on the educational context, additional terms like "access to education," "educational equity," and "learning resources" were included, facilitating a more precise focus on studies directly addressing the accessibility of digital resources within the realm of education. Variations of these keywords, including synonyms and alternative expressions, were considered to accommodate the diverse language used in different studies. The strategic use of Boolean operators, such as "AND" and "OR," further refined the search by combining or excluding specific terms, thereby enhancing the precision and relevance of the search results.

Description of Screening Process for Identifying Relevant Articles

The screening process consists of multiple stages, each involving rigorous evaluation to filter out irrelevant or low-quality articles and refine the pool of literature for further analysis. In Stage 1, the process initiates with an extensive search of electronic databases, academic journals, and relevant sources, resulting in an initial set of 634 articles meeting the search criteria. Stage 2 involves a Title and Abstract Screening, where researchers review the titles and abstracts to exclude articles that do not align with the research objectives, reducing the pool to 524 potential articles. The third stage, Full-Text Assessment, involves a comprehensive evaluation of the full texts of the selected 524 Stage 2. Researchers scrutinize articles from the content to determine if articles meet inclusion criteria, resulting in a further reduction to 207 articles. Stage 4, Quality Assessment, ensures the inclusion of only high-quality and credible research through criteria such as study design and methodology. This stage results in a final set of 153 articles. The last stage, Final Selection, involves a thorough review of the 153 articles to identify the most relevant and impactful ones that significantly contribute to the research objectives. Ultimately, the final selection comprises 18 articles representing the core literature for the research study. This systematic screening process enhances the credibility and validity of the research findings.

Figure 1

PRISMA flow diagram of literature retrieval



Review of Socioeconomic Factors on Access to Digital Resources for Education

This review critically examines 18 scholarly articles focused on the influence of socioeconomic factors on access to digital resources for education. The increasing integration of technology in educational settings has raised concerns about potential disparities in access based on socioeconomic status. The selected articles contribute insights into the multifaceted relationship between socioeconomic factors and access to digital resources, shedding light on challenges, inequalities, and potential solutions in the realm of education.

The study conducted by Jury et al. (2017) explores challenges faced by low socioeconomic status (SES) students in higher education. It reveals that these students encounter not only economic barriers but also psychological obstacles. The research suggests that achieving equality in higher education goes beyond providing economic resources and access; additional factors such as psychological well-being are crucial. Low-SES students may experience increased threats, health issues, and negative emotions. The study concludes that addressing these challenges requires a combination of psychological interventions and institutional changes to create an

environment that minimizes barriers and supports the success of low-SES students in higher education.

Pratama (2017) investigated student device ownership, revealing noteworthy findings. Higher socioeconomic status correlated with a greater likelihood of owning desktop computers and tablets, highlighting economic factors influencing device ownership. A gender disparity was observed, with females more likely to own tablets. Interestingly, no significant variations in device ownership were tied to majors or location. Additionally, age and college year showed no significant impact on device ownership, indicating stability across different demographics.

Choung and Manamela (2018) discusses the profound impact of digital inequality on the educational growth and quality of education for youth. It highlights that a lack of access to digital resources can have lasting consequences for young individuals. However, the study emphasizes the potential positive outcomes that Information and Communication Technologies (ICTs) can bring to youth in South Africa. It suggests that by utilizing ICTs, young individuals can actively participate and share information, thereby enhancing their educational experiences. The study concludes by advocating for the importance of equipping South Africa's graduates with ICT skills and knowledge to address the digital divide and ensure a more inclusive and effective education system.

Chiao and Chiu (2018) investigated the relationship between gender and socioeconomic status with students' ICT competences. The research revealed a noteworthy trend wherein girls demonstrate superior technical ICT skills and higher-order ICT competences compared to boys. Additionally, the study indicates a positive correlation between the educational level of mothers and students' ICT skills and competences. This suggests that a higher educational level of mothers is associated with enhanced proficiency in information and communication technology among students.

Niyigena et al. (2020) underscores the significance of computer ownership as a primary determinant of ICT fluency, emphasizing its role in shaping technological skills. It identifies prior computer experience as a major factor contributing to inequalities in technological proficiency among individuals. The study reveals a positive trend, indicating a decline in barriers to technology usage as students' progress from the 1st to the 4th year of their academic journey. Notably, inequalities in computer ownership exhibit a substantial decrease compared to Internet access. Authors suggests that accommodating more computer labs can be instrumental in reducing technology inequalities. Additionally, it highlights the potential of mobile technology and wireless internet in mitigating the digital divide, offering avenues for enhanced access and equity in technology usage.

Cochrane (2020) provides a comprehensive exploration of the factors influencing students' access to information and communication technology (ICT) and its impact on positive academic outcomes. It goes beyond a purely technological perspective, emphasizing the digital divide and the influence of diverse domains of capital, including social, economic, and cultural factors, on ICT access. By shifting focus to encompass broader social and economic dimensions, the study

acknowledges the role of cultural factors in shaping digital disparities. The investigation recognizes individual and family attributes as crucial components of digital equity, highlighting the multifaceted nature of the issue. Furthermore, the study identifies the breadth of access as a pivotal determinant of students' engagement in online activities, underscoring the significance not only of having access to technology but also the extent of that access in influencing academic success.

The study by Bae and Lai (2020) emphasizes the significance of considering both individual and contextual factors in understanding student engagement. It highlights that opportunities for students to participate in science learning have a positive impact on their engagement. The research indicates that social processes and the socioeconomic status of schools influence the relationship between opportunities to participate (OtP) and student engagement. The study underscores the crucial role of engagement in supporting students' interest, persistence, and achievement in science. Importantly, it argues that a comprehensive understanding of student engagement necessitates considering not only individual factors but also the classroom and organizational contexts within which learning takes place.

Rahiem (2020) investigates technological barriers and challenges faced by university students in Jakarta, Indonesia, during remote learning amid the COVID-19 pandemic. Employing a qualitative phenomenological approach with a sample of 80 students, the study identifies several significant obstacles. These include device-related issues, such as problems with incompatible devices and the need for device sharing among multiple users. Connectivity challenges, encompassing issues of unstable internet connections and restricted access, are also highlighted. Additionally, the study underscores the impact of technology costs and a lack of skills as contributing factors to the difficulties experienced by students in effectively engaging with Information and Communication Technologies (ICT) during remote learning.

Hunsucker (2021) investigates the impact of socioeconomic status on student attendance and academic growth in an online learning environment. The research focuses on eighth-grade students during the 2019-2020 school year, utilizing data from a fully online K-8 school in Tennessee. The study reveals a noteworthy disparity in absenteeism between students receiving free-reduced lunch and those who did not. Additionally, the research examines the interplay between socioeconomic status, attendance, and academic achievement growth. Despite finding a significant difference in absences, there is no notable variance in NWEA ELA growth scores throughout the academic year.

Khasawneh (2021) contributes to the considerate of access and equity in online learning by examining socioeconomic factors. The research identifies challenges in online education and proposes effective strategies to address them. It underscores the influence of socioeconomic factors on access and equity in online learning, emphasizing the importance of bridging the digital divide to promote fair access. The study investigates the correlation between socioeconomic factors and engagement in online learning, offering insights into the relationship between gender and access to online education.

Domina et al. (2021) study investigates into predicting successful engagement in online learning during the COVID-19 pandemic, specifically focusing on elementary school students. The research investigates various factors influencing student engagement in remote learning. Notably, the study explores racial and parental education gaps in student engagement, examining how these factors contribute to disparities. It also analyzes the relationship between students' access to technological resources and their level of engagement. The findings highlight that providing additional socio-emotional learning opportunities enhances student enjoyment and engagement in the remote learning environment.

Nursamsu et al. (2021) investigates the impact of socio-economic disparity on learning engagement during the COVID-19 pandemic in Indonesia, shedding light on the effectiveness of education. The research provides descriptive information on schools' ICT and physical infrastructure and employs event study estimations and difference-in-difference approaches to assess search intensity. The study highlights potential implications for learning effectiveness and educational outcomes, emphasizing the critical need for reliable internet access and digital infrastructure across all regions. Additionally, the research adopts a methodology from a previous study on socio-economic differences and the digital technology divide.

Mollborn et al. (2022) examines into children's technology use, examining their adherence to pediatric guidelines and exploring potential class differences in such usage. By offering new estimates of the relationship between social class and technology use, the study reveals previously unexplored aspects of this dynamic. Beyond mere statistical correlations, the research identifies distinct parenting approaches associated with children exceeding established technology use guidelines. The findings underscore parents' ambivalence and a significant lack of reliance on expert guidance, suggesting a complex interplay of factors shaping the integration of technology into children's lives across various social classes.

Elliott (2023) investigated the computing device ownership and access among students, revealing key findings regarding demographic factors. The research showed that students typically possess or have access to a diverse range of computing devices. However, demographic variables significantly influenced the type and quality of devices owned. Smartphones and laptops emerged as the predominant computing tools for students. Notably, students from lower socioeconomic backgrounds exhibited lower rates of laptop ownership and were more likely to use Chromebooks. First-generation and Pell-eligible students were found to have fewer computing resources compared to their counterparts. Additionally, older students tended to acquire additional or upgraded computing resources, suggesting a correlation between age and technological access and sophistication.

Afzal et al. (2023) investigates the impact of the digital divide on students' access to technology, providing a nuanced exploration of various dimensions. The research uncovers variations in internet access across different age groups, elucidating disparities among students at various educational levels. Additionally, the study emphasizes significant discrepancies in household internet access between rural and urban areas, highlighting the geographical aspect of

the digital divide. Gender-based differences in personal device ownership are explored, drawing attention to potential inequalities influenced by gender dynamics. The research also addresses challenges faced by low-income households, emphasizing lower levels of internet access in comparison to more affluent counterparts. In a broader context, the study underscores the pivotal role of technology resource centers in schools as potential equalizers in bridging the digital gap among students. Furthermore, it advocates for public-private partnerships as a strategic approach to addressing the digital divide, recognizing collaborative efforts necessary to ensure equitable access to technology resources for all students

Gunawardena and Dhanapala (2023) The Gunawardena and Dhanapala (2023) study focuses on the impact of technology on online learning, with a specific emphasis on disadvantaged communities. It highlights that technology can create obstacles to learning, particularly when there is a lack of assistive technology, thereby intensifying challenges in these communities. The study advocates for the application of Universal Design for Learning (UDL) principles to address student diversity and promote universally relevant education. The research underscores the importance of educators gaining a comprehensive understanding of both UDL principles and technology-related issues to identify and implement effective solutions. Moreover, the study emphasizes the crucial role of strong university support systems in ensuring equal opportunities in learning, particularly in the realm of online education and technology-driven instruction. Overall, this research stresses the need for a holistic approach that integrates UDL principles, technological considerations, and robust support systems to overcome barriers and enhance access to quality education, especially in disadvantaged communities.

The study by Gohar et al. (2023) focuses on enhancing educational access for out-of-school children through e-learning by seeking insights from teachers. The research prioritizes the perspectives of educators to generate evidence-based recommendations for effective e-learning initiatives. The study envisions using these findings to drive evidence-based policy reforms, empowering teachers to play a pivotal role in shaping a more inclusive and resilient education landscape. Ultimately, the goal is to create educational environments that are both more inclusive and equitable, with the hope that the provided recommendations will contribute to breaking down barriers and improving educational opportunities for out-of-school children.

The study by Wang et al. (2023) explores the relationships between subjective socioeconomic status, perceived social support, self-efficacy, and e-learning engagement. The findings indicate positive associations between these factors, suggesting that subjective socioeconomic status influences e-learning engagement through the mediation of perceived social support and self-efficacy. The study proposes a serial multiple mediation model, suggesting that the positive impact of subjective socioeconomic status on e-learning engagement is channeled through the sequential pathways of perceived social support and self-efficacy. The research suggests that addressing subjective socioeconomic status and promoting perceived social support and self-efficacy can enhance students' e-learning engagement, offering a potential model for improving overall learning outcomes in online education.

Table 1

Detail Information of reviewed articles

Authors	Year	Source	Title
Jury et al.	2017	Journal of Social Issues, 73(1)	The experience of low-SES students in higher education: Psychological barriers to success and interventions to reduce social-class inequality
Pratama	2017	14th IFIP WG 9.4 International Conference on Social Implications of Computers in Developing Countries	Exploring personal computing devices ownership among university students in Indonesia. Information and Communication Technologies for Development
Choung and Manamela	2018	Bangladesh e-Journal of Sociology, 15(2)	Digital Inequality in Rural and Urban settings: Challenges of Education and Information in South African Youth Context
Chiao and Chiu	2018	The Asia-Pacific Education Researcher, 27	The mediating effect of ICT usage on the relationship between students' socioeconomic status and achievement
Niyigena et al.	2020	Applied Sciences, 10(7)	Modeling the Measurements of the Determinants of ICT Fluency and Evolution of Digital Divide Among Students in Developing Countries—East Africa Case Study
Cochrane	2020	Australian Educational Computing, 35(1)	Factors affecting access to digital technologies and the resulting impact for students in a P-12 context
Bae and Lai	2020	Journal of Educational Psychology, 112(6)	Opportunities to participate in science learning and student engagement: A mixed methods approach to examining person and context factors
Rahiem	2020	Universal Journal of Educational Research, 8(11B)	Technological barriers and challenges in the use of ICT during the COVID-19 emergency remote learning
Hunsucker	2021	Union University,Global	Attendance and Student Engagement in the Online Learning Environment: Are Lower Socioeconomic Students at a Disadvantage?
Khasawneh	2021	Tuijin Jishu/Journal of Propulsion Technology, 44(3)	Investigating the socioeconomic factors influencing access and equity in online learning
Domina et al.	2021	Socius, 7	Remote or removed: Predicting successful engagement with online learning during COVID-19
Nursamsu et al.	2021	ERIA	Education for aLL? Assessing the impact of socio-economic disparity on learning engagement during the COVID-19 pandemic in Indonesia
Mollborn et al.	2022	Journal of Marriage and Family, 84(4)	Family socioeconomic status and children's screen time

Elliott	2023	Educational Technology & Society, 26(3)	The demographics of student device ownership
Afzal et al.	2023	Journal of Social Sciences Review, 3(2)	Addressing the Digital Divide: Access and Use of Technology in Education
Gunawardena and Dhanapala	2023	Communications of the Association for Information Systems, 52(1)	Barriers to Removing Barriers of Online Learning
Gohar et al.	2023	Journal of Development and Social Sciences, 4(1)	Removing Barriers for the out of School Children through E-Learning: A Study of Teachers Perspectives
Wang et al.	2023	European Journal of Psychology of Education	Subjective socioeconomic status predicts e-learning engagement in college students: the mediating role of perceived social support and self-efficacy

Result and Discussion

The evolving landscape of technology in education is accompanied by a complex web of influences, where socioeconomic, cultural, and educational factors intersect to shape students' experiences. This analysis examines into key themes identified across multiple studies, unraveling the intricate relationships that define the dynamics of technology access, engagement, and academic outcomes.

Socioeconomic Factors: Impact on Technology Access, Engagement, and Academic Outcomes

The influence of socioeconomic factors on students' experiences with technology is a recurring theme in educational literature. Economic status goes beyond merely dictating access to technology; it shapes students' levels of engagement and academic outcomes. Students hailing from lower socioeconomic backgrounds encounter additional challenges, leading to the emergence of a digital divide that extends beyond surface-level access issues.

Digital Divide: Emphasizing Disparities

The digital divide represents a multifaceted concern, encompassing unequal access to devices, internet connectivity, and the effective utilization of technology for educational purposes. The persistent emphasis on the digital divide across various studies reflects a shared apprehension about disparities in resources and opportunities. It is a complex issue that demands concerted attention and intervention to ensure an educational landscape that is equitable for all.

Parenting Approaches: Distinct Approaches and Ambivalence

The nuanced dimension of technology use among children is illuminated by the exploration of parenting approaches. Studies, including Mollborn et al., shed light on the distinct ways parents approach technology in their children's lives. The presence of ambivalence among parents signals a need for targeted interventions. Educational programs and resources are crucial to empower parents, filling the gap in reliance on expert guidance and ensuring a more informed and supportive parental role in children's technology use.

Gender Dynamics: Gender-Based Differences

The investigation into gender-based differences in technology ownership and ICT competences reveals a layer of inequality intersecting with socio-economic factors. Studies by Pratama (2017) and Chiao and Chiu (2018) draw attention to how gender dynamics contribute to variations in access and proficiency. Addressing gender-specific challenges in technology access and literacy becomes crucial for fostering an inclusive and gender-equitable educational environment.

Educational Context: Importance of Classroom and Organizational Contexts

The role of classroom and organizational contexts in shaping student engagement with technology is underscored by studies like Bae and Lai (2020). Recognizing that student engagement is not solely an individual endeavor, the emphasis on educational context highlights the need for a holistic approach in educational planning and implementation. Creating environments conducive to technology integration involves considering broader organizational and classroom dynamics.

Universal Design for Learning (UDL): Advocacy for Diversity and Universally Relevant Education

The advocacy for the application of Universal Design for Learning (UDL) principles by Gunawardena and Dhanapala (2023) aligns with the broader theme of promoting diversity and ensuring universally relevant education. UDL principles, addressing the diverse needs of students, especially those impacted by socioeconomic disparities, become instrumental in fostering an inclusive and accessible educational environment where technology plays a central role.

Finding of the Study

This review sheds light on the intricate relationship between socioeconomic factors and access to digital resources for education. The findings underscore the multifaceted challenges, disparities, and potential solutions within this dynamic landscape.

Socioeconomic Factors: Impact on Technology Access, Engagement, and Academic Outcomes

Economic status significantly influences students' access to technology, level of engagement, and academic outcomes. Students from lower socioeconomic backgrounds face additional challenges, contributing to the emergence of a digital divide that extends beyond mere access issues.

Digital Divide: Emphasizing Disparities

The digital divide encompasses unequal access to devices, internet connectivity, and effective utilization of technology for educational purposes. The persistent concern about disparities in resources and opportunities demands concerted attention and intervention to ensure an equitable educational landscape.

Parenting Approaches: Distinct Approaches and Ambivalence

A exploration of parenting approaches, as exemplified by Mollborn et al., highlights distinct ways parents engage with technology in their children's lives. The presence of parental ambivalence signals the need for targeted interventions, educational programs, and resources to empower parents and ensure informed and supportive roles in children's technology use.

Gender Dynamics: Gender-Based Differences

Gender dynamics intersect with socio-economic factors, contributing to variations in access and proficiency. Addressing gender-specific challenges in technology access and literacy is crucial for fostering an inclusive and gender-equitable educational environment.

Educational Context: Importance of Classroom and Organizational Contexts

Classroom and organizational contexts play a crucial role in shaping student engagement with technology. Recognizing that student engagement is not solely an individual endeavor underscores the need for a holistic approach in educational planning and implementation.

Universal Design for Learning (UDL): Advocacy for Diversity and Universally Relevant Education

Gunawardena and Dhanapala's advocacy for UDL principles aligns with the broader theme of promoting diversity and ensuring universally relevant education. UDL principles become instrumental in fostering an inclusive and accessible educational environment where technology plays a central role.

Conclusion

This study reveals the intricate relationship between socioeconomic factors and access to digital educational resources. The review's findings highlight several key themes i.e. Economic status significantly influences students' access to technology, level of engagement, and academic outcomes, contributing to the emergence of a digital divide that extends beyond mere access issues. In essence, the review emphasizes the need for a holistic approach in educational planning and implementation, considering socioeconomic, cultural, and educational factors to address challenges, disparities, and promote equitable access to digital resources in education.

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