

Exposure to Digital Media as a Catalyst for English Vocabulary Development at the Secondary Level in Bangladesh: A Mixed Methods Study

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Abstract

Original Research Article

This study investigates the relationship between digital media exposure and English vocabulary development among secondary-level students in Bangladesh. By employing a mixed-methods research design, the study collected quantitative data through a structured questionnaire survey conducted among secondary-level students, while qualitative insights were gathered through in-depth interviews and key informal interviews using purposive sampling techniques. Quantitative data were analyzed using SPSS (Version 26) for descriptive and inferential statistical analysis, whereas qualitative data were interpreted following Braun and Clarke's six-stage thematic analysis approach. The result indicates a weak, non-significant relationship between digital media exposure and vocabulary development ($r = -0.17$, $p = 0.083$). However, qualitative findings demonstrate that digital media provides rich contextual and multimodal input, enhances motivation, and supports incidental vocabulary learning. Despite these affordances, learning remains largely passive and unguided, resulting in limited transfer from receptive recognition to productive use. The study identifies key mediating processes, including noticing, multimodal processing, and engagement, alongside moderating factors such as pedagogical guidance, digital access, and distraction. The findings suggest that digital media functions as a conditional resource rather than an autonomous driver of vocabulary acquisition. Effective outcomes depend on structured integration, cognitive engagement, and supportive learning environments. The study contributes to the literature by offering a context-sensitive, mechanism-based explanation of digital vocabulary learning in developing-country settings.

Keywords: Digital media; Vocabulary development; Multimodal learning; Incidental learning; Bangladesh.

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INTRODUCTION

Vocabulary is the stratum of language proficiency that forms the basis of the ability of learners to read, write, listen, and communicate with accuracy and fluency (Nation, 2022). In Bangladesh, English language education at the secondary level, still remains dominated by memorisation-based and textbook-centred teaching methods that hardly encourage the use of contextual vocabulary and communicative competence. Learners can gain passive knowledge of target lexis but they are not able to effectively apply such words in real life situations. This pedagogical distance has not been overcome even with the rapid growth of Information and Communication Technology (ICT) in the country that has dramatically increased exposure of students to English far beyond the classroom (Islam & Grönlund, 2016). The increasing pervasiveness of smartphones,

low-cost mobile internet, video-sharing sites, and language-learning apps have changed the linguistic environment of young learners. Digital media is now a multimodal space where visual, auditory, and textual information intersect, which in theory allows making deeper lexical understanding and memory (Mayer, 2005). These platforms, including YouTube, social media, and mobile game apps, offer opportunities to learners to be exposed to vocabulary in contextualised, authentic conditions that support intentional and incidental learning processes of special interest is the incidental acquisition of vocabulary, where knowledge of lexicon is an incidental by-product of meaningful interaction with content (Webb & Nation, 2017). In spite of these affordances, there remains a critical gap between exposure to digital media and the demonstration of vocabulary development. Nevertheless, more access to digital platforms do not necessarily result in quantifiable

outcomes of vocabulary development since the quality of exposure depends on the cognitive engagement of learners, their attentional focus and the mediational role of the pedagogue. Additionally, the incorporation of digital media in formal instructional practice in Bangladeshi secondary schools is still limited; teachers are often untrained, lack institutional support, or curricular frameworks to harness digital tools strategically (Saha, 2023). Another complicating aspect is the digital divide: the socioeconomic disparity creates unequal access to devices and to stable internet access, that is, the potential benefits of the digital media itself are distributed unevenly (Islam & Grönlund, 2016). The following research objectives guide the study: (1) to describe the type of digital media use by students in terms of vocabulary development; (2) to analyse patterns of use of digital media in terms of frequency and nature of use in terms of vocabulary development; (3) to assess the perceptions of students and teachers regarding the pedagogical efficacy of digital media as a vocabulary learning tool. Through a combination of quantitative survey and qualitative interview results, the research study offers a context-sensitive, empirically based explanation of how the digital media can and cannot act as a catalyst in vocabulary acquisition in the Bangladeshi secondary education setting.

LITERATURE REVIEW

Multimodal Learning Environment Digital Media.

The landscape of language learning has been completely changed by digital media which has made possible interactive and multimodal learning environments in which learners simultaneously process text, audio, imagery, and interactive prompts (Lotherington & Jenson, 2011). The shift to Web 2.0 and mobile technologies has relegated learners to passive consumers, and there are active producers and collaborators, fostering participatory forms of language engagement (Kolcubas *et al.*, 2024; Tafazoli *et al.*, 2020). These systems expose learners to real, unscripted English - placing vocabulary in real-life communicative situations and not in artificial textbook drills - and thereby improving both incidental acquisition and contextual understanding (Nation, 2022; Webb & Nation, 2017).

Vocabulary Development: Conceptual Dimensions.

It is a well-established fact that vocabulary is the staple of language proficiency, through which the abilities of learners to understand and produce language get mediated by vocabulary across all four skills (Schmitt, 2010). Literature differentiates receptive vocabulary (words known on hearing or seeing them) and productive vocabulary (words actively used in speech or writing). Characteristically, learners possess larger receptive than productive vocabularies (Alsahafi, 2023), and the transformation of receptive knowledge to productive use is achieved through deliberate practice, repeated exposure to the context, and meaningful use

(Nakata & Elgort, 2021). Robust lexical development requires both incidental acquisition, which involves the development of words through rich linguistic input, and intentional learning, i.e., explicit study and rehearsal (Elgort & Warren, 2014; Kang *et al.*, 2019).

Digital Media and Vocabulary Learning

The empirical studies widely agree with the stance that digital media can be used to improve vocabulary acquisition by providing authentic input (Gatcho *et al.*, 2026; Kang *et al.*, 2019), supporting multimodal encoding (Mayer, 2005), promoting learner autonomy (Reinders & Benson, 2017), and increasing motivational engagement through gamification and interactivity (Jaiswal, 2024). According to Peters & Webb, (2018), incidental acquisition of words by watching captioned video was significant when watching was frequent and continued. Nonetheless, one of the most frequent caveats in the literature, however, is that the quality and intentionality of engagement have a significantly greater impact than the amount of exposure (Nation, 2022). In this regard, the pedagogical quality of digital media does not depend on the exposure, but on the nature of depth, intentionality, and the quality of cognition of the learner engagement.

Research Gaps

Although much has been researched worldwide, there are still a number of gaps. There is limited context-specific evidence on the issue of digital divide in Bangladesh, where the digital infrastructure, pedagogical standards, and socioeconomic conditions differ significantly compared to high-income settings (Islam & Grönlund, 2016). Learners in the vocabulary-and-digital-media literature are underrepresented in the secondary level learners, and yet they are in a critical stage of development in acquiring the English language. Very few studies use mixed-methods designs capable of capturing both statistical trends and learners lived experiences. Most importantly, the correlation between the number of quantified digital media exposures and the quantifiable outcomes of vocabulary is debatable, since the number of quantified exposures can obscure the quality, purpose, and cognitive depth of individual engagements. The gaps are directly covered by the present study.

Theoretical and Conceptual Framework.

This paper is rooted in a complex theoretical framework that describes the relationship between digital media exposure and vocabulary development in the context of a set of mutually dependent cognitive, pedagogical, and structural processes. In its most basic form, the conceptualisation of digital media exposure is a multidimensional construct that includes access to devices and the internet, the frequency with which exposure occurs, the type of platforms used (ex, video-based exposure, social media exposure, application exposure), and the modes through which exposure is

gained (passive exposure versus active exposure). Based on the premises of the Input Hypothesis of Krashen, (1985) the conditions under which such exposure can be converted into learning are specified; the digital media is positioned as a source of abundant and potentially comprehensible linguistic input; however the framework does not assume a linear input-output relationship. The theorized process of exposure-vocabulary development is mediated by a series of mediating cognitive processes. Pioneering the Noticing Hypothesis, as proposed by SCHMIDT, (1990) proves that acquisition of lexicon requires conscious awareness of linguistic form, whereas Mayer's (2014) Cognitive Theory of Multimedia Learning explains how multimodal input (visual, auditory, textual) can be used to enhance encoding and retention when processed within cognitive limits. Parallel to this, incidental learning theory (Webb & Nation, 2017) describes vocabulary gains that occur as a by-product of meaning-centered interaction, and the motivational framework offered by Dörnyei & Ushioda, (2009) explains how more engagement maintains engagement with input. In this model, all of these processes work together to mediate the relationship between exposure and learning and transform raw input into internalized lexical knowledge.

The conceptualization of vocabulary development includes two dimensions: receptive and productive (Nation, 2022). Receptive vocabulary is the capacity to recognize and understand words within context, whereas productive vocabulary is the ability to correctly use those words in speaking and writing. The framework assumes that the relationship between these

dimensions is asymmetrical, with receptive gains more easily attained through exposure, and productive competence requiring deeper processing, practice, and feedback (Elgort & Warren, 2014). Most importantly, the framework includes moderating conditions, which determine the strength and direction of such relationships. The Social Constructivist Theory by Vygotsky & Cole, (1978) informs the purpose of pedagogical guidance and holds that teacher scaffolding and structured tasks are what are necessary to focus attention and strengthen learning and the transfer of receptive to productive knowledge. The quality of engagement also moderates the results of the moderators, since active, goal-oriented interaction with digital content leads to deeper cognitive processing in comparison with passive consumption (Nation, 2022). Moreover, structural conditions like digital access and infrastructural inequality precondition the degree of exposure and its uniformity (Islam & Grönlund, 2016), and distraction and discontinuous attention decrease processing depth and restrict retention.

Combined, the framework promotes a mediated-moderated model where exposure to digital media does not have a direct or automatic impact on vocabulary development but instead has a contingent influence on vocabulary development depending on cognitive engagement, pedagogical mediation, and enabling structural conditions. This combined method gives a theoretically based explanation to the weak statistical association found in the study, which shows that exposure is not sufficient without directed, attentive and contextually oriented learning procedures.

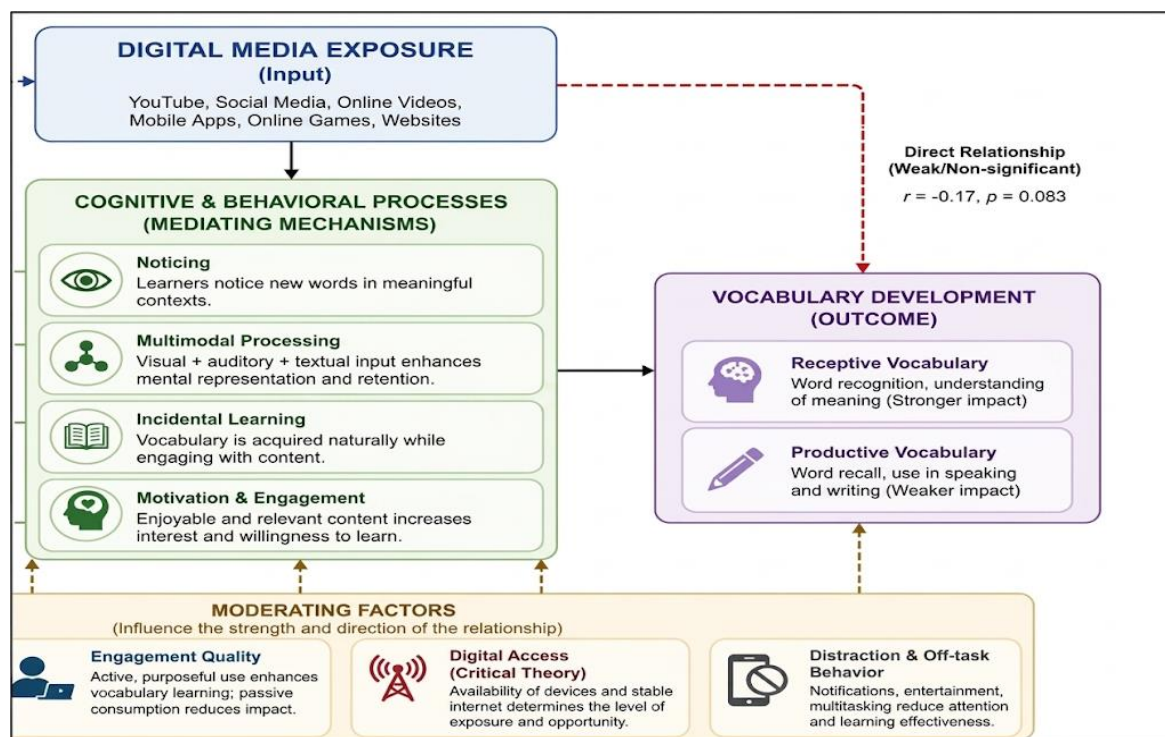


Figure 1: conceptual Framework, Digital media exposure, and English Vocabulary Development

METHODOLOGY

Research Design

The study employed a mixed-methods design in which quantitative and qualitative data strands were collected simultaneously, analyzed separately, and integrated at the interpretation stage (Creswell & Plano Clark, 2018). This design is well-suited as it enables both the statistical analysis of exposure–development relationships and the contextual elucidation of student and teacher experiences. The quantitative approach adopted for descriptive and correlational, examining patterns of digital media use and their association with vocabulary outcomes without experimental manipulation. The qualitative strand is exploratory, using semi-structured interviews and thematic analysis to generate explanatory depth. In this study, ethical consent was obtained from respondents prior to data collection. A pre-test was employed to check validity, replicability, and authenticity from 10 respondents. Final questions were reviewed, checked, and modified by one independent researcher.

Study Area and Sampling

The study was conducted across a diverse range of secondary-level educational institutions in Bangladesh, encompassing government schools, private schools, and madrasa settings to ensure contextual and institutional variation. The selected institutions included Santosh Jahnnabi High School, Santosh Tangail, Santosh Islamic University Govt. Girls' High School (Mbstu Campus), Bindubasini Government Girls' High School (Tangail Sadar, Tangail), Bindubasini Government Boys' High School (Tangail Sadar, Tangail), Police Lines Adarsha High School (Tangail Sadar, Tangail), Daffodil International School (Tangail Sadar, Tangail), Sristy Academic School (Tangail Sadar, Tangail), Abeda Khanam Girls' High School (Karatia, Tangail), Hasan Kindergarten and Academic School (Karatia, Tangail), Chowhali Adarsha High School (Chauhali, Sirajganj), Khashkawlia K. R. Pilot Model Govt High School (Chauhali Sirajganj), Muhtamim Ayatollah Darul Uloom Madrasah (Shah Makhdum Rajshahi), Chardhitpur Dakhil Madrasah (Chauhali, Sirajganj). These institutions were selected to capture variations in geographic location (urban, semi-urban, and rural), institutional type, and levels of access to digital resources, thereby strengthening the contextual representativeness and transferability of the findings. The quantitative component of the study comprised 100 secondary-level students from Classes 8, 9, and 10. The sample size was determined based on both methodological adequacy and analytical feasibility for statistical procedures. A sample of 100 is widely considered sufficient for conducting correlation and descriptive analyses with acceptable statistical power in small-scale educational research (Majid, 2018). Additionally, selecting 100 respondents ensured balanced representation across class levels and institutions while keeping data collection and processing

manageable. Students were selected using simple random sampling to ensure equal probability of inclusion and to minimize selection bias, thereby enhancing the internal validity of the findings. The qualitative component included 25 participants, comprising 15 in-depth interviews (IDIs) and 10 key informant interviews (KIIs). Participants for the qualitative strand were selected through purposive sampling, focusing on individuals with direct experience and relevant knowledge of English vocabulary teaching and learning processes at the secondary level. The IDIs included both students and English teachers to capture experiential insights, while the KIIs involved senior teachers, head teachers, and academic coordinators to provide institutional and pedagogical perspectives (Creswell & Clark, 2007).

Data Collection Instruments

Quantitative data were collected using a structured questionnaire administered both online and offline to 100 students. The instrument included items on demographic characteristics, digital device and internet access, frequency and type of digital media use (Q1–Q10), and self-reported vocabulary development (Q11–Q14), measured using five-point Likert scales. Qualitative data were collected through semi-structured interviews with 15 in-depth interview (IDI) participants and 10 key informant interviews (KII) participants. Interviews were conducted both face-to-face and via digital platforms, each lasting approximately 30–45 minutes. All interviews were conducted in Bengali, audio-recorded with consent, and subsequently transcribed and translated into English. For qualitative data, a semi-structured interview protocol was used with 15 IDI and 10 KII. The interviews were conducted face-to-face and via digital platforms and lasted approximately 30–45 minutes. Before data collection, their voluntary participation was ensuring by ethical consent form. All data were collected in Bengali and recorded, and then data were transcribed into English. Moreover, a classroom observation checklist was used with selected teachers and students to document naturally occurring digital media use in instructional settings.

Data Analysis

The quantitative data were analysed with the help of descriptive statistics (frequencies, percentages, means) and the Pearson product-moment correlation, which were performed in and SPSS 26 version. Composite variables Digital Media Exposure (Q7–Q10) and Vocabulary Development (Q11–Q14) were created by calculating mean scores on items with Likert responses recoded to reflect increasing agreement. To test the hypothesis that there is a significant relationship between the two composites, the Pearson correlation coefficient (r) and the associated p -value ($\alpha = 0.05$) were used. Interpretation of qualitative data through interviews and observation was transcribed and

subjected to inductive thematic analysis following the six-phase procedure of familiarisation, initial coding, theme generation, theme review, definition and reporting developed by Braun and Clarke (2006): familiarisation, initial coding, theme generation, theme review, definition and reporting. Qualitative data were analysed using Braun and Clerk's six stage thematic approach.

Validity, Reliability and Ethics

The questionnaire reliability was measured using a coefficient of alpha of Cronbach; the coefficients of 0.70 and above were acceptable (Field, 2018). In this work, the value of alpha of the Cronbach was 0.80, which was established by basing the instrument's design on the literature and the research purpose of the study; face validity was determined through expert review. Methodological triangulation between quantitative and qualitative strands of data was used to support construct validity (Creswell & Clark, 2007). Ethical procedures involved institutional permission, informed consent of

all subjects, ensured voluntary involvement, and anonymity with the help of pseudonymisation and secure storage of data (Bryman, 2016).

RESULTS

Demographic Profile of Respondents from Quantitative Data

One hundred secondary-level learners were involved in the quantitative strand. According to Table 2, the sample was represented by 44 percent of male students and 56 percent of female students, which shows the sample was almost balanced with a slight majority of female students. There was approximately equal representation of classes; 35 percent of Class 8, 33 percent of Class 9 and 32 percent of Class 10 which is helpful in making cross-grade comparisons. In terms of medium of instruction, 52% were in Bangla-medium schools and 48% were in English-medium schools.

Table 1: Demographic Profile of Student Respondents (N = 100)

Variable	Category	Frequency (N)	Percentage (%)
Gender	Male	44	44%
	Female	56	56%
Class/Grade	Class 8	35	35%
	Class 9	33	33%
	Class 10	32	32%
Medium of Instruction	Bangla Medium	52	52%
	English Medium	48	48%

Source: Field study, 2025

Types of Digital Media for Vocabulary Teaching

The observation indicates that the diversity, and not all used massively influence vocabulary instruction digital media tools. 25% of 27 teachers chose videos and images as the most important eLearning materials. They consist of You Tube video fragments, Google pictures, multi-media. And 32 percent more said that they use an integration of digital contents, such as video, images and web materials. Only 8 percent of the teachers used social media and language learning applications in their instruction in the study. According to teachers, the students are able to decode the meaning of the words which are based on the visual context and videos and pictures are especially effective. According to teachers, pictures may help make the process of acquiring vocabulary more tangible, and, therefore, more memorable.

Exposure to English through Digital Media

Figure 2 illustrates the extent of engagement with English-language material among students in four of the most important categories of digital media. Video-based content was the most prevalent form of English exposure: 73% of students agreed or strongly agreed that they watch English videos on websites and social networking sites like YouTube. The endorsement of 66 percent of students was on digital gaming involving

English-language content, and the approval of 64 percent of students toward the use of English learning applications or websites. The least common, but still large, at 56 percent, was the engagement with social media in English.

Student Perceptions of Vocabulary Development through Digital Media

The overview of self-reported perceptions of digital media contribution to vocabulary learning by students is summarised in Figure 8. Most students expressed positive attitudes: 54 percent responded affirmatively or strongly affirmatively that digital media have aided them in learning new vocabulary and 63 percent indicated that digital media have helped them to better retain the new vocabulary they have been taught compared to textbooks. Motivational impact achieved the highest rate of agreement, with 70 per cent indicating that digital media enhance their interest in learning English, which is of particular interest when the existing relationship between learner motivation and lexical acquisition is taken into consideration. It was found that 59% of students approved productive use of new vocabulary in either speaking or writing, but 22% of the students were neutral and 19% of the students disagreed, which suggests that there is a non-trivial gap between receptive exposure and productive deployment.

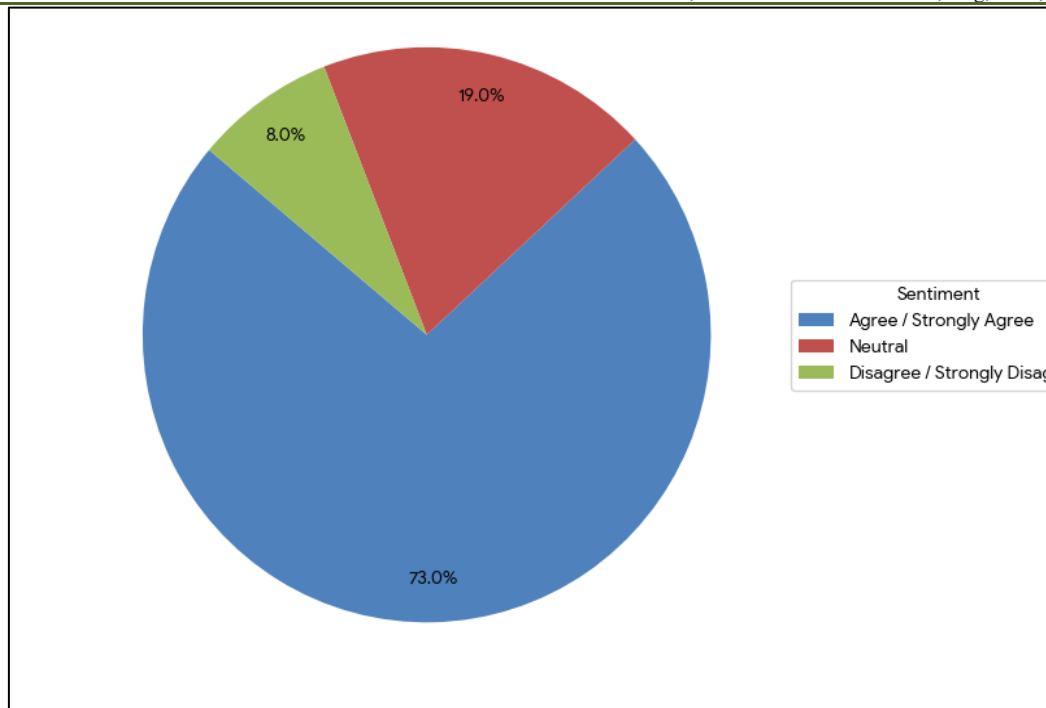


Figure 2: Students' Exposure to English through Digital Media (N = 100)

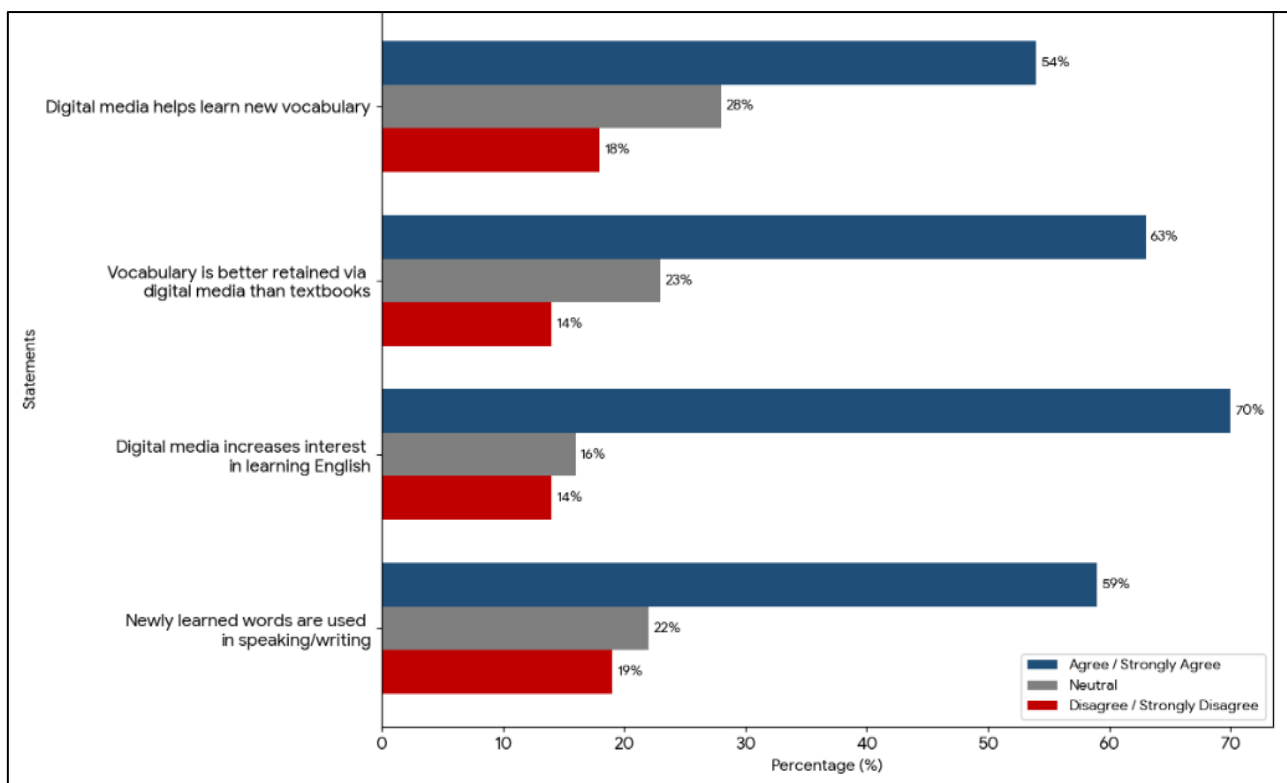


Figure 3: Student Perceptions of Vocabulary Development through Digital Media (N = 100)

Relationship between Digital Media Exposure and Vocabulary Development

As a solution to answer the main quantitative research question, composite scores were calculated of Digital Media Exposure and Vocabulary Development of each of the 100 student respondents. A Pearson correlation was then calculated to determine the strength

and direction of the linear relation between the two composites. Figure 4 shows the results of a weak negative correlation ($r = -0.17$, $p = 0.083$). Since the p -value is greater than the traditional level of $0.05 = 0.05$, there is no statistically significant relationship between these two variables, and the null hypothesis of non-correlation between the two variables cannot be rejected.

The direction of the coefficient, although non-significant, indicates that in this sample, a higher reported digital media exposure has a weak (non-significant) positive relationship with slightly lower

vocabulary development scores--a counterintuitive relationship which the qualitative strand helps to put into perspective.

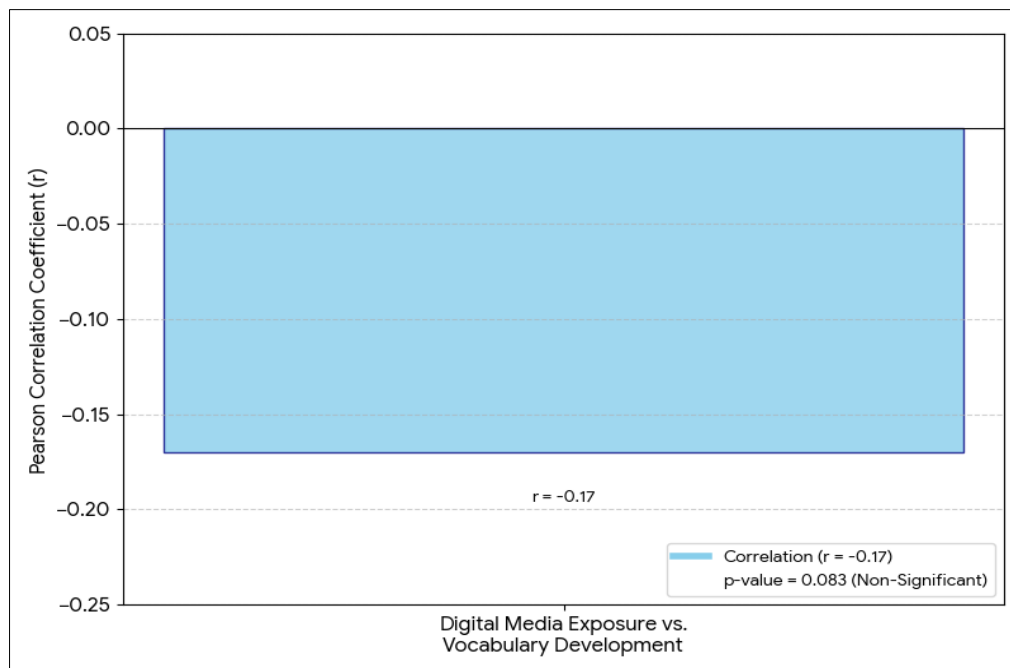


Figure 4: Pearson Correlation between Digital Media Exposure and Vocabulary Development

Qualitative Results

Demographic Profile of Qualitative Respondents

The qualitative aspect of this research involved 25 participants, which guaranteed both the richness of experience and the diversity of the institutions. Among these, 15 participants were involved in in-depth interviews (IDI), including 9 students (Classes 8–10) and 6 teachers of the English language. Another 10 participants were selected as key informants (KII), who included participants of the following categories: head teachers, assistant head teachers, and senior English teachers having substantial professional experience. The age of student participants was 13-16 years old, and the educational background of student participants was both Bangla- and English-medium. The participants who were teachers had an experience in the teaching profession ranging between 5-22 years with both new and experienced professionals participating. This diversity not only added an analytical strength to the qualitative results but also allowed a subtle comprehension of the role of digital media in vocabulary learning in various learning settings.

Digital Media as a Contextual and Multimodal Learning Environment

A central theme emerging from the qualitative data is the role of digital media as a contextual and multimodal environment that facilitates vocabulary learning through meaningful exposure rather than rote memorization. Students repeatedly emphasized that

digital platforms—particularly video-based media enable them to understand vocabulary in relation to real-life situations, emotional tone, and communicative context. This contrasts sharply with traditional textbook-based approaches, which often present vocabulary in isolation. One student explained, “When I watch English videos, I can understand the meaning of words from the situation without memorizing them separately” (IDI-03). Another participant noted, “In dramas and cartoons, I can see how words are used in real conversations, which helps me remember them better” (IDI-07). A similar perspective was offered by a student from an English-medium institution, who stated, “Videos give both pronunciation and meaning together, so it becomes easier to learn compared to books” (IDI-01). Teachers also highlighted the pedagogical value of multimodal input. As one teacher explained, “When students see images, hear pronunciation, and understand context at the same time, vocabulary learning becomes more effective and long-lasting” (IDI-13). These findings suggest that digital media enhances vocabulary acquisition by integrating visual, auditory, and contextual cues, thereby supporting deeper cognitive processing and retention.

Incidental Vocabulary Acquisition and Limited Strategic Learning

Another dominant theme is the incidental nature of vocabulary learning through digital media. The majority of students reported that they do not intentionally use digital platforms for vocabulary

development; rather, learning occurs as a by-product of engaging with entertainment content such as videos, social media, and digital games. One participant stated, "I do not watch videos to learn vocabulary, but I end up learning new words automatically" (IDI-05). Another student described, "While scrolling through social media, I often come across English words that I did not know before" (IDI-02). Similarly, a participant from a madrasa context noted, "While playing games, I learn English instructions and words without trying" (IDI-08). Although some students reported occasional use of learning applications or dictionaries, these practices were neither consistent nor structured. This indicates that digital media primarily functions as a source of passive linguistic input, where vocabulary acquisition lacks intentionality, repetition, and reinforcement. Consequently, while exposure is high, the depth of learning remains uneven.

Pedagogical Gaps and Lack of Guided Learning

A critical issue identified in the analysis is the lack of structured pedagogical guidance in students' use of digital media for vocabulary learning. Students expressed uncertainty about how to effectively use digital resources and which platforms are most beneficial. One student stated, "I do not know which online resources are actually useful for learning vocabulary" (IDI-05). Another participant noted, "If teachers guided us, we could learn more effectively" (IDI-09). Teachers acknowledged limitations in their own capacity to integrate digital tools into teaching practices. One teacher explained, "We are not properly trained to use digital media in teaching" (IDI-10). Similarly, a key informant stated, "Digital media is used, but not in a structured and planned way" (KII-04). These findings suggest a significant gap between digital exposure and pedagogical application, indicating the need for systematic integration of digital tools into formal vocabulary instruction.

Taken together, the qualitative findings reveal a complex and multi-layered relationship between digital media exposure and vocabulary development. Digital media provides rich contextual input and enhances learner motivation; however, learning remains largely incidental, unguided, and unevenly distributed. Structural barriers, distraction, and lack of pedagogical integration further limit its effectiveness. Most importantly, a persistent gap exists between receptive exposure and productive vocabulary use. These interconnected dynamics suggest that digital media functions as a supplementary learning resource rather than a standalone mechanism for vocabulary development, requiring guided and structured integration to achieve meaningful outcomes.

DISCUSSION

The results of the present study contradict the popular belief according to which, the more secondary-

level learners are exposed to digital media, the more developed their vocabulary is. Whereas students interact regularly with digital resources and are exposed to the English language through videos, social media, and online sources, the fact that the effect of exposure on vocabulary development ($r = -0.17$, $p = 0.083$) is not statistically significant, indicates that exposure is not a sufficient explanatory variable. This is in line with the position of Hinkel & Fotos, (2001) who suppose that the language acquisition process relies not on the amount of input to encounter but on the level of thinking that the input causes to take place. The current situation is that the activity of students in the digital media seems to be rather passive and entertainment based which does not allow students to notice, process and retain linguistic input. The fact that the majority of the content presented is audio-visual, specifically video-based content, is indicative of a learning environment that is in line with the Cognitive Theory of Multimedia Learning as suggested by Mayer (2014): learning can be facilitated through a unified visual and audio stimulus. The success of such multimodal input is however limited by the degree of attentional involvement in learners. The Noticing Hypothesis created by (SCHMIDT, 1990), underlines that conscious attention to linguistic forms is a precondition to acquisition. Qualitative results show that such noticing is not very common in casual digital settings, where entertainment and not learning is the motive behind engagement. Therefore, although digital media has a rich contextual exposure, a lack of intentional attention decreases the effectiveness of digital media in the acquisition of vocabulary. Meanwhile, the digital media is highly motivational. Students have increased reports of engagement, enjoyment, and interest in digitally mediated settings, teachers report increased participation. This helps in the argument of Dörnyei & Ushioda, (2009) that motivation is one of the key factors in learning a language. Nevertheless, the results also show that motivation in itself is not a guarantee of the learning outcomes. An ongoing discrepancy between passive and active knowledge of vocabulary suggests that learners tend to know vocabulary words that they have seen through digital media but are not able to use these words actively in speaking or writing. This observation is consistent with Nation (2022), who differentiates between receptive and productive vocabulary, where exposure facilitates recognition but not necessarily an active usage. Vocabulary knowledge is not complete and limited in its functions without the chance to practice, repeat and get feedback about it.

These results highlight the importance of the crucial role of pedagogical mediation. Both students and teachers note that there is no systematic guidance to using digital media to learn vocabulary and students are left to navigate the digital resources without clear objectives and strategies. This is in line with the social constructivist view of cognitive development, which stresses the significance of guided interaction and

scaffolding in cognitive development (Islam & Grönlund, 2016). . Without such support, the learners will be less likely to perform crucial cognitive functions, including noticing, elaboration, and rehearsal. Thus, formal instruction cannot be substituted with digital media, yet can be effective, when it is incorporated into a pedagogically guided framework that facilitates attention, organizes engagement, and fosters productive language use. In addition to the cognitive and pedagogical aspects, there are structural constraints that influence the learning outcomes. Although many people own the devices, discrepancies that arise in the use of internet and institutional infrastructure especially in rural and semi-urban areas are limiting effective use of the digital media. This result confirms Dörnyei & Ushioda, (2009), who believe that digital inequalities are more and more similar to inequalities in the quality of connection, as opposed to mere access. Poor internet connectivity and insufficient infrastructure in classrooms not only hinder access of students to digital resources but also their ability to use digital tools in the classroom that further consolidate existing educational disparities.

CONCLUSION

This paper explored the connections between exposure to digital media and English vocabulary acquisition among secondary school students in Bangladesh based on a mixed-methods study. The results indicate that even though students are generally exposed to English through digital platforms, especially audiovisual contents, exposure does not necessarily lead to the development of vocabulary that is measurable. The lack of a meaningful correlation is the drawback of the exposure-based assumptions and shows the significance of cognitive involvement. The engagement of the learners with the digital media is mostly incidental and driven by entertainment, which cannot facilitate mechanisms such as noticing, repetition and contextual use that are essential in retention. Although digital media can be used to increase motivation and engagement, it does not guarantee that productive use of vocabulary without structured practice will be achieved. Another point made by the study is the vital importance of the pedagogical guidance in changing the exposure into learning. Moreover, ineffective integration of digital technology is limited by infrastructural disparities, especially in rural communities. In general, digital media must be considered a conditional resource, which needs to be directed in its use and provided with the conditions under which it can be used with the aim of achieving meaningful language learning outcomes.

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