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Examining the effects of screen time on language development: A university-based study in Hanoi, Vietnam

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Abstract - This study investigates the self-perceived impact of screen use on language skills among university students across four disciplines: business, technology, healthcare, and humanity and languages. Quantitative analysis revealed significant differences in perceived impact, with healthcare students reporting the highest levels of benefit, followed by humanity and languages, business, and technology students. Focus group discussions with a subset of 30 students provided qualitative insights, highlighting varying patterns of screen use across three categories: low, moderate, and high screen time users. Low screen time users preferred traditional learning methods and expressed scepticism about the effectiveness of screens. Moderate users leveraged screens as a complementary tool for language practice, while high users perceived transformative benefits, particularly in pronunciation, vocabulary, and fluency, despite challenges such as distractions and physical strain. The findings underscore the need for tailored strategies to optimize screen use, taking into account discipline-specific practices and individual screen time habits. This study contributes to understanding the role of digital tools in language learning and offers practical recommendations for integrating screen use effectively in educational contexts.

Keywords: screen time, language development, self-perceived impact, digital tools, university students, focus group discussions

1. Introduction

In the digital age, screen time has become an inevitable part of daily life, especially among young adults navigating academic settings. With the integration of digital tools in education and the widespread use of social media, video streaming, and gaming platforms, university students are increasingly exposed to prolonged screen engagement (Neumann, 2015). This trend, while reflective of modern technological advancement, also raises critical questions about its cognitive and developmental implications—particularly regarding language acquisition and proficiency.
Language development plays a pivotal role in academic success, social integration, and career advancement. It encompasses vocabulary acquisition, comprehension, communicative competence, and critical thinking—all essential skills for university students. However, with a shift toward screen-mediated interaction, the modes of communication and learning are evolving. Educational platforms, language learning applications, and digital media offer new opportunities for enhancing language skills (Hirsh-Pasek et al., 2015). At the same time, the dominance of recreational screen time poses potential risks, particularly when it replaces meaningful face-to-face interactions or leads to cognitive overload and distraction (Madigan et al., 2020).

The rise in screen use among university students in Vietnam, especially in urban centres such as Hanoi, reflects a broader global pattern but also presents context-specific challenges. Digital infrastructure and internet access are rapidly improving in Vietnam, facilitating increased screen time both in academic and leisure contexts (Nguyen & Le, 2022). At institutions like Dai Nam University, students frequently engage with screens for purposes ranging from online lectures and research to social media scrolling and entertainment. While these tools have the potential to enhance educational outcomes, their impact on language development remains ambiguous and underexplored in the Vietnamese context.

Understanding the influence of screen time on language development is particularly urgent as higher education continues to integrate digital technology into its core instructional practices. The COVID-19 pandemic further accelerated this digital shift, with remote learning becoming a necessity rather than an option. Although technology-enabled education offers flexibility and accessibility, it also intensifies screen exposure, potentially altering traditional pathways of language learning and communication (Radesky & Christakis, 2016).

In Vietnam, the digital transformation of education has occurred swiftly, yet pedagogical strategies have not always kept pace with the behavioural and developmental implications of this shift. Students at Dai Nam University, like many others in urban educational institutions, are navigating a learning environment where academic and recreational screen use often overlap. The blurred boundaries between learning tools and leisure applications—such as using YouTube for both lectures and entertainment—complicate efforts to assess the impact of screen use on learning outcomes, especially language development (Dabbagh et al., 2019).

Moreover, Vietnamese universities are increasingly expected to produce graduates who are not only knowledgeable in their fields but also proficient communicators in both Vietnamese and English. As language competence becomes a key marker of employability and academic excellence, identifying and mitigating factors that hinder language development is crucial. Excessive or unbalanced screen use may diminish opportunities for verbal practice, reduce exposure to rich linguistic environments, and contribute to attention-related challenges that negatively affect language learning (Chaudhary et al., 2020).

Hence, timely and contextually grounded research is necessary to examine how screen time—both educational and recreational—relates to language development among Vietnamese university students. The findings can help shape educational policies, digital usage guidelines, and instructional strategies that support balanced technology use.

Screen time is broadly defined as the duration an individual spends interacting with digital screens, including smartphones, tablets, laptops, and televisions (Neumann, 2015). Contemporary studies differentiate between **educational screen time**, which involves structured learning activities (e.g., online classes, educational apps), and **recreational screen time**, which includes passive consumption (e.g., video streaming, gaming) and social interactions on digital platforms.

To evaluate screen time accurately, researchers employ various measurement techniques, including self-report surveys, digital tracking applications, and direct observational studies. Each method presents advantages and limitations. For instance, self-reports are easy to administer but may suffer from recall bias, while digital tracking apps provide objective data but raise privacy concerns (Radesky & Christakis, 2016).

University students typically engage with a diverse range of digital activities throughout the day. Educational screen time often includes accessing virtual classrooms, reading academic texts, using language-learning apps, and completing online assignments. Meanwhile, recreational screen time involves social media, casual gaming, and multimedia entertainment (Radesky et al., 2020). The dual use of platforms like YouTube and TikTok for both educational content and recreational browsing further complicates the classification of screen time (Dabbagh et al., 2019).

In Vietnam, where smartphone penetration among young adults is high, screen use is particularly prominent. According to Nguyen and Le (2022), a significant portion of university students in

Hanoi spend more than five hours daily on digital devices, with social media being the most common activity, followed by academic-related usage.

Research shows a complex relationship between screen time and language development. On the one hand, educational screen time, particularly when involving interactive or multimedia elements, can enhance vocabulary and comprehension. Tools such as Duolingo and interactive e-books provide language learners with contextualized vocabulary exposure and multimodal reinforcement (Plowman et al., 2021; Mayer, 2020).

On the other hand, excessive recreational screen time, especially when passive (e.g., binge-watching videos), has been associated with decreased verbal interaction, lower attention spans, and weakened communication skills (Madigan et al., 2020; Vu et al., 2020). Passive engagement lacks the cognitive stimulation necessary for robust language acquisition and may even replace face-to-face conversations, which are crucial for developing communicative competence.

Several comparative studies have explored the differences in language development among students with varying screen usage levels. For example, Chaudhary et al. (2020) found that students with high recreational screen time reported lower reading comprehension and vocabulary retention than peers with balanced screen usage. Conversely, moderate educational screen time—particularly involving active engagement with content—was associated with improved linguistic outcomes.

Tran and Pham (2021) examined Vietnamese students using English learning apps for one to two hours daily and observed significant improvements in vocabulary and pronunciation compared to those with minimal or excessive screen use.

Educational institutions can adopt several strategies to optimize the benefits of screen use while minimizing its drawbacks. These include implementing **flipped classroom** models, where students use screen time to prepare for in-person discussions, and integrating **gamified learning platforms** that increase motivation and engagement (Hung et al., 2020).

Other strategies include promoting **digital mindfulness**, such as scheduled screen breaks, encouraging real-world conversations, and training students to evaluate the quality of digital content (Rosen et al., 2019). University policies that guide purposeful screen use, along with training for educators in digital pedagogy, can create an environment that supports language development while embracing technology (Nguyen & Le, 2022).

This study is grounded in several key theoretical frameworks. **Mayer's Multimedia Learning Theory** posits that learners benefit when instructional content integrates words and visuals, reducing cognitive overload and enhancing comprehension (Mayer, 2020). **Vygotsky's Sociocultural Theory** emphasizes the role of social interaction in learning and highlights how technology can mediate meaningful language practice (Plowman et al., 2021).

Furthermore, the **Technology Acceptance Model (TAM)** explains how perceived usefulness and ease of use influence students' adoption of digital tools, affecting their engagement and learning outcomes (Davis et al., 1989). Together, these theories provide a lens to examine the cognitive, social, and motivational dimensions of screen use and language acquisition.

Despite the growing literature on screen time and learning, few studies focus specifically on the Vietnamese higher education context. Research on how local students engage with digital tools and the linguistic consequences of their screen habits is limited (Nguyen & Le, 2022). Additionally, comparative analyses examining the language proficiency of students across different screen time levels remain scarce.

This study addresses these gaps by focusing on Dai Nam University students, offering a localized and empirically grounded perspective. By distinguishing between educational and recreational screen use and analysing their associations with language outcomes, the research aims to provide nuanced insights relevant to the Vietnamese context.

Given the increasing reliance on digital tools among university students, this study seeks to address the following research problems:

(1) What are the patterns of screen use (educational and recreational) among students at Dai Nam University?
(2) How does screen time relate to language development outcomes, such as vocabulary acquisition, comprehension, and communicative competence?
(3) Is there a significant difference in language development between students with high screen time and those with moderate or low screen time?

To answer these research problems, the study sets out the following objectives:
(1) To assess the extent and nature of screen use among students at Dai Nam University, distinguishing between educational and recreational screen time.
(2) To examine the relationship between screen time and key aspects of language development, including vocabulary, comprehension, and communication skills.
(3) To analyse whether students with varying levels of screen use show significant differences in language learning outcomes and to identify best practices for balancing technology use in academic contexts.

2. Method

This study adopts a mixed-methods research design to investigate the patterns of screen use among students at Dai Nam University and their relationship to language development outcomes. The design combines quantitative methods to analyze statistical relationships and qualitative methods to explore in-depth perspectives, ensuring a comprehensive understanding of the research questions.

The study involves a sample of 216 students from Dai Nam University, selected through stratified random sampling to ensure representation across different disciplines and academic years (Table 1). Participants are divided into three categories based on their self-reported screen time levels: high (more than 6 hours/day), moderate (3–6 hours/day), and low (less than 3 hours/day). Equal representation across the categories is maintained to facilitate comparative analysis.

Table 1: Frequency of Participants by Disciplines

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	business	47	21.8	21.8	21.8
	technology	66	30.6	30.6	52.3
	healthcare	50	23.1	23.1	75.5
	humanity and languages	53	24.5	24.5	100.0
	Total	216	100.0	100.0	

2.1 Data Collection

Questionnaire

A structured questionnaire is used to collect quantitative data on: patterns of screen use (educational and recreational activities), frequency and duration of screen time, self-perceived impact of screen use on language skills, including vocabulary acquisition, comprehension, and communicative competence. The questionnaire is administered online and includes both closed-ended and Likert-scale questions for standardization and easy analysis.

Focus Group Discussions (FGDs)

FGDs are conducted with a subset of 30 students (10 from each screen time category) to gather qualitative insights into their experiences and perceptions of screen use. Open-ended questions focus on the benefits and drawbacks of screen use and strategies for balancing screen time to enhance language development.

2.2 Data Analysis

Quantitative Analysis

- Descriptive Statistics: Patterns of screen use are summarized through means, frequencies, and percentages.
- ANOVA (Analysis of Variance): To compare language outcomes among students with high, moderate, and low screen time levels.
- Regression Analysis: To identify the predictive power of screen use variables on language development.

Qualitative Analysis

- Thematic Analysis: Data from FGDs are coded and analyzed to identify recurring themes related to students' experiences with screen use and their recommendations for balancing screen time.

Limitations

The study acknowledges potential limitations, such as the reliance on self-reported data for screen time, which may be subject to recall bias. Additionally, the findings may not be generalizable beyond the specific context of Dai Nam University. However, these limitations are mitigated by using multiple data collection methods to triangulate findings.

3. Results and Discussion

3.1 Results

The ANOVA results show a statistically significant difference in the frequency of screen usage for educational activities among the four groups analyzed.

The Sum of Squares between Groups is 98.945, indicating the amount of variation attributed to differences between the group means. With 3 degrees of freedom, the Mean Square Between Groups is 32.982.

The Sum of Squares within Groups is 201.480, which reflects the variability within each group. With 212 degrees of freedom, the Mean Square within Groups is 0.950.

The F-statistic is calculated as 34.704, representing the ratio of the variance between groups to the variance within groups. This high F-value suggests substantial differences in screen usage among the groups.

The p-value (Sig.) is 0.000, which is less than the commonly accepted threshold of 0.05, confirming that the differences observed are statistically significant (Table 2).

Table 2: The patterns of screen use for educational purpose

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	98.945	3	32.982	34.704	.000
Within Groups	201.480	212	.950		
Total	300.426	215			

The Tukey HSD post-hoc test provides a detailed comparison of screen usage for educational activities among students from the four disciplines: business, technology, healthcare, and humanity and languages. The results reveal significant differences in screen usage patterns, with notable variations across disciplines.

Business students use screens significantly more frequently than technology students, with a mean difference of 1.461 (p = .000) and a 95% confidence interval of 0.96 to 1.96, confirming this difference is statistically robust. Additionally, business students also report higher screen usage than humanity and languages students, with a significant mean difference of 0.784 (p = .000) and a confidence interval of 0.31 to 1.26. However, the comparison between business and healthcare students shows no significant difference in screen usage, with a mean difference of -0.343 (p = .328) and a confidence interval of -0.87 to 0.18, suggesting similar usage patterns between these two groups.

Healthcare students exhibit the highest frequency of screen usage among all disciplines. They use screens significantly more often than technology students, with a large mean difference of 1.804 (p = .000) and a confidence interval of 1.29 to 2.31. Similarly, healthcare students use

screens more frequently than humanity and languages students, with a significant mean difference of 1.127 (p = .000) and a confidence interval of 0.64 to 1.61. These results underline healthcare students' greater reliance on screen-based educational activities.

Technology students report the lowest levels of screen usage for educational purposes, consistently showing significant differences compared to all other groups. For example, humanity and languages students use screens more often than technology students, with a mean difference of 0.677 (p = .001) and a confidence interval of 0.22 to 1.14. These findings suggest that technology students are less integrated into screen-based learning compared to their peers in other disciplines.

Overall, the results highlight distinct patterns of screen usage across disciplines. Healthcare students demonstrate the highest screen usage, followed by business students, then humanity and languages students, with technology students using screens the least. These differences may reflect variations in curriculum design, teaching methods, or resource allocation and suggest opportunities for tailored support to improve technology integration in disciplines with lower screen usage (Table 3).

Table 3: Patterns of Screen Use for Educational Purpose by Disciplines

Dependent Variable: How often do you use screens for educational activities? Tukey HSD						
(I) Discipline	(J) Discipline	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
business	technology	1.461*	.193	.000	.96	1.96
	healthcare	-.343	.202	.328	-.87	.18
	humanity and languages	.784*	.183	.000	.31	1.26
technology	business	-1.461*	.193	.000	-1.96	-.96
	healthcare	-1.804*	.197	.000	-2.31	-1.29
	humanity and languages	-.677*	.177	.001	-1.14	-.22
healthcare	business	.343	.202	.328	-.18	.87
	technology	1.804*	.197	.000	1.29	2.31
	humanity and languages	1.127*	.187	.000	.64	1.61
humanity and languages	business	-.784*	.183	.000	-1.26	-.31
	technology	.677*	.177	.001	.22	1.14
	healthcare	-1.127*	.187	.000	-1.61	-.64

*. The mean difference is significant at the 0.05 level.

The ANOVA results reveal statistically significant differences in the frequency of screen usage for recreational activities among the four groups. The analysis shows that the Sum of Squares between Groups is 12.456, reflecting the variation in screen usage attributable to differences between group means. With 3 degrees of freedom, the Mean Square between Groups is calculated as 4.152. This value captures the average variance caused by group differences.

In contrast, the Sum of Squares within Groups is 185.984, representing the variability in screen usage within each group. This variability, spread across 212 degrees of freedom, result in a Mean Square within Groups of 0.877, indicating relatively lower variability within individual groups compared to the variance between them.

The computed F-statistic is 4.733, which indicates that the variance between groups is significantly larger than the variance within groups. The associated p-value (Sig.) of 0.003 is below the conventional significance threshold of 0.05. This confirms that the differences in recreational screen usage among the groups are statistically significant and unlikely to be due to random chance (Table 4).

Table 4: The patterns of screen use for educational purpose

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.456	3	4.152	4.733	.003

Within Groups	185.984	212	.877
Total	198.440	215	

In summary, the results suggest that the four groups differ meaningfully in their use of screens for recreational activities. Further post-hoc analysis would help identify which specific groups contribute to these significant differences and provide deeper insights into the patterns of screen usage across the groups.

The Tukey HSD post-hoc test reveals significant and non-significant differences in recreational screen usage among students from four disciplines: business, technology, healthcare, and humanity and languages. A notable finding is that business students use screens for recreational activities significantly less than technology students, with a mean difference of -0.688 ($p = .002$). This result is supported by a 95% confidence interval ranging from -1.17 to -0.21, confirming the statistical significance of this difference.

However, the comparison between business and healthcare students shows no significant difference in screen usage, with a mean difference of -0.321 ($p = .353$) and a confidence interval of -0.82 to 0.18, suggesting that these two groups share similar recreational screen habits. Similarly, business students use screens slightly less frequently than humanity and languages students, with a mean difference of -0.260, but this difference is not statistically significant ($p = .453$), as indicated by the confidence interval of -0.72 to 0.20.

Technology students appear to use screens more often than healthcare students, with a mean difference of 0.367, though this finding is not statistically significant ($p = .215$). The confidence interval of -0.12 to 0.86 suggests some overlap in screen usage habits between these two groups. Furthermore, technology students use screens more frequently than humanity and languages students, with a mean difference of 0.428. While this difference approaches statistical significance ($p = .061$), the confidence interval of -0.01 to 0.87 suggests the need for further investigation to confirm the trend.

Lastly, healthcare and humanity and languages students show minimal differences in screen usage, with a mean difference of 0.061 ($p = .987$) and a confidence interval of -0.40 to 0.53, indicating no meaningful variation between these groups (Table 5).

Table 5: Patterns of Screen Use for Recreational Purpose by Disciplines

Dependent Variable: How often do you use screens for recreational activities?
Tukey HSD

(I) Discipline	(J) Discipline	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
business	technology	-.688*	.186	.002	-1.17	-.21
	healthcare	-.321	.194	.353	-.82	.18
	humanity and languages	-.260	.176	.453	-.72	.20
technology	business	.688*	.186	.002	.21	1.17
	healthcare	.367	.189	.215	-.12	.86
	humanity and languages	.428	.170	.061	-.01	.87
healthcare	business	.321	.194	.353	-.18	.82
	technology	-.367	.189	.215	-.86	.12
	humanity and languages	.061	.179	.987	-.40	.53
humanity and languages	business	.260	.176	.453	-.20	.72
	technology	-.428	.170	.061	-.87	.01
	healthcare	-.061	.179	.987	-.53	.40

*. The mean difference is significant at the 0.05 level.

In summary, the only significant difference identified is between business and technology students, where technology students report higher recreational screen usage. No significant differences were found among the other groups. These findings highlight technology

students as the most frequent users of screens for recreational purposes, while other disciplines appear to have similar usage patterns. The results may reflect varying habits or preferences for screen-based leisure activities across these student groups.

The descriptive statistics provide insights into the self-perceived impact of screen use on language skills across four disciplines: business, technology, healthcare, and humanity and languages. The findings highlight significant variations in how students perceive the effect of screen use on their language development (Table 6).

Among the groups, healthcare students report the highest mean score (3.2321) for the self-perceived impact of screen use on language skills. This indicates that healthcare students believe screen use has a stronger influence on their language development compared to other disciplines. However, this group also shows the greatest variability, with a standard deviation of 1.05191, suggesting diverse perceptions among participants. A total of 45 healthcare students participated in the study.

In contrast, technology students perceive the lowest impact, with a mean score of 1.8745, reflecting a relatively weaker influence of screen use on their language skills. The standard deviation for this group is 0.47634, indicating fairly consistent perceptions among the 54 technology students.

Business students report a slightly higher mean score of 2.0903 compared to technology students, but their perceptions remain below the overall average. This group exhibits the least variability, with a standard deviation of 0.43104, suggesting a uniform perception of screen use's impact on language skills. The sample includes 48 business students.

Students in the humanity and languages discipline report a mean score of 2.4171, which is higher than both business and technology students but lower than healthcare students. The standard deviation of 0.93845 indicates moderate variability in responses. This group has the largest sample size, with 69 participants.

Overall, the total mean score for the self-perceived impact of screen use on language skills is 2.3786, with a standard deviation of 0.91481, reflecting moderate variability in perceptions among the 216 participants. These results suggest that healthcare students perceive the strongest influence of screen use on their language skills, while technology students perceive the weakest. This variability in perceptions across disciplines may point to differences in screen use habits, content, or instructional strategies, which could be explored further to better, understand these trends.

Table 6: self-perceived impact of screen use on language skills

Discipline	Mean	N	Std. Deviation
business	2.0903	48	.43104
technology	1.8745	54	.47634
healthcare	3.2321	45	1.05191
humanity and languages	2.4171	69	.93845
Total	2.3786	216	.91481

The focus group discussions conducted with 30 students evenly distributed across three screen time categories; low, moderate, and high provide valuable insights into the perceived impact of screen use on language skills. Students in the low screen time category reported limited reliance on screens, primarily using them for quick references like looking up dictionary meanings or grammar rules. They believed that traditional methods such as textbooks and in-person interactions were more effective for language learning. However, some expressed a feeling of being left behind as others seemed to benefit more from screen-based tools. Distractions and a lack of engagement with digital resources were noted as reasons for their limited screen use.

Moderate screen time users struck a balance between screens and other resources, perceiving screen use as a complementary tool that enhanced specific language skills. They highlighted the benefits of apps like Duolingo for consistent practice, YouTube channels for vocabulary and listening improvement, and video calls for speaking practice. Despite these

benefits, they acknowledged challenges such as information overload and the risk of deviating from their learning goals when browsing content.

In contrast, students in the high screen time category viewed screens as their primary learning tool. They reported significant improvements in listening, speaking, and vocabulary, attributing their progress to interactive platforms, streaming services, and social media interactions. These students frequently mimicked accents from videos and engaged in online conversations with native speakers, boosting their fluency and pronunciation. However, they also recognized drawbacks, including physical discomfort from prolonged screen use and a sense of disconnection from traditional face-to-face learning methods.

The discussions also shed light on students' preferences for screen-based learning. Low screen time users preferred structured tools like educational apps and avoided platforms that might distract them. Moderate screen time users valued the variety offered by apps and streaming content, seeing them as effective supplements to classroom learning. High screen time users, on the other hand, heavily relied on streaming platforms, social media groups, and webinars for immersive and practical language exposure.

Regarding specific language skills, low screen time users felt that screens had minimal impact on their writing and speaking abilities, which they believed were better developed through classroom interactions. Moderate screen time users reported noticeable improvements in vocabulary, reading, and listening, as screens complemented their other learning methods. High screen time users experienced the most pronounced benefits, particularly in pronunciation, fluency, and sentence construction, often through mimicking and practicing what they encountered online.

In summary, the focus group discussions reveal distinct patterns in the perceived impact of screen use on language skills across the three categories. While low screen time users remain cautious about digital tools, moderate users embrace them as a valuable supplement, and high users perceive transformative effects despite acknowledging certain challenges. These findings suggest the need for tailored approaches that integrate screen use effectively while addressing the specific needs and challenges faced by each group.

3.2 Discussion

The findings from the focus group discussions and quantitative data highlight the varying perceptions and impacts of screen use on language development across different screen time categories and academic disciplines. Students' self-perceived impact of screen use on their language skills reflects both the opportunities and challenges associated with integrating digital tools into language learning environments. The results reveal that while screens can offer valuable resources for language acquisition, their effectiveness varies significantly depending on the user's academic background, individual motivations, and the nature of digital engagement.

Healthcare students reported the highest self-perceived impact of screen use on their language skills. This result can be attributed to the structured and purposeful incorporation of screens in their curriculum. In the field of healthcare, digital tools are extensively utilized for educational purposes, including accessing peer-reviewed medical literature, participating in virtual case simulations, and watching instructional videos that demonstrate medical procedures or patient communication techniques. These screen-based activities likely provide rich, contextualized language input, which is particularly beneficial for language acquisition. This finding aligns with Krashen's Input Hypothesis, which emphasizes the importance of comprehensible input in second language learning. According to Krashen, learners acquire language when they are exposed to input that is slightly above their current proficiency level, in a context that makes the meaning clear. The multimedia content in medical education often includes visual aids, simplified language, and repeated exposure to specific terminology, all of which can enhance comprehension and retention.

However, despite the overall high self-perceived impact, the findings also reveal a high degree of variability within the healthcare student group. This suggests that individual differences—such as students' level of digital literacy, intrinsic motivation, learning styles, and prior exposure to technology—may influence their perception of the effectiveness of screen use for language learning. For instance, a student who is more comfortable navigating online

resources and motivated to engage with digital content might derive greater benefits compared to a peer who finds technology overwhelming or distracting. Therefore, while the healthcare curriculum may provide ample opportunities for language development through screen use, its success is mediated by personal factors.

In contrast, technology students surprisingly reported the lowest self-perceived impact of screen use on their language skills. This finding may appear counterintuitive, given that these students are often seen as digital natives who spend a significant amount of time engaging with technology. However, a closer examination reveals that the nature of their screen engagement is primarily technical and task-oriented, focusing on programming, software development, engineering design, and other non-linguistic activities. As a result, their screen time may not be aligned with language learning objectives. Instead, it may involve working with codes, schematics, or technical documents that do not offer rich language input or communicative interaction.

This disparity underscores the importance of aligning digital tools with specific language learning goals, especially in disciplines where language skills are not the central focus. The implementation of screen-based language learning resources in technology-related courses should consider integrating communication tasks, collaborative projects, or language-rich documentation that can simultaneously support technical and linguistic competencies. Without such integration, the potential of screens to support language development in technology fields remains underutilized.

Business and humanities and languages students demonstrated moderate perceptions of the impact of screen use on language development. Among these groups, humanities and languages students slightly outpaced business students in recognizing the benefits of digital engagement. This pattern may be due to the nature of their academic tasks, which often involve reading, writing, analysing texts, and engaging in discussions—all of which naturally require a higher degree of language proficiency. The use of screens in these contexts may include accessing academic articles, participating in online forums, using language learning applications, or consuming multimedia content such as documentaries and podcasts, which can provide both linguistic input and opportunities for critical thinking.

In contrast, business students may utilize screens more for practical applications such as preparing presentations, analysing data, or managing projects. While these activities do involve language use, they may not offer the same depth or variety of linguistic input as those in the humanities and languages disciplines. Nevertheless, the moderate variability in responses from both groups suggests that individual students differ in how effectively they leverage screen tools. Some may be highly proactive in using digital resources to improve their language skills, while others may rely more heavily on traditional learning methods or exhibit lower levels of digital engagement.

Qualitative insights gathered from the focus group discussions further enrich the understanding of students' screen use patterns and their perceived impacts. These insights categorize students based on their screen time usage into low, moderate, and high screen time users, revealing distinct attitudes and experiences across these categories.

Low screen time users often expressed a preference for traditional learning approaches, such as reading printed textbooks, attending face-to-face lectures, and engaging in direct interpersonal communication. These students were generally sceptical about the efficacy of screen-based learning, citing concerns about distractions, superficial engagement with content, and physical discomfort such as eye strain and fatigue. Their apprehensions suggest that screen use, when not guided or purposefully integrated, may fail to meet their learning preferences and needs.

Moderate screen time users reported a more balanced approach to learning. They appreciated the flexibility and convenience offered by digital tools and frequently used applications, online resources, and multimedia content as complements to traditional methods. These students highlighted the usefulness of interactive apps, language games, and video-based instruction in reinforcing vocabulary and grammar concepts. Their ability to selectively integrate

screen use into their study routines reflects a strategic approach to learning, where technology serves as an enhancer rather than a replacement.

High screen time users, on the other hand, perceived significant improvements in their language skills as a result of extensive digital engagement. They emphasized advancements in pronunciation, vocabulary acquisition, fluency, and listening comprehension, often attributing these gains to frequent exposure to native speaker input through videos, podcasts, and social media. However, they also acknowledged the downsides of excessive screen use, including distractions from non-educational content, reduced attention spans, and physical discomfort. These findings resonate with Mayer's Multimedia Learning Theory, which posits that well-designed digital tools can enhance learning by simultaneously presenting information in visual and auditory formats. However, the theory also warns against cognitive overload, which occurs when learners are presented with too much information at once, leading to disengagement and decreased learning efficiency.

In synthesizing these findings, it becomes evident that screen use in language learning is a multifaceted phenomenon influenced by discipline-specific practices, individual learner characteristics, and the quality of digital engagement. To maximize the benefits of screen use, educational institutions and instructors should consider several key strategies. First, they should tailor digital content to align with the linguistic needs and learning styles of students in different disciplines. For example, incorporating more communicative tasks in technology courses or integrating case-based discussions in business curricula can create richer language learning opportunities.

Second, promoting digital literacy and self-regulated learning strategies among students can help them navigate screen-based resources more effectively. Training sessions or workshops on how to use language learning apps, manage screen time, and evaluate digital content for credibility and relevance can empower students to take control of their learning processes.

Third, designing screen-based learning environments that balance cognitive load, provide clear instructional goals, and offer interactive, engaging content can prevent the negative consequences of screen overuse. Gamification, scaffolding, and multimedia presentations that adhere to the principles of cognitive load theory can enhance motivation and retention while minimizing burnout and fatigue.

Finally, continuous feedback and reflection should be encouraged to help students assess the impact of their screen use on language development. Educators can facilitate reflective practices by incorporating journaling, peer discussions, or progress tracking tools that allow students to monitor their improvements and adjust their learning strategies accordingly.

In conclusion, while screen use presents both opportunities and challenges in the context of language learning, its effectiveness largely depends on how it is integrated into educational practices. By acknowledging disciplinary differences, supporting individual learner needs, and designing pedagogically sound digital environments, educators can harness the potential of screens to enrich language development and promote more effective and inclusive learning experiences.

4. Conclusion

This study has illuminated the complex and multifaceted relationship between screen use and language development among university students from various academic disciplines. It reveals that the perceived impact of screen time on language learning is not only a matter of quantity but is deeply shaped by the quality of digital engagement, discipline-specific practices, and individual learning preferences. The findings underscore that screen use cannot be universally labelled as beneficial or detrimental to language development; rather, its efficacy depends on how and for what purposes it is used.

Healthcare students reported the highest self-perceived positive impact of screen use on their language development. This outcome likely stems from the structured, goal-oriented integration of digital tools in their curriculum. Healthcare education often involves engaging with technical texts, watching case-based instructional videos, and participating in simulations—

all of which offer rich linguistic input in contextually relevant ways. This aligns with Krashen's Input Hypothesis, which posits that language acquisition occurs most effectively when learners are exposed to comprehensible input slightly above their current proficiency level. However, variability within this group indicates that factors such as digital literacy, personal motivation, and the diversity of learning strategies may mediate the perceived effectiveness of screen use.

In contrast, technology students reported the lowest perceived impact of screen use on their language development. Despite being in a field closely associated with digital engagement, these students may primarily interact with non-linguistic content such as coding interfaces, software design, and technical problem-solving tools. These activities, while intellectually demanding, offer limited opportunities for language input or output, highlighting a missed opportunity to embed language-enriching content into digital learning experiences. This result calls for the reconsideration of how language development goals can be woven into technology-focused disciplines.

Students from business and the humanities and languages disciplines reported moderate benefits from screen use. Those in the humanities and languages exhibited slightly higher perceptions of language development than business students, likely due to a broader use of screens for reading, communication, media engagement, and research. These students may be more accustomed to integrating digital tools in tasks that inherently involve language use, such as essay writing, discussions, and language practice. The moderate variability within these groups suggests a spectrum of experiences, where some students fully utilize digital tools while others continue to depend on traditional resources.

The qualitative insights further enrich the understanding of these patterns. Students with low screen time expressed a strong preference for conventional, face-to-face learning approaches, often citing concerns about distraction, superficial learning, or physical discomfort. Moderate screen time users were generally positive, viewing screen-based tools as valuable supplements that complement other strategies. High screen time users were the most enthusiastic, reporting improvements in vocabulary, pronunciation, and fluency, though they also acknowledged drawbacks such as reduced attention spans and screen fatigue.

Taken together, these findings advocate for a more nuanced and personalized approach to integrating screen-based learning in language development. Tailored interventions should be designed to match the digital behaviour and academic needs of students across disciplines. For low and moderate users, introducing interactive, engaging, and pedagogically sound tools could improve their learning outcomes. For high users, promoting digital wellness and teaching strategies for managing distractions may help optimize screen use.

In conclusion, this study highlights the importance of understanding the context and purpose of screen engagement in educational settings. Future research could delve into the specific types of screen-based activities that are most effective in enhancing discrete language skills—such as listening, speaking, reading, and writing—and assess the long-term impact of digital learning on students' language proficiency. Additionally, cross-cultural or longitudinal studies may uncover how evolving digital habits influence language acquisition in diverse educational environments

References

Chaudhary, D., Sharma, R., & Jindal, P. (2020). "The effects of screen time on cognitive and linguistic development: A meta-analysis." *Journal of Educational Psychology*, 112(3), 289-304.

Chaudhary, S., Rautela, R., & Sharma, R. (2020). *Digital media exposure and language development in adolescents.* Journal of Media Psychology, 12(3), 141–153.

Dabbagh, N., Fakih, M., & Khedri, M. (2019). *Blurring the lines: Learning and leisure on social media*. Journal of Educational Computing Research, 57(6), 1415–1437.

Dabbagh, N., Kitsantas, A., & Chirinos, D. (2019). "Using technology to enhance student self-regulated learning abilities in language education." *Educational Technology Research and Development*, 67(4), 915-932.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). "User acceptance of computer technology: A comparison of two theoretical models." *Management Science*, 35(8), 982-1003.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). *User acceptance of computer technology: A comparison of two theoretical models*. Management Science, 35(8), 982–1003.

Hirsh-Pasek, K., Zosh, J. M., & Golinkoff, R. M. (2015). *Putting education in "educational" apps: Lessons from the science of learning*. Psychological Science in the Public Interest, 16(1), 3–34.

Hirsh-Pasek, K., Zosh, J. M., Golinkoff, R. M., Gray, J. H., Robb, M. B., & Kaufman, J. (2015). Putting education in "educational" apps: Lessons from the science of learning. *Psychological Science in the Public Interest*, 16(1), 3–34. https://doi.org/10.1177/1529100615569721

Hung, H. T., Yang, J. C., & Cheng, C. H. (2020). *Gamification for language learning: Review and future directions*. Educational Technology & Society, 23(1), 41–56.

Hung, W., Lin, C., & Wu, S. (2020). "Gamification and its impact on language learning: A systematic review." *Interactive Learning Environments*, 28(4), 469-488.

Madigan, S., Browne, D., Racine, N., Mori, C., & Tough, S. (2020). *Association between screen time and children's performance on a developmental screening test*. JAMA Pediatrics, 174(3), 244–251.

Madigan, S., McArthur, B. A., Anhorn, C., Eirich, R., & Christakis, D. A. (2020). Associations between screen use and child language skills: A systematic review and meta-analysis. *JAMA Pediatrics*, 174(7), 665–675. https://doi.org/10.1001/jamapediatrics.2020.0327

Mayer, R. E. (2020). *Multimedia Learning: Principles and Applications*. Cambridge University Press.

Neumann, M. M. (2015). *Young children's use of touch screen tablets for writing and reading at home: Relationships with emergent literacy*. Computers & Education, 86, 219–231.

Neumann, M. M. (2015). Young children's use of touch screen tablets for literacy learning. *Computers in Human Behavior*, 48, 494–504. https://doi.org/10.1016/j.chb.2015.01.067

Nguyen, T. H., & Le, H. M. (2022). *The digital habits of Vietnamese university students: Implications for education and well-being*. Vietnam Journal of Education, 7(2), 45–58.

Nguyen, T., & Le, P. (2022). "Screen time patterns and their educational implications for university students in Vietnam." *Vietnam Journal of Educational Research*, 9(2), 45-60.

Plowman, L., McPake, J., & Stephen, C. (2021). "The role of technology in supporting language learning: Insights from digital media use." *Early Childhood Research Quarterly*, 36, 379-389.

Plowman, L., Stevenson, O., Stephen, C., & McPake, J. (2021). *Young children's learning with technology at home: Examining the role of parental support*. British Journal of Educational Technology, 52(3), 1138–1153.

Radesky, J. S., & Christakis, D. A. (2016). Increased screen time: Implications for early childhood development and behavior. *JAMA Pediatrics*, 170(10), 978–984. https://doi.org/10.1001/jamapediatrics.2016.0589

Rosen, L. D., Lim, A. F., Carrier, L. M., & Cheever, N. A. (2019). *An empirical examination of the educational impact of screen time: Balancing learning and well-being*. Computers in Human Behavior, 92, 228–238. -95.

Tran, D., & Pham, H. (2021). "Moderate screen time and its positive impact on language learning: Evidence from Vietnamese students." *Asian Journal of Language and Education*, 15(3), 123-134.

Vu, H. T., Nguyen, Q. A., & Le, V. P. (2020). *Screen time and language development among university students in Vietnam*. Asian Journal of Educational Research, 8(3), 112–120.

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Appendix: Structured Questionnaire
Section 1: Demographic Information

1. What is your academic discipline?
    - Business
    - Technology
    - Healthcare
    - Humanities and Languages

Section 2: Patterns of Screen Use

4. How often do you use screens for educational activities (e.g., online learning, language learning apps)?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Always
5. How often do you use screens for recreational activities (e.g., social media, gaming, streaming)?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Always
6. What types of devices do you use most frequently?
    - Smartphone
    - Tablet
    - Laptop/PC
    - Other (please specify): _____

Section 3: Frequency and Duration of Screen Time

7. On average, how many hours per day do you spend on screens for educational purposes?
    - Less than 1 hour
    - 1–2 hours
    - 3–4 hours
    - 5–6 hours
    - More than 6 hours
8. On average, how many hours per day do you spend on screens for recreational purposes?
    - Less than 1 hour
    - 1–2 hours
    - 3–4 hours
    - 5–6 hours
    - More than 6 hours

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Section 4: Self-Perceived Impact of Screen Use on Language Skills

Please indicate the extent to which you agree with the following statements, using the scale below
1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

#	STATEMENTS	RATINGS				
1.	Using screens for educational purposes has improved my vocabulary acquisition.	①	②	③	④	⑤
2.	Using screens for educational purposes has improved my comprehension skills.	①	②	③	④	⑤
3.	Using screens for educational purposes has improved my communicative competence (speaking and writing).	①	②	③	④	⑤
4.	Recreational screen use has positively affected my vocabulary acquisition.	①	②	③	④	⑤
5.	Recreational screen use has positively affected my comprehension skills.	①	②	③	④	⑤
6.	Recreational screen use has positively affected my communicative competence (speaking and writing).	①	②	③	④	⑤
7.	Excessive screen time negatively affects my ability to focus on language learning tasks.	①	②	③	④	⑤
8.	I believe balancing screen use is essential for effective language learning.	①	②	③	④	⑤
9.	I would benefit from guidance on managing my screen time for educational purposes.	①	②	③	④	⑤