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Impact of Short Reels on Attention Span and Academic Performance of Undergraduate Students

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Abstract
Frequent reels that have gained immense popularity on platforms like TikTok, Instagram, and YouTube, significantly reduce attention span and impairs academic performance. This study investigates the impact of frequent exposure to short video reels on undergraduate students' attention span and academic performance, assuming that attention span plays a critical role in student engagement, learning retention, and academic achievement. Using a quantitative research design, this study examined the relationship between short-form video consumption on social media platforms and students' attention span, as well as its potential effects on their academic performance. A sample of 150 students was chosen through convenience sampling method, comprising undergraduate students at University for Business and Technology (UBT), Kosovo. The study utilized a correlational research approach, where the variables of interest—reel consumption, attention span, and academic performance—were measured and statistically analyzed to determine the strength and direction of their relationships. The results suggest that teaching methods can mitigate the cognitive overload caused by short media consumption. Additionally, future research should investigate long-term impacts and intervention strategies. Recommendations include incorporating interactive and multimedia teaching strategies to engage students. Limitations include reliance on self-reported data and the short duration of the study.

Keywords: Attention Span, Social Media, Academic Performance, Digital Engagement, Aognitive Load, Multimedia.

Introduction

The rapid rise of digital platforms, particularly social media, has reshaped how individuals, especially younger generations, consume content. Short-form videos, commonly referred to as "reels," have gained immense popularity on platforms like TikTok, Instagram, and YouTube, which have popularized these "reels" or short-form videos, prompting discussions about how this media format may affect viewers' ability to concentrate and engage in prolonged mental tasks, such as academic work. These reels, typically lasting only a few seconds to a minute, are designed to deliver quick bursts of entertainment or information (Duffy & Hund, 2019). As engaging as they are, these reels are increasingly consumed by undergraduate students, raising concerns about the potential impacts on attention span and academic performance (Carrier et al., 2015). This increasing consumption of short-form video content, particularly among young adults, has garnered the attention of researchers who study its potential effects on cognitive functions, including attention span and learning outcomes.

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In the context of education, attention span plays a critical role in student engagement, learning retention, and academic achievement. While traditional classroom settings have always required sustained focus and concentration, the constant exposure to fast-paced, attention-grabbing content may interfere with students' ability to maintain focus during lectures, reading assignments, or assessments (Wilson & Korn, 2007). Research has shown that digital multitasking, often involving social media use, negatively affects cognitive tasks and academic outcomes (Rosen et al., 2014). Thus, the increasing consumption of reels poses a potential threat to the cognitive functions needed for academic success.

Reels trace their origin to the broader rise of social media platforms designed for fast-paced engagement. Initially introduced by Instagram in 2020, reels quickly became a central feature of platforms aiming to rival TikTok's short-video dominance. These short-form videos build on earlier trends in digital media, such as Vine (active between 2012 and 2016), which pioneered the six-second video concept. Over time, the format has evolved to emphasize algorithm-driven engagement, leveraging user preferences to curate highly personalized content feeds. This evolution reflects broader shifts in digital media consumption, where brevity and entertainment are prioritized to sustain user interest.

In educational contexts, digital media—including reels—has been both a challenge and an opportunity. Research indicates that while reels can introduce elements of engagement and visual learning, their fast-paced nature often conflicts with traditional teaching methods that demand sustained cognitive effort (Firth et al., 2019). Social media, in general, has transformed learning environments by enabling access to multimedia resources, collaborative tools, and virtual classrooms. However, it has also introduced distractions and reduced attention spans among students, complicating educators' efforts to maintain focus in classrooms (Turel & Qahri-Saremi, 2016). To address these challenges, educators have explored strategies such as incorporating multimedia content into lectures, utilizing gamification, and designing interactive assignments to align with students' digital habits while fostering deeper cognitive engagement (Junco, 2012). This dual-edged influence of digital media underscores the importance of understanding its effects on learning to craft effective teaching strategies in the modern age.

Despite the growing body of research on digital media and attention, there is limited focus on the specific impact of short reels on undergraduate students. While previous studies have investigated the general effects of social media use on attention span and academic performance, more empirical research is needed to examine the influence of short-form videos as a distinct form of content. This study seeks to fill that gap by exploring the relationship between reel consumption and attention span in undergraduate students, contributing to a more nuanced understanding of how emerging media forms affect academic performance. The rationale behind this study stems from the increasing integration of technology into students' daily lives and its potential effects on cognitive functions (Junco, 2012). Given that undergraduate students are not only frequent users of social media but are also in a critical phase of their academic development, understanding the relationship between reel consumption and attention span is essential. By exploring this relationship, educators and policymakers can make informed decisions about how to address the challenges posed by short-form media consumption in educational settings.

The purpose of this study is to investigate the impact of short reels on the attention span and academic performance of undergraduate students. Specifically, the study aims to determine whether frequent exposure to short-form videos affects students' ability to concentrate during academic tasks and how this, in turn, influences their academic success. The research objectives are as follows: (1) To assess the correlation between the frequency of short-reel consumption and attention span in undergraduate students; (2) To evaluate the potential link between short-reel consumption and academic performance; and (3) To explore the perceptions of undergraduate students regarding the effects of short-reel consumption on their ability to focus and perform academically. By addressing these objectives, this study seeks to contribute to the ongoing discourse on the influence of digital media on learning environments and offer insights for educators striving to create effective teaching strategies in the age of social media.

Literature Review

Theoretical Underpinnings

The Cognitive Load Theory (Sweller, 1988) provides a valuable framework for understanding the potential cognitive impact of consuming short-form videos. The theory posits that the human brain has a limited capacity for processing information at any given time, and when individuals are bombarded with rapid, attention-grabbing content, their cognitive resources may be depleted. This can result in a reduced ability to concentrate on tasks that require sustained attention, such as studying or completing academic assignments (Paas, Renkl, & Sweller, 2003). As social media platforms increasingly rely on short, repetitive videos, they may influence the way students allocate their cognitive resources, possibly leading to shorter attention spans (Sweller, 2022). In educational contexts, this theory emphasizes the importance of minimizing extraneous cognitive load during learning activities to enhance students' ability to process and retain information (Sweller, 2020). For instance, the fragmented nature of short reels contrasts sharply with the

structured delivery of information in classrooms, often leading to cognitive overload when students transition between the two.

The relevance of the Cognitive Load Theory to this study lies in its application to teaching strategies. Educators can mitigate the negative impacts of digital media consumption by designing instructional materials that account for students' diminished attentional resources. For example, integrating multimedia learning tools that balance cognitive demands—such as AI-powered eye-tracking technology to manage learners' focus—has been shown to improve engagement and retention in online education (Šola, Qureshi, & Khawaja, 2024). Moreover, Sweller's (2020) emphasis on optimizing intrinsic and extraneous loads offers a foundation for developing instructional procedures that align with students' cognitive capabilities in the digital era.

Similarly, Kahneman's (1973) theory of attentional resources provides critical insights into how students allocate their limited attention. The theory posits that continuous exposure to fast-paced, highly stimulating content such as short reels can fragment attention, making it difficult for students to focus on slower-paced, cognitively demanding academic activities (Lang, 2000). Furthermore, this theory supports the idea that attention is a finite resource that can be divided or exhausted, which aligns with the findings of this study regarding the fragmenting effect of reels on sustained focus. In educational settings, the frequent consumption of reels can diminish the attentional reserves necessary for deep learning. Kahneman and Henik's (2022) research highlights how selective attention, when disrupted by external stimuli such as fast-paced digital content, can impede recall and comprehension in academic contexts. Educational psychologists have further explored the spatial and temporal factors that influence cognitive load in multimedia learning. For instance, Schroeder & Cenkci (2020) demonstrated that poorly designed multimedia environments exacerbate cognitive overload, while Wickens (2020) expanded on the allocation of processing resources in multitasking scenarios. These findings underscore the need for educators to create instructional designs that reduce cognitive interference, such as incorporating cohesive, visually intuitive teaching materials.

Additionally, the rise of social media has introduced new challenges to the attentional capacities of students. Ning & Inan (2024) revealed that social media addiction significantly affects academic performance by fragmenting attention and reducing students' ability to engage with prolonged academic tasks. This aligns with the hypothesis of this study, which investigates the influence of short-form video consumption on students' attentional and academic outcomes. By integrating these theoretical insights, this research aims to offer actionable recommendations for educators to address the cognitive challenges posed by digital media consumption.

Empirical Studies

Several studies have explored the relationship between social media usage and cognitive functions, particularly attention. For instance, Ophir, Nass, & Wagner (2009) focused on media multitasking and its impact on cognitive control, finding that individuals who frequently switched between different types of media content—like transitioning from studying to watching reels—were less able to filter irrelevant information and focus on a single task. This is particularly relevant for students in academic settings, where multitasking between digital media and coursework may lead to poorer academic outcomes due to diminished attentional capacity. Similarly, Turel & Qahri-Saremi (2016) found that the overuse of social media significantly affects users' ability to focus and engage in complex tasks. This finding is critical in the context of short reels, which are specifically designed to capture attention quickly, offering minimal cognitive engagement but maximizing visual stimulation. Firth et al. (2019) investigated the effect of digital media use on attention span in students. The study found that higher consumption of digital media, including short-form content, was associated with a measurable decline in sustained attention during academic tasks. The authors concluded that students who frequently engage with fast-paced content were less able to maintain focus for extended periods, highlighting the detrimental impact on academic performance.

In a more specific study on short-form video content, examined the impact of TikTok usage on university students' cognitive abilities. The researchers found that students who spent more time-consuming short reels exhibited shorter attention spans and had lower academic performance compared to those who used social media less frequently. The study also revealed that these students struggled more with maintaining concentration during lectures and reading assignments, supporting the hypothesis that the constant bombardment of brief, engaging content can negatively affect students' cognitive endurance. Prindle et al. (2024) explored the use of short-form videos as a tool for STEM education. Their study emphasized that while short videos can serve as an effective edutainment resource, they may inadvertently encourage fragmented attention spans if not carefully integrated into learning processes. This highlights the dual-edged nature of short-form media in academic contexts.

Bristow (2014) examined the role of video as an instructional strategy in addressing affective learning domains. The dissertation highlighted that while videos—including short-form reels—can boost engagement and emotional connectivity, they risk diminishing learners' capacity for deep cognitive engagement when overused. Laouadji, Khenteur, & Messaoudi (2023) investigated the use of Instagram and TikTok reels as

learning tools in enhancing grammar in English for Specific Purposes (ESP) classes. Their findings revealed that while reels could increase students' motivation and interest, overreliance on such tools might hinder the development of sustained attention, which is crucial for language learning tasks. Rasheed & Hussain (2024) explored ethical muteness among university students in relation to their Instagram Reels consumption. Their study found a correlation between increased exposure to short, visually stimulating content and students' tendency to overlook ethical considerations in academic and personal contexts, potentially hinting at a broader decline in reflective and sustained thinking habits. Paul, Baker, & Cochran (2012) examined the effect of online social networking on academic performance, finding that excessive use of social platforms—including engagement with brief media formats—negatively impacts academic focus and outcomes. They emphasized the need for balanced and mindful media consumption among students.

These studies collectively underscore the complexities of integrating short-form media into academic contexts, where the benefits of engagement and motivation must be weighed against potential drawbacks such as reduced attention span and cognitive endurance.

Methodology

Research Design

This study follows a quantitative research design to examine the relationship between short-form video consumption (specifically reels on social media platforms) and students' attention span, as well as its potential effects on their academic performance. The study utilized a correlational research approach, where the variables of interest—reel consumption, attention span, and academic performance—were measured and statistically analyzed to determine the strength and direction of their relationships. Correlational studies are appropriate for exploring how variables interact in a naturalistic setting without manipulating the environment (Creswell, 2014). This approach allows the study to gauge the extent to which reel consumption may be associated with attention span and academic outcomes. The focus is on determining whether there is a significant negative correlation between the time students spend watching reels and their ability to sustain attention during academic tasks.

Sampling and Research Procedure

The study employed a convenience sampling method, selecting participants from a pool of undergraduate students at UBT who were easily accessible. Convenience sampling was chosen due to its practicality and the time constraints of the research. This method is commonly used in educational research to gather relevant data from participants who are available and willing to participate (Etikan, Musa, & Alkassim, 2016). However, the limitation of this method is that it may not represent the broader population, which is acknowledged as a constraint in the study's generalizability. A total of 150 undergraduate students participated in the study. These students were enrolled in various academic programs and had varying levels of exposure to social media and short reels. Participants were required to complete an informed consent form before taking part in the research. The study took place during the Fall 2023 semester, with data collection lasting for four weeks.

Data Collection Procedure

Data were collected through two main instruments: a self-reported survey and a digital attention span test. The self-reported survey captured data on participants' social media habits, particularly their usage of platforms that feature short reels (e.g., Instagram, TikTok, and YouTube). The survey included questions about the number of hours spent daily on these platforms and their perceived difficulty in concentrating on academic tasks. A Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was used to gauge students' perceptions of their attention span and academic difficulties in relation to social media usage. Additionally, participants were asked to report their Grade Point Average (GPA) as an indicator of their academic performance, similar to studies by Firth et al. (2019). This method allowed for the analysis of how social media usage patterns may correlate with academic success.

The digital attention span test was administered using a modified version of the Sustained Attention to Response Task (SART), which has been widely validated as an effective tool to measure attentional control (Robertson et al., 1997). In this test, participants were required to respond to stimuli on a computer screen, and their reaction times and error rates were recorded. This objective measure provided insights into their ability to maintain focus during monotonous tasks, which mirrors the kind of sustained attention required in academic settings.

Data Analysis Techniques

Data analysis was conducted using descriptive and inferential statistics**.** Descriptive statistics, including means, standard deviations, and frequency distributions, were used to summarize the participants' demographic data, reel consumption habits, attention span test scores, and GPA. These summaries provided

a clear overview of the sample and allowed for initial observations regarding patterns of social media usage and academic performance. For inferential statistics, Pearson's correlation coefficient was applied to determine the strength and direction of the relationships between reel consumption, attention span, and academic performance. Pearson's correlation is commonly used in correlational research to assess linear relationships between variables (Field, 2018). A significance level of $p < 0.05$ was set for all statistical tests, ensuring that findings with a probability lower than 5% would be considered statistically significant.

In addition to correlation analysis, multiple regression analysis was conducted to examine the extent to which reel consumption could predict academic performance, controlling for potential confounding variables such as study habits and time spent on coursework. Regression analysis helped to identify whether reel consumption was a significant predictor of GPA when other factors were considered. Finally, the results were interpreted based on effect sizes and practical significance in addition to statistical significance. Effect sizes were calculated to assess the magnitude of the relationships, using guidelines from Cohen (1988), where a small effect is defined as $r = 0.1$, a medium effect as $r = 0.3$, and a large effect as $r = 0.5$.

Results

This study investigated the relationship between short-reel consumption on social media platforms and its impact on undergraduate students' attention spans and academic performance. Below, the results are elaborated in detail, supported by descriptive statistics, correlation analysis, regression analysis, and attention span test results.

Descriptive Statistics

Table 1 summarizes the descriptive statistics, sample characteristics and their engagement with short-reel content. The data indicate a significant prevalence of reel consumption among undergraduate students.

- *Time spent watching reels:* The participants ($n = 150$) reported an average of 3.5 hours per day ($SD = 1.2$) spent on reels. Notably, 40% of the sample spent over three hours daily on platforms such as TikTok, Instagram, and YouTube.
- *Daily usage patterns:* A substantial 75% of participants engaged in daily reel-watching, with high-frequency usage observed among this group.
- *Academic performance:* The average Grade Point Average (GPA) was 2.8 ($SD = 0.6$), which falls within a moderate performance range. Students who consumed reels more intensively had noticeably lower GPAs.

The data underscore a heavy reliance on short-reel content in students' daily routines, raising concerns about the potential consequences for cognitive functions and academic outcomes.

Table 1: *Descriptive Statistics (n=150).*

Measure	Mean	SD	Range
Hours spent on reels/day	3.5	1.2	1 - 6 hours
Percentage watching daily (%)	75.0	-	-
GPA	2.8	0.6	1.5 - 4.0

Correlation Analysis

The Pearson correlation analysis revealed key relationships between reel consumption, attention span, and academic performance.

- *Reel consumption and attention span:* A strong negative correlation was found ($r = -0.45$, $p < 0.01$), suggesting that higher time spent on reels significantly reduced attention spans.
- *Reel consumption and GPA:* A moderate negative correlation ($r = -0.32$, $p < 0.05$) indicated that increased reel consumption was associated with lower academic performance.

These findings reveal that excessive reel consumption is a notable risk factor for both cognitive decline and academic underachievement. The stronger correlation with attention span highlights how short-form content may undermine sustained focus. Table 2 summarizes these results of correlation analysis.

Table 2: *Correlation Analysis Results.*

Variables	Correlation Coefficient (r)	p-value	Strength
Reel consumption & Attention span	-0.45	< 0.01	Strong
Reel consumption & GPA	-0.32	< 0.05	Moderate

Regression Analysis

Multiple regression analysis was conducted to determine whether reel consumption could predict GPA, accounting for other variables such as study habits and coursework hours.

- *Predictive role of reel consumption:* Reel consumption significantly predicted GPA ($\beta = -0.27$, $p < 0.05$).
- *Variance explained:* The model explained 25% of the variance in GPA ($R^2 = 0.25$), demonstrating a substantial impact of reel consumption on academic performance.

The regression model supports the hypothesis that high reel consumption adversely affects academic outcomes, even when other factors are considered. Table 3 summarizes these results of regression analysis.

Table 3: *Regression Analysis Results.*

Predictor	Beta (β)	p-value	R^2
Reel consumption	-0.27	< 0.05	0.25

Attention Span Test Results

The Sustained Attention to Response Task (SART) assessed attentional control across different levels of reel consumption.

- *Error rates:* High reel consumers (>3 hours/day) exhibited significantly higher error rates (27%) compared to low consumers (<1 hour/day) at 5% ($p < 0.05$).
- *Reaction times:* Slower reaction times were observed among high reel consumers (420 mins), suggesting reduced cognitive control compared to low consumers (300 mins).

These results indicate a direct link between heavy reel consumption and impaired attentional capacity, which may account for the observed decline in academic performance. Table 4 summarizes these results of SART Performance by Reel Consumption Levels.

Table 4: *SART Performance by Reel Consumption Levels.*

Consumption Level	Reaction Time (mins)	Error Rate (%)
Low (< 1 hour/day)	300	5
Moderate (1-3 hours/day)	350	12
High (> 3 hours/day)	420	27

The results highlight a concerning trend where extensive engagement with short reels is linked to shorter attention spans and lower academic performance. These findings call for interventions targeting digital consumption habits to mitigate their adverse effects on student learning outcomes.

Discussion

The results of this study are consistent with the findings of several other recent studies that explore the impact of digital media on cognitive abilities and academic outcomes. For instance, Firth et al. (2019) found that excessive screen time, particularly involving fast-paced, highly stimulating content, could lead to diminished attention control and cognitive overload, which negatively affects academic performance. This study corroborates these findings by demonstrating that prolonged exposure to short reels reduces attention span and correlates with lower GPA scores among students. Similarly, Ophir et al. (2009) argued that individuals who engage in frequent media multitasking tend to have poorer cognitive control, particularly in areas related to attention and working memory. This aligns with the results of the present study, where students who reported spending more time watching reels had greater difficulty maintaining focus during the attention span test, as reflected in their higher error rates and slower reaction times. The inability to filter distractions and sustain attention on a single task likely contributes to their reduced academic performance.

Moreover, this study extends the existing body of research by highlighting the specific role of short reels in disrupting attention, an area that has not been extensively studied before. While much of the literature focuses on general media multitasking or social media usage (Firth et al., 2019; Ophir et al., 2009), this research emphasizes the unique challenges posed by short-form video content**,** which is designed to deliver information in quick, fragmented bursts. These videos typically emphasize visual stimulation over deep cognitive engagement, conditioning the brain to seek constant novelty, which may explain the decrease in attention span observed in the study. The findings also echo Carr's (2020) notion of the "shallowing hypothesis," which posits that the internet, with its rapid and fragmented delivery of information, contributes to cognitive shallowness, making it more difficult for individuals to engage in sustained, deep thinking. As reels have become one of the most popular forms of content on social media, it is plausible that their high usage contributes to this cognitive shift among students, leading to decreased academic performance over time.

While the study provides robust evidence of the negative impact of reels on attention and GPA, it also points to the need for further research to understand the long-term cognitive effects of consuming short-form content. Future research could explore interventions to mitigate these effects, such as digital detox programs

or mindfulness training, to help students improve their focus and academic outcomes in the digital age.

Conclusion, Recommendations, and Implications

This study explored the impact of short reels on social media platforms on the attention span and academic performance of undergraduate students. The findings revealed a strong negative correlation between time spent consuming short-form video content and students' ability to sustain attention, which in turn impacted their academic performance, as measured by GPA. Students who spent more time watching reels were more prone to attentional lapses and performed worse in their academic endeavors. These results suggest that the highly engaging but cognitively shallow nature of reels may disrupt students' focus and diminish their academic achievements.

While this study contributes important insights into the relationship between social media usage and academic performance, it is important to acknowledge its limitations. The sample size was relatively small and limited to a single university, which may restrict the generalizability of the findings. Additionally, the study relied on self-reported data regarding media consumption, which could be subject to reporting bias. Moreover, the study did not account for potential confounding variables such as socioeconomic background, time management skills, or the use of other social media platforms that could also influence academic performance. Future studies could address these limitations by incorporating larger and more diverse samples and using objective measures of media consumption.

Based on the findings and limitations of this study, several recommendations for future research can be made:

1. Longitudinal Studies: Future research should consider conducting longitudinal studies to examine the long-term effects of short-form content consumption on attention span and academic performance. This would provide a deeper understanding of how sustained usage impacts cognitive development over time.
2. Diverse Populations: Research should also be expanded to include students from different educational institutions and cultural backgrounds to explore whether the effects observed in this study are consistent across diverse groups.
3. Interventions and Solutions: Studies exploring potential interventions, such as mindfulness training, digital detox programs, or time management strategies, could provide practical solutions to mitigate the negative effects of reel consumption on academic performance. This could include testing strategies that help students balance their media consumption with their academic responsibilities.
4. Comparative Analysis with Other Media: Future studies could investigate how reels compare to other forms of social media, such as long-form videos or text-based platforms, to understand whether the unique attributes of reels (e.g., brevity, visual stimulation) are particularly harmful to attention span.

The findings of this study have significant implications for both research and educational practice.

1. *For Research:* This study opens avenues for further exploration of the cognitive effects of short-form content consumption, especially in the context of academia. It also highlights the need for more empirical studies focused on understanding how digital media, particularly fast-paced and visually stimulating platforms like TikTok and Instagram, affect the cognitive and academic development of students.
2. *For Educators and Institutions:* Educators and academic institutions should take into account the impact of media consumption on students' cognitive abilities and design curricula that promote deeper cognitive engagement. Implementing educational programs that teach students about the effects of excessive social media usage and providing tools for managing their time effectively could be beneficial. Additionally, incorporating discussions about digital literacy and the cognitive impact of media in the curriculum may empower students to make more informed choices about their media habits.
3. *For Students:* Students can benefit from understanding how their daily media consumption impacts their academic performance. By raising awareness of the detrimental effects of prolonged reel consumption, students can be encouraged to adopt healthier habits, such as setting limits on screen time or using apps designed to monitor and reduce distractions.

Overall, this study underscores the need for a balanced approach to media consumption, particularly among students, who are vulnerable to the cognitive and academic consequences of excessive short-form content engagement.

References

Bristow, P. M. (2014). *Reel Influence: Video as an Instructional Strategy in Addressing the Affective Domain in Instructional Design* (Doctoral Dissertation, Capella University). Retrieved from https://www.proquest.com/openview/0ee137770e2c9808ee027b32f539b728

Carr, N. (2020). *The Shallows: What the Internet is Doing to Our Brains*. WW Norton & Company. Retrieved from https://wwnorton.com/books/9780393357820

Carrier, L. M., Rosen, L. D., Cheever, N. A., & Lim, A. F. (2015). Causes, Effects, and Practicalities of Everyday Multitasking. *Developmental Review, 35*, 64-78. doi: https://doi.org/10.1016/j.dr.2014.12.005

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. Routledge. doi: https://doi.org/10.4324/9780203771587

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications. Retrieved from http://eduq.info/xmlui/handle/11515/19498

Duffy, B. E., & Hund, E. (2019). Gendered Visibility on Social Media: Navigating Instagram's Authenticity Bind. *International Journal of Communication, 13*, 4983–5002. Retrieved from https://ijoc.org/index.php/ijoc/article/view/11729

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1-4. doi: https://doi.org/10.11648/j.ajtas.20160501.11

Field, A. (2018). *Discovering Statistics using IBM SPSS Statistics* (5th ed.). SAGE Publications. Retrieved from http://collegepublishing.sagepub.com/products/discovering-statistics-using-ibm-spss-statistics-5-260423

Firth, J., Torous, J., Stubbs, B., Firth, J. A., Steiner, G. Z., Smith, L., et al. (2019). The "online Brain": How the Internet May Be Changing Our Cognition. *World Psychiatry, 18*(2), 119-129. doi: https://doi.org/10.1002/wps.20617

Junco, R. (2012). In-Class Multitasking and Academic Performance. *Computers in Human Behavior, 28*(6), 2236-2243. doi: https://doi.org/10.1016/j.chb.2012.06.031

Kahneman, D. (1973). *Attention and Effort*. Prentice-Hall.

Kahneman, D., & Henik, A. (2022). Effects of Visual Grouping on Immediate Recall and Selective Attention. In *Attention and Performance VI* (pp. 307-332). Routledge. doi: https://doi.org/10.4324/9781003309734-19

Lang, A. (2000). The Limited Capacity Model of Mediated Message Processing. *Journal of Communication, 50*(1), 46-70. doi: https://doi.org/10.1111/j.1460-2466.2000.tb02833.x

Laouadji, I., Khenteur, R., & Messaoudi, N. (2023). *Investigating the use of Instagram and Tiktok Reels as a Learning Tool to Enhance Grammar in ESP Classes. The Case of the Third-Year Economy students at the University of Ain Temouchent* (Doctoral Dissertation, University of Ain Temouchent). Retrieved from http://dspace.univ-temouchent.edu.dz/handle/123456789/3591

Ning, W., & Inan, F. A. (2024). Impact of Social Media Addiction on College Students' Academic Performance: An Interdisciplinary Perspective. *Journal of Research on Technology in Education, 56*(5), 616-631. doi: https://doi.org/10.1080/15391523.2023.2196456

Ophir, E., Nass, C., & Wagner, A. D. (2009). Cognitive Control in Media Multitaskers. *Proceedings of the National Academy of Sciences, 106*(37), 15583-15587. doi: https://doi.org/10.1073/pnas.0903620106

Paas, F., Renkl, A., & Sweller, J. (2003). Cognitive Load Theory and Instructional Design: Recent Developments. *Educational Psychologist, 38*(1), 1-4. doi: https://doi.org/10.1207/S15326985EP3801_1

Paul, J. A., Baker, H. M., & Cochran, J. D. (2012). Effect of Online Social Networking on Student Academic Performance. *Computers in Human Behavior, 28*(6), 2117-2127. doi: https://doi.org/10.1016/j.chb.2012.06.016

Prindle, C. R., Orchanian, N. M., Venkataraman, L., & Nuckolls, C. (2024). Short-Form Videos as an Emerging Social Media Tool for STEM Edutainment. *Journal of Chemical Education, 101*(3), 1319-1324. doi: https://doi.org/10.1021/acs.jchemed.3c01185

Rasheed, A., & Hussain, S. (2024). Instagram Reels and Ethical Muteness Among University Students. *Jahan-e-Tahqeeq, 7*(2), 44-60. Retrieved from https://www.jahan-e-tahqeeq.com/index.php/jahan-e-tahqeeq/article/view/1328

Robertson, I. H., Manly, T., Andrade, J., Baddeley, B. T., & Yiend, J. (1997). `Oops!': Performance Correlates of Everyday Attentional Failures in Traumatic Brain Injured and Normal Subjects. *Neuropsychologia, 35*(6), 747-758. doi: https://doi.org/10.1016/S0028-3932(97)00015-8

Rosen, L. D., Lim, A. F., Felt, J., Carrier, L. M., Cheever, N. A., Lara-Ruiz, J. M., et al. (2014). Media and Technology Use Predicts Ill-Being Among Children, Preteens and Teenagers Independent of the Negative Health Impacts of Exercise and Eating Habits. *Computers in Human Behavior, 35*, 364-375. doi: https://doi.org/10.1016/j.chb.2014.01.036

Schroeder, N. L., & Cenkci, A. T. (2020). Do Measures of Cognitive Load Explain the Spatial Split-Attention Principle in Multimedia Learning Environments? A Systematic Review. *Journal of Educational Psychology, 112*(2), 254-270. doi: https://doi.org/10.1037/edu0000372

Šola, H. M., Qureshi, F. H., & Khawaja, S. (2024). AI Eye-Tracking Technology: A New Era in Managing Cognitive Loads for Online Learners. *Education Sciences, 14*(9), 933. doi: https://doi.org/10.3390/educsci14090933

Sweller, J. (1988). Cognitive Load During Problem Solving: Effects on Learning. *Cognitive Science, 12*(2), 257-285. doi: https://doi.org/10.1016/0364-0213(88)90023-7

Sweller, J. (2020). Cognitive Load Theory and Educational Technology. *Educational Technology Research and Development, 68*(1), 1-16. doi: https://doi.org/10.1007/s11423-019-09701-3

Sweller, J. (2022). The Role of Evolutionary Psychology in Our Understanding of Human Cognition:

Consequences for Cognitive Load Theory and Instructional Procedures. *Educational Psychology Review, 34*(4), 2229-2241. doi: https://doi.org/10.1007/s10648-021-09647-0

Turel, O., & Qahri-Saremi, H. (2016). Problematic Use of Social Networking Sites: Antecedents and Consequence from a Dual-System Theory Perspective. *Journal of Management Information Systems, 33*(4), 1087-1116. doi: https://doi.org/10.1080/07421222.2016.1267529

Wickens, C. D. (2020). Processing Resources and Attention. In D. Damos (Ed.), *Multiple Task Performance* (pp. 3-34). CRC Press. doi: https://doi.org/10.1201/9781003069447-2

Wilson, K., & Korn, J. H. (2007). Attention During Lectures: Beyond Ten Minutes. *Teaching of Psychology, 34*(2), 85-89. doi: https://doi.org/10.1080/00986280701291291