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The Impact of Short-Form Video Consumption on Students' Attention Span

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***Abstract*: The widespread use of short-form video platforms has raised concerns about their potential influence on students' attention span and learning behaviors. This study investigates the relationship between short-form video consumption and attentional control among secondary school students using a mixed-methods approach. A total of 180 students aged 12–18 completed standardized attention assessments, media-use questionnaires, and were observed during classroom activities. Quantitative analyses revealed that high-frequency short-video consumption significantly predicted poorer sustained attention, weaker executive control, and increased off-task behavior, even after controlling for total screen time and demographic variables. Qualitative findings from teacher interviews supported these results, highlighting reduced task persistence and increased demand for stimulation among heavy users. The findings suggest that excessive exposure to short-form video content may reshape attentional habits in ways that challenge traditional educational practices.**

***Keywords*: short-form video, attention span, students, executive function, digital media.**

1. Introduction

Attention is a core cognitive function essential for academic learning, problem-solving, and self-regulation [1], [2]. Sustained attention enables students to engage with complex tasks such as reading comprehension, mathematical reasoning, and extended writing. However, teachers increasingly report difficulties in maintaining students' focus during classroom instruction [3].

Parallel to these observations is the rapid growth of short-form video platforms such as TikTok, Instagram Reels, and YouTube Shorts. These platforms emphasize brevity, rapid pacing, and algorithm-driven novelty [4]. While they provide entertainment and informal learning opportunities, their potential cognitive effects particularly on attentional control remain underexplored empirically.

This study seeks to address this gap by examining whether frequent short-form video consumption is associated with measurable differences in attention span and classroom behavior among students. Attention and Executive Control: Attention span is not a unitary construct but involves multiple networks, including alerting, orienting, and executive control [5]. Sustained attention depends heavily on executive functions such as inhibitory control and working memory [6]. These abilities are sensitive to environmental demands and habitual cognitive engagement [7].

Digital Media Use and Attention: Prior research on digital media suggests that heavy media multitasking is associated with increased distractibility and reduced attentional filtering [8], [9]. Students who frequently switch between media sources tend to perform worse on tasks requiring sustained focus [10].

Short-Form Video and Reward Processing: Short-form video platforms intensify reward-seeking behaviors through rapid feedback, novelty, and variable reinforcement schedules [11]. Neurocognitive research suggests that such patterns may condition dopaminergic reward systems to prefer immediate stimulation, reducing tolerance for slower-paced tasks [12].

Educational Context: Studies have linked excessive screen time with lower academic performance and reduced classroom engagement. However, other researchers argue that moderate and purposeful use does not necessarily harm well-being or cognition. Empirical studies focusing specifically on short-form video consumption remain limited.

2. Materials and Methods

Short-form video consumption has become increasingly prevalent among students, raising concerns about its potential effects on attention and self-regulation. This study examines whether engagement with short-form video platforms is associated with students' sustained attention and executive control, and whether such consumption predicts classroom off-task behavior beyond overall screen time. We hypothesize that students who engage in higher levels of short-form video consumption will exhibit significantly lower sustained attention compared to low-use peers. Furthermore, we expect short-form video consumption to remain a significant predictor of off-task classroom behavior even after controlling for total screen time and age, suggesting that the fragmented and rapid nature of short-form video content may have unique implications for students' attentional functioning and classroom engagement.

A total of 180 secondary school students (92 males, 88 females) aged 12–18 years ($M = 14.9$, $SD = 1.8$) were recruited from three urban schools, with parental consent and student assent obtained prior to participation. Based on self-reported average daily short-form video use, cross-validated with smartphone screen-time logs, participants were classified into

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low (< 30 min/day, n = 58), moderate (30–90 min/day, n = 62), and high (> 90 min/day, n = 60) usage groups. Sustained attention and executive control were assessed using the Attention Network Test (ANT), which measures alerting, orienting, and executive control networks through reaction time and accuracy indices. Media use patterns, including short-form video consumption, total screen time, and multitasking frequency, were measured using an adapted Media Use Questionnaire. Classroom engagement was evaluated over a two-week period using a teacher-rated observation scale assessing on-task behavior, task persistence, and distractibility, demonstrating good internal consistency ($\alpha = 0.86$) and inter-rater reliability ($\kappa = 0.82$). Testing was conducted during school hours in controlled computer laboratory settings. Data were analyzed using SPSS, with one-way ANOVA used to examine group differences, Pearson correlations to assess associations among variables, and hierarchical multiple regression to determine whether short-form video use predicted off-task behavior beyond age and total screen time, with statistical significance set at $p < 0.05$.

3. Results and Discussion

Analysis of variance revealed a significant effect of short-form video consumption on sustained attention, $F(2, 177) = 12.84$, $p < 0.001$, $\eta^2 = 0.13$, indicating a medium effect size. Post hoc Tukey comparisons showed that students in the high-use group demonstrated significantly lower sustained attention than those in the low-use group ($p < 0.001$), while the moderate-use group differed marginally from the low-use group ($p = 0.048$). Consistent with these findings, executive control performance was also impaired among high-use students, who exhibited significantly slower reaction times ($M = 712$ ms, $SD = 85$) compared with low-use students ($M = 643$ ms, $SD = 78$). Correlational analyses further indicated that short-form video consumption was moderately and negatively associated with sustained attention ($r = -0.41$, $p < .001$) and classroom on-task behavior ($r = -0.46$, $p < .001$), whereas total screen time showed only weak associations with these outcomes ($r = -0.19$ to -0.23). Hierarchical regression analysis demonstrated that short-form video consumption remained a significant predictor of classroom off-task behavior after controlling for age, gender, and total screen time ($\beta = 0.38$, $t = 5.92$, $p < 0.001$), with the final model accounting for 29% of the variance ($R^2 = 0.29$).

These findings support the hypothesis that frequent engagement with short-form video content is associated with reduced sustained attention and weaker executive control. Importantly, the persistence of these effects after controlling for overall screen exposure suggests that the fragmented, high-reward structure of short-form videos, rather than screen time alone, may contribute to attentional difficulties. This interpretation is consistent with prior research on media multitasking and attentional control, as well as reward-based models of attention suggesting that repeated exposure to rapid, highly stimulating content may diminish tolerance for sustained cognitive effort. Qualitative observations from teachers further corroborated these quantitative findings, with high-use students frequently described as displaying impatience, requesting frequent breaks, and having trouble completing extended academic tasks.

From an educational perspective, these results suggest that outright prohibition of short-form media may be neither feasible nor desirable. Instead, educators may benefit from explicitly teaching attention-regulation strategies, designing lessons with structured cognitive pacing, encouraging intentional and limited media use, and fostering metacognitive discussions that help students reflect on how media consumption shapes their attention and learning behaviors. Such approaches may mitigate potential negative effects while acknowledging the pervasive role of digital media in students' daily lives.

Several limitations should be acknowledged. The cross-sectional design of this study precludes causal inferences, and future longitudinal or experimental research is needed to determine the directionality of the observed relationships. Additionally, subsequent studies should examine whether structured or educational short-form video content produces similar attentional effects, as content type may moderate the relationship between media use and cognitive outcomes.

Fig. 1.

4. Recommendations and Conclusions

This study provides empirical evidence that high levels of short-form video consumption are associated with reduced sustained attention and lower classroom engagement among students. As short-form media becomes increasingly embedded in students' daily lives, it is essential for educators to proactively address its potential cognitive implications through informed instructional strategies and attention-supportive learning environments.

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