Phones negative impact on academics when used in class

1. "**72% of U.S. high school teachers say cellphone distraction is a major problem in the classroom**"

Key Finding: About seven in ten high school teachers say that students being distracted by cell phones is a major problem in the classroom.

Ref: Jenn Hatfield. (2024), *Pew Research Center*.

2. "**Constant Companion: A Week in the Life of a Young Person's Smartphone Use**"

Key Finding: 97% of students aged 11 to 17 used their phones during the school day. Daily in-school phone use ranged from less than a minute to 6½ hours, with a median of 43 minutes of screen time.

Ref: Jenny S. Radesky et al. (2023), *Common Sense Media*.

3. "**The effects of smartphone addiction on learning: A meta-analysis**"

Key Finding: Excessive smartphone use and behavioral smartphone addiction correlate with a decline in academic performance according to a comprehensive analysis of 44 different studies.

Ref: Oluwafemi J. Sunday et al. (2021), *Computers in Human Behavior Reports*.

4. "**The impact of students' cellphone-use and self-control on academic performance in traditional classroom**"

Key Finding: Students with self-reported low, medium, and high levels of self-control all demonstrated a negative correlation between cellphone use frequency and academic performance.

Note: college-age, international

Ref: Lin Xuefen et al. (2023), *Asia Pacific Education Review*.

5. "**Cell phone use distracts young adults from academic work with limited beneft to self-regulatory behavior**"

Key Finding: Students switched between their academic task and their cell phone three to four times (an average of 3.52) during an hour-long lecture. The number of times students checked their phones was negatively correlated with their academic performance.

Note: college-age

Ref: Suresh C. Joshi et al. (2022), *Current Psychology*.

6. "**Technology in Education: A Tool on Whose Terms?**"

Key Finding: Students can take up to 20 minutes to re-focus on what they were learning after being distracted. A negative correlation was shown between excessive cell phone use and academic performance.

Ref: Manos Antoninis et al. (2023), *Global Education Monitoring Report*.

7. "**Understanding smartphone usage in college classrooms: A long-term measurement study**"

Key Finding: Students used their phones for over 25% of the effective class duration and phone distractions happened every three to four minutes for over a minute. Phone usage patterns had a negative correlation with student's grades.

Note: college-age, international

Ref: Inyeop Kim et al. (2019), *Computers &*

8. "**The Impact of Mobile Phone Usage on Student Learning**"

Key Finding: College students who were not using their cell phones wrote down 62% more information in their notes and scored a letter grade and a half higher on a multiple choice test than students who were actively using their phones.

Note: This study was cited in Dr Ruston's Op-Ed on CNN.com

Ref: Kuznekoff, et al. (2013) *Communication Education V. 62,* 233-252.

9. "**Ill Communication: Technology, distraction & student performance**"

Key Finding: When schools in England banned mobile phones, the test scores of 16-year-old students increased by 6.4%. These effects were twice as impactful on the scores of low-achieving students and had little to no impact on already high-achieving students.

Ref: Louis-Philippe Beland, et al., "Ill Communication: Technology, distraction & student performance," Labour Economics, Volume 41, 2016, Pages 61-76, ISSN 0927-5371.

10. "**Non-academic internet use in the classroom is negatively related to classroom learning regardless of intellectual ability**"

Key Finding: Students in an introductory psychology class were surveyed three times over the course of their 15 week-long class on their use of portable devices in the classroom. Students were using portable devices and many of them were cell phones.

Ref: Ravizza, et al. (2014), *Computers & Education* V.78, 109-114.

11. "**An Empirical Examination of the Educational Impact of Text Message-Induced Task Switching in the Classroom: Educational Implications and Strategies to Enhance Learning**"

Key Finding: While college students watched a videotaped lecture, they were randomly interrupted by text messages. Based on the number of texts sent and received, three "texting interruption" groups were defined as Low, Moderate and High. A recall test measured the impact of the texting distractions on students' memory. The high texting group scored significantly worse (10.6% lower) than the low texting interruption group.

Ref: Rosen, et al. (2011) *Psicologia Educativa,*163-177.

12. "**Texting as a Distraction**"

MAIN FINDING: This study observed the difference in performance on a lecture quiz between students who were randomly assigned to text message during the lecture and those who were not supposed to text at all. Those who text messaged throughout the lecture scored significantly lower on the quiz.

Ref: Dietz, Stephanie, et al. (2014) *Computers and Human Behavior* V. *36*, 163-167.

13. “**The Effects of Cell Phone Use and Emotion-regulation Style on College Students Learning**”

Key Finding: In a study of participants who watched a video lecture in four different cellphone conditions, those who had their phones taken away during the lecture performed the best on a test about the lecture.

Ref: Lee, et al. (2017) *Applied Cognitive Psychology*, 360-366.

14. **“Examining the Impact of Off-task Multi-tasking with Technology on Real-time Classroom Learning.”**

Key Finding: Some groups in this experiment were permitted to use technology during lectures while others were not. The groups that did not use technology outperformed those that did.

Ref: Wood, et al. (2012) *Computers & Education*, 58(1), 365–374.

15. **Results of Screenagers' Survey of Cell Phone Policies and Parental Preferences in Schools** (2017)

Studies showing cell phones' negative impact on academics when present but not used in class

1. “**Cell Phone Use Policies in US Middle and High Schools**”

Key Finding: 85% of schools do not restrict phones during lunch or recess periods. 16% of middle schools and 25% of high schools do not restrict phone use in classrooms.

Ref: Tandon PS, et al. Cell Phone Use Policies in US Middle and High Schools. *JAMA Netw Open.* 2020;3(5):e205183. doi:10.1001/jamanetworkopen.2020.5183.

2. “**Brain Drain: The Mere Presence of One’s Smartphone Reduces Available Cognitive Capacity**”

Key Finding: Participants turned off their phones. While they performed memory tasks, some could keep their phone with them and some had to put it in the other

room. Those who had the phone with them did significantly worse on the tasks. The attention and energy it takes to not check a phone seems to cause "brain drain."

Note: This study was also referenced in Dr. Ruston's Op-Ed on CNN.com.

Ref: Ward, et al. (2017) *JACR, 140-154.*

3. "**The Mere Presence of a Cell Phone May be Distracting: Implications for Attention and Task Performance**"

Key Finding: College students did various cognitive tests with phones present and with them out of sight. The presence of phones negatively impacted attention and task performance.

Ref: Thorton, et al. (2014) *Social Psychology V. 45, 479-488.*

4. "**The Extended iSelf: The Impact of iPhone Separation on Cognition, Emotion, and Physiology**"

Key Finding: Investigated the psychological and physiological effects of iPhone users being unable to use their iPhones. When they were unable to answer their ringing phones, their heart rate, blood pressure and levels of anxiety all increased.

Ref: Clayton, et al. (2015) *J Comput-Mediat Comm* V. 20, 119–135.

5. "**The Attentional Cost of Receiving a Cell Phone Notification**"

Key Finding: Cellphone notifications disrupted participants' performance on an attention-demanding task.

Ref: Stothart, C., et al. (2015) *J Exp Psychol Hum Percept Perform V. 41, 893-897.*

Students often have the false belief that cell phone use in class does not impact their learning

1. "**Non-academic Internet Use in the Classroom is Negatively Related to Classroom Learning Regardless of Intellectual Ability**"

Key Finding: Introductory psychology students were asked about the frequency and duration of their use of portable electronic devices and how it affected their learning. Higher rates of internet use were found to be linked to lower test grades.

Ref: Ravizza, Susan M., et al. (2014), *Computers & Education* V.78, 109-114.

2. "**An Introduction to Multitasking and Texting: Prevalence and Impact on Grades and GPA in Marketing Classes**"

Key Finding: Marketing students from two separate universities said they received an average of 37 texts per day and wrote about 16. Students said they believed they were able to pay attention to the professor while writing and receiving texts. However, those who did text while in class received lower grades.

Ref: Clayson, D. E., et al. (2013). *Journal of Marketing Education*, 35, 26e40.

3. "**An Empirical Examination of the Educational Impact of Text Message-induced Task Switching in the Classroom: Educational Implications and Strategies to Enhance Learning**"

Key Finding: Participants received texts that demanded a response while watching a 30-minute video lecture. Participants split into different classrooms and were randomly assigned to different groups: receiving no text messages, receiving four text messages or receiving eight text messages. Participants were then given a test on the content of the lecture. Those who received the most text messages scored the worst.

Ref: Rosen, L. D., et al. (2011). *Psicología Educativa*, 17, 163e177.