

# A conversation about technology and learning

Jodi Dworkin, Ph.D.  
Professor & Extension Specialist  
Department of Family Social Science  
University of Minnesota  
jdworkin@umn.edu

College of Education and Human Development

Department of  
Family Social Science  
UNIVERSITY OF MINNESOTA  
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1

## Outline

- About Me
- Context since COVID-19
- Digital and in-person communication
- How is adolescent development associated with technology use
- Is technology use good or bad?
- Thinking about AI in the future
- Recommendations

2

## About Me

- Researcher
  - Studying teen and parent technology use for 20+ years
  - The impact of COVID-19 on education a partnership with suburban middle schools
- Extension faculty member
  - Trainings for professionals working with youth and families
  - Workshop for youth and parents, often in partnership with K-12 schools
- Parent

3

## What's different since COVID-19?

- During the first half of March 2020 there was a 1087% increase in the download of educational apps.
- Nearly two thirds of parents (63%) reported they lowered their standards for what they thought was appropriate screen time for their children during the pandemic.
- Expectations for schools also changed:
  - 49% of adults in 2021 said that K-12 schools have a responsibility to provide all students with laptop or tablet to complete their coursework during COVID-19, up from 37% in 2020.
- "Despite the negative content they see, digital media has been a lifeline for many of them to access critical health information, stay connected to their peers, find inspiration, and receive comfort in a difficult time."

<https://www.pewresearch.org/internet/2021/09/01/the-internet-and-the-pandemic/>

4

## Digital communication

- In a study of 9-15 year olds, who were tracked daily and over time:
  - total screen time on average each day was, 4hrs, 10min.
    - 47 min for school work (slightly more than 10% of their total tech time)
    - about 75% of their time is spent for communication and entertainment
- Digital communication does not replace in-person communication but complements it
- Digital communication does not inherently reduce the quality of relationships

Jensen, M., George, M.J., Russell, M.A., Lippold, M.A. and Odgers, C.L. (2021). Daily parent-adolescent digital exchanges. *Research on Child and Adolescent Psychopathology*, 49, 1125-1138.  
<https://doi.org/10.1007/s10802-020-00765-x>

5

## In-person communication is still important

- Young people still want in-person communication across ages and across studies (of 13-18 year olds)
  - 78.4% of adolescents want to “receive or offer advice or recommendations” in-person
  - 79.9% want to “receive or offer emotional support” in-person
  - 62.5% want to “make plans” in person
  - 22.6% avoid technology “because it distracts me from really connecting with others”
  - 54.1% choose technology “because I find it easier to communicate online than in real life”

Dworkin et al.

6

## In-person and digital communication are different

- When followed daily, there was little consistent evidence that adolescents' quantity of daily digital technology use detracted from the amount of time they spend interacting with close others.

Jensen, M., George, M.J., Russell, M.A., Lippold, M.A. and Odgers, C.L. (2021). Daily parent-adolescent digital exchanges. *Research on Child and Adolescent Psychopathology*, 49, 1125-1138.  
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- In person interactions compared to zoom activates different parts of the brain, increases eye contact and social cues (<https://www.sciencealert.com/something-strange-happens-to-the-human-brain-during-zoom-calls>)

7

## What's going on with adolescent development?

- **The adolescent's brain is different from both the child's brain and the adult's brain.**
- Young brains are still developing:
  - Experiences and interactions contribute to that development
  - New experiences, experiences that allow in person connections, create different opportunities for brain connections
  - At the same time, there are important changes in how teens process social and emotional information
- Brain plasticity makes adolescence a time of considerable opportunity for intervention.
- This means there are individual differences in brain structure and function that can be linked to differences in experience.

<https://www.sciencedirect.com/science/article/abs/pii/S0278262609002127?via%3Dihub>

8

## Is technology use good or bad?

- It's complicated
  - It can be really beneficial to individuals and their relationships, increase access to information, learning, and support.
  - AND**
  - It can be also be all consuming, distracting, take time away from other activities or relationships, and increase access to inappropriate information or dangerous people.
- “When used intentionally and appropriately, technology and interactive media are effective tools to support learning and development.” (from A joint position statement issued by the National Association for the Education of Young Children and the Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College)
- It should be goal directed and there should be a need for the tools and information that can be found online.

9

“Preparing students for a world we can't quite even imagine is a true challenge.”

<https://www.commonsense.org/education/articles/chatgpt-and-beyond-how-to-handle-ai-in-schools>

10

## What's coming: Responsible AI

- A commitment to fairness, equity, and inclusion
- More AI won't necessarily mean more access and won't mean equal access
- Hard to be critical when we don't understand the back-end programming
- Concerns with plagiarism and inaccurate information
- Growing public concern about the role of AI in daily life

<https://www.pewresearch.org/short-reads/2023/08/28/growing-public-concern-about-the-role-of-artificial-intelligence-in-daily-life/>  
<https://www.responsible.ai/post/ai-vs-responsible-ai-why-is-it-important>

11

## Recommendations

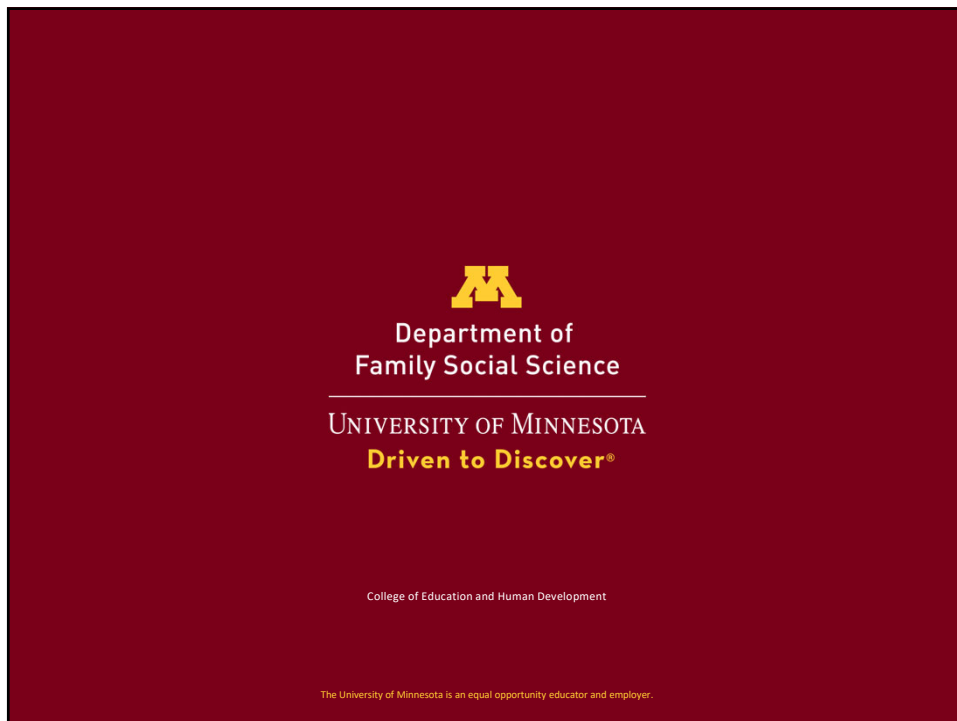
- Youth Advisory Committee
- Collect data regarding how students are using their devices and how that's associated with SEL outcomes
- Document instructional contact time
- Engage experts from multiple disciplines
- Ongoing support for teachers and students

12

## Resources

- Common Sense Media
  - ChatGPT and Beyond: How to Handle AI in Schools  
<https://www.commonsense.org/education/articles/chatgpt-and-beyond-how-to-handle-ai-in-schools>
  - SEL in digital life resource center  
<https://www.commonsense.org/education/SEL>
  - Use media to start important conversations about artificial intelligence.  
<https://www.commonsense.org/education/articles/ai-movies-books-and-podcasts-to-discuss-in-the-classroom>
- International Society for Technology in Education - a framework that guides educators, leaders and coaches in using technology to create high-impact, sustainable, scalable and equitable learning experiences. They have been adopted by all U.S. states and many countries worldwide.  
<https://iste.org/standards>

13



14