
Laura Arcia

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**Child Development & Covid-19: How Different Modes of Interpersonal Communication Impact Social Skills in Early Elementary Students**

Laura Arcia & Dr. Tim Beyer
Department of Psychology, University of Puget Sound, Tacoma, WA

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**INTRODUCTION**

**Background:**
Due to Covid-19, many American schools ceased in-person instruction during the 2020/21 school year. These closures have seriously impacted children’s development. Much of the current research identifies adverse academic effects (see Rao & Fisher, 2021; Timmons et al., 2021). Less understood are the impacts of school closures on young children’s social skill development.

**Social Skills in Academic Settings:**
Learning in primary grades is greatly dependent on in-person peer relations (Timmons et al., 2021):
- In-person interactions provide the opportunity to learn necessary social skills such as emotion regulation and communication (Cameron & Tenenbaum, 2021)
- Peer play is essential for children to understand emotions in others and learn appropriate behavior for group settings (Cameron & Tenenbaum, 2021)
- Lack of social experience may impact children’s ability to self-regulate and communicate their experience of strong emotions

*Previous parental reports during the pandemic indicated:
- Children experienced more stress than usual (Christner et al., 2021)
- Children were more angry and irritable or showed signs of depression and anxiety (Sama et al., 2020)*

*The Current Study:*
Prior to the Covid-19 pandemic, research seldom focused on the impact of online interactions on children’s social development. Online interactions are the new normal as they allow for social interaction and compliance of public health guidelines. It is imperative to further understand how these interactions influence social development in young children.

**Research Question:** How do Online and In-Person interactions contribute to the development of social skills in early elementary school students?

We focused on 3 foundational social skills categories:
- Play
- Emotion Regulation
- Communication

We examined how 4 factors, outlined in Figure 1 contributed to these areas of social skill development.

**RESEARCH DESIGN**

**FACTOR**

**SOCIAL SKILLS ASSESSMENT CATEGORY**

- In-Person Interaction
- Online Interaction
- Emotion Regulation
- Communication

**METHOD**

**Participants:**
- We reached out to children’s museums and other community organizations to help with recruitment
- Participants across the United States completed an online survey
- Over 150 people opened the survey
- 39 Parents of First & Second Graders (Mean age = 7 years) provided sufficient data for analysis

**Survey:**
- Demographic Information
  - Child’s Age & Grade
  - Siblings
  - Parent’s Education Level
- Experience during the 2020-21 School Year
  - Factor 1: Mode of Instruction
  - Factor 2: Social Interactions
  - Factor 3: Support Systems
  - Factor 4: Time For Activities
- Social Skills Assessment
  - Raters: 3 from the same child development team

**RESULTS**

**FACTOR 1: Mode of Instruction:**
- There was no statistical evidence to suggest that mode of instruction impacted social skills assessment scores

  For Mode of Instruction and:
  - Play: F(2,34) = 1.20, p = .32
  - Emotion Regulation: F(2,34) = 0.24, p = .71
  - Communication: F(2,34) = 1.65, p = .21

**FACTOR 2: Social Interactions**
- Online interactions had no significant effect on social skills assessment scores

  For Online Interaction and:
  - Play: t(32) = 0.95, p = .35
  - Emotion Regulation: t(32) = 0.63, p = .53
  - Communication: t(32) = 0.34, p = .53

- In-Person interactions had a marginally significant effect on play skills scores

  For In-Person Interaction and:
  - Play: t(32) = -1.96, p = .05
  - Emotion Regulation: t(32) = -0.79, p = .44
  - Communication: t(32) = 0.02, p = .99

- Children who had in-person social interactions had significantly higher play scores than children who had no social interactions
  - t(37) = -1.77, p = .04

**FACTOR 3: Support Systems**
- Teacher and School support significantly, positively correlated with play and communication scores (Table 1)

**FACTOR 4: Time For Activities**
- Time spent on various activities were significantly, positively intercorrelated (Table 2)

**CONCLUSIONS**

**Factor 1:**
- Type of schooling had a negligible effect across all social skills categories

**Factor 2:**
- In-person interactions are valuable for play skill
  - In-person social interactions may improve play scores. These patterns appear to be influenced by support systems (Factor 3) and time on activities (Factor 4)

**Factor 3:**
- Education support systems such as schools and teachers positively impacted children’s play and communication scores

**Factor 4:**
- Time spent on all categories of activities were intercorrelated
  - Families who spent more time on any given activity were more likely to spend more time on all other types of activities

**Implications:**
- Online and In-Person school instruction (Factor 1) provided similar social skills outcomes. However, social interactions (Factor 2) appear to impact specific social skills differently. For example, in-person social interactions may improve play scores. These patterns appear to be influenced by support systems (Factor 3) and time on activities (Factor 4)

- While schools were unable to provide in-person social interactions, families in our sample sought out alternative ways to provide their children such interactions

**Limitations**
- A larger sample is necessary to make sense of data patterns. Our data came from a small, highly educated sample
  - 82% of participants had a bachelor’s or graduate degree
  - 74.4% of children had in-person social interactions
  - While we had participants from many areas throughout the country, our sample was not representative of everyone’s experience with the pandemic

**REFERENCES**


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