The Use of Everyday Technologies by High School Students with Autism to Support Independence

THE UNIVERSITY *of* NORTH CAROLINA *at* CHAPEL HILL

CSESA — The Center on Secondary Education for Students with Autism Spectrum Disorders

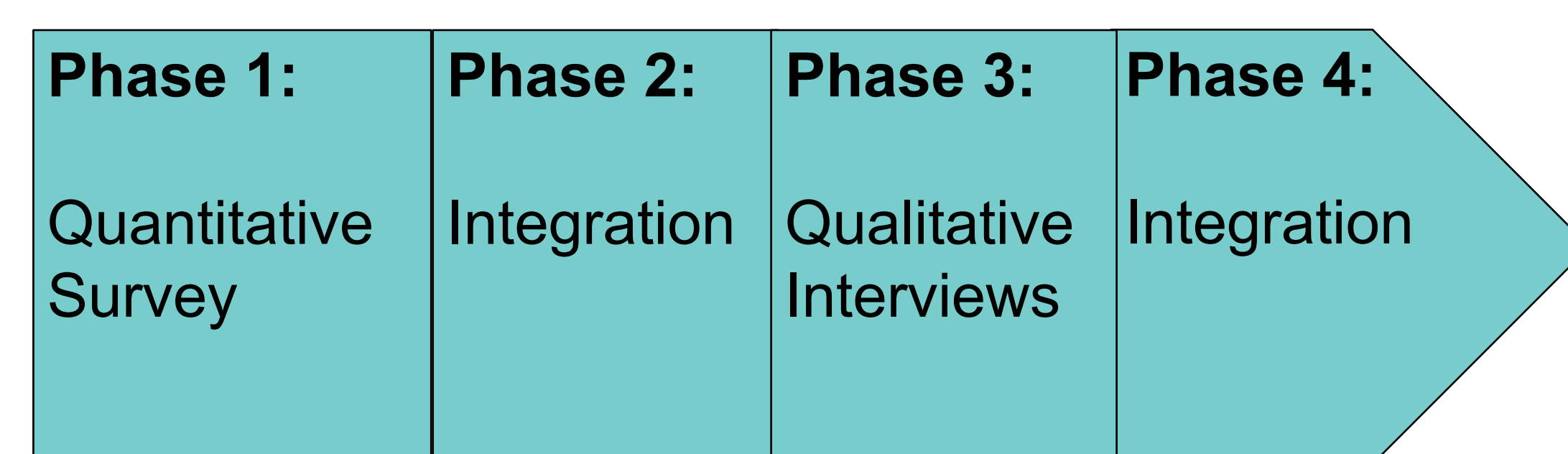## Tara Regan, M.S.W. | teregan@live.unc.edu

Introduction

The majority of students with Autism Spectrum Disorder (ASD) are leaving high school ill prepared to integrate successfully into adult life, which comes at a huge cost, not only to themselves and to their families, but to society at large. Technology supports have the potential to improve their outcomes and enhance their quality of life. Knowing that most individuals with ASD have an affinity for technology and that technology is becoming more portable, less expensive, and more widely available, makes it an attractive potential support. Previous studies of the technology use by adolescents with ASD focused primarily on discretionary use (Kuo et al., 2013; MacMullin, Lunsky, & Weiss, 2015; Mazurek et al., 2012; Shane & Albert, 2008).This mixed methods study investigated the use of everyday technologies as a support tool by high school students with ASD.

Objectives

1. To gain a first-person account of technology use
2. To find out what forms of tech teens w/ASD are using
3. To find out what purposes teens use technology
4. To gain insights into perceptions of the benefits and barriers of tech use
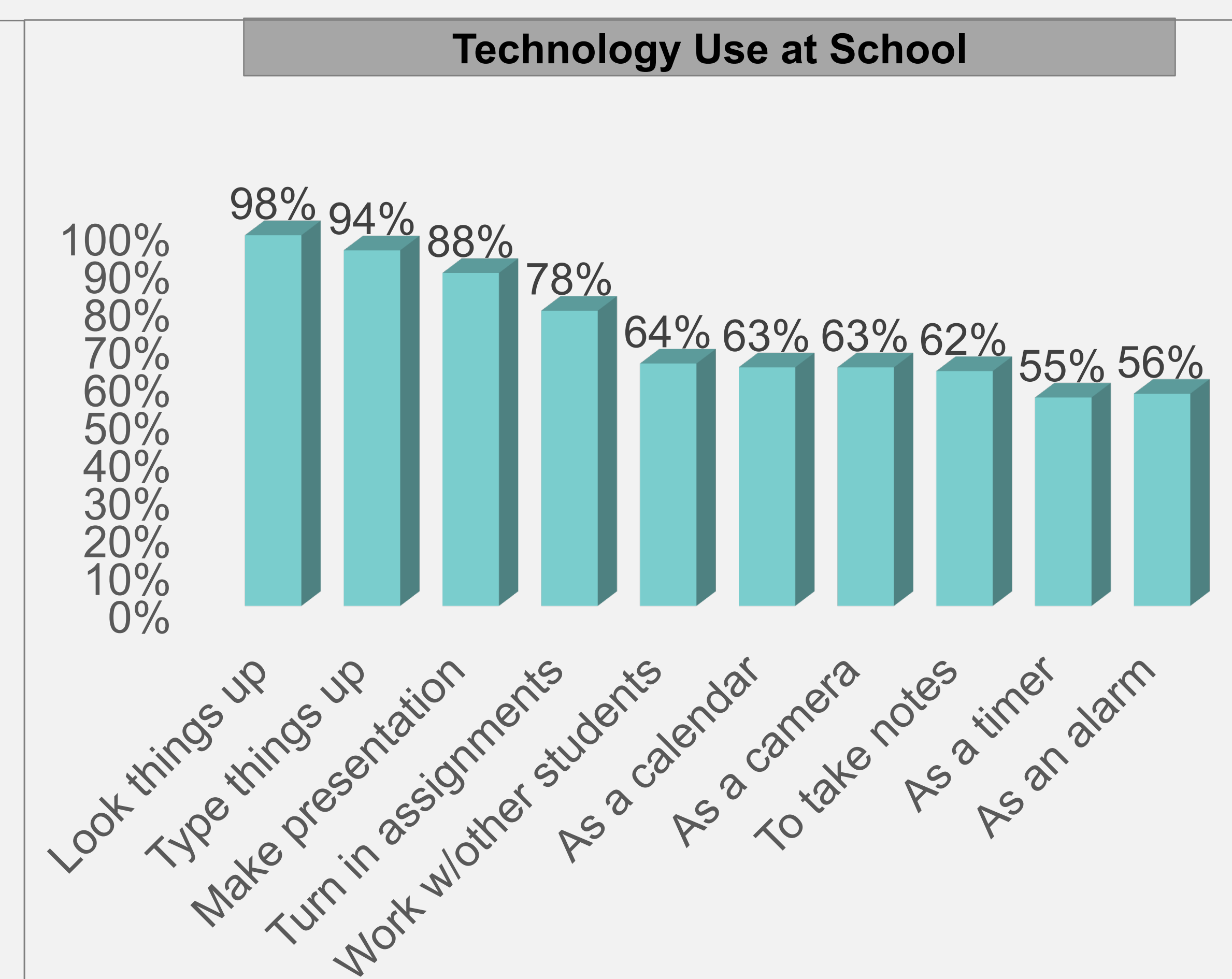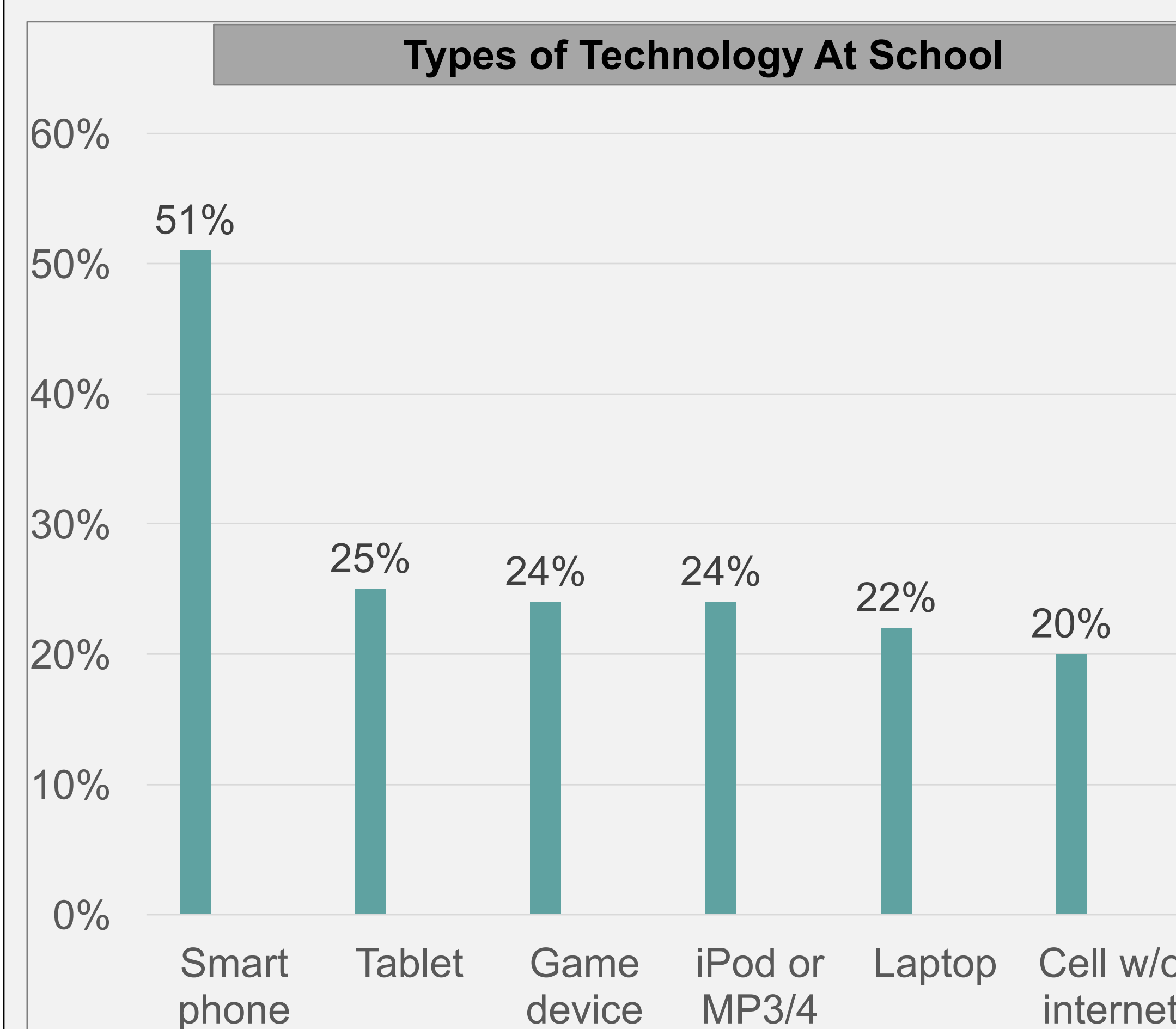
Methods

Phase 1:	Phase 2:	Phase 3:	Phase 4:
Quantitative Survey	Integration	Qualitative Interviews	Integration

Characteristics	Survey N=243	Interviews N=10
Gender Male	84%	80%
Age	mean=17 range 14-22	mean=16 range 15-18
Race White	74% (Hispanic 17%)	70% (Hispanic 10%)
Income >$99k	52%	20%
IQ >70	78%	90%
Standard Diploma Track	61%	90%

Survey Results

84% of teens with ASD bring technology to school

At School

97% of teens with ASD use technology at school

Types of Technology At School

- Smart phone: 51%
- Tablet: 25%
- Game device: 24%
- iPod or MP3/4: 24%
- Laptop: 22%
- Cell w/o internet: 20%

Technology Use at School

- Look things up: 98%
- Type things up: 94%
- Make presentation: 88%
- Turn in assignments: 78%
- Work w/other students: 64%
- As a calendar: 63%
- As a camera: 63%
- To take notes: 62%
- As a timer: 55%
- As an alarm: 56%

96% of teens with ASD indicate they are good at using technology.
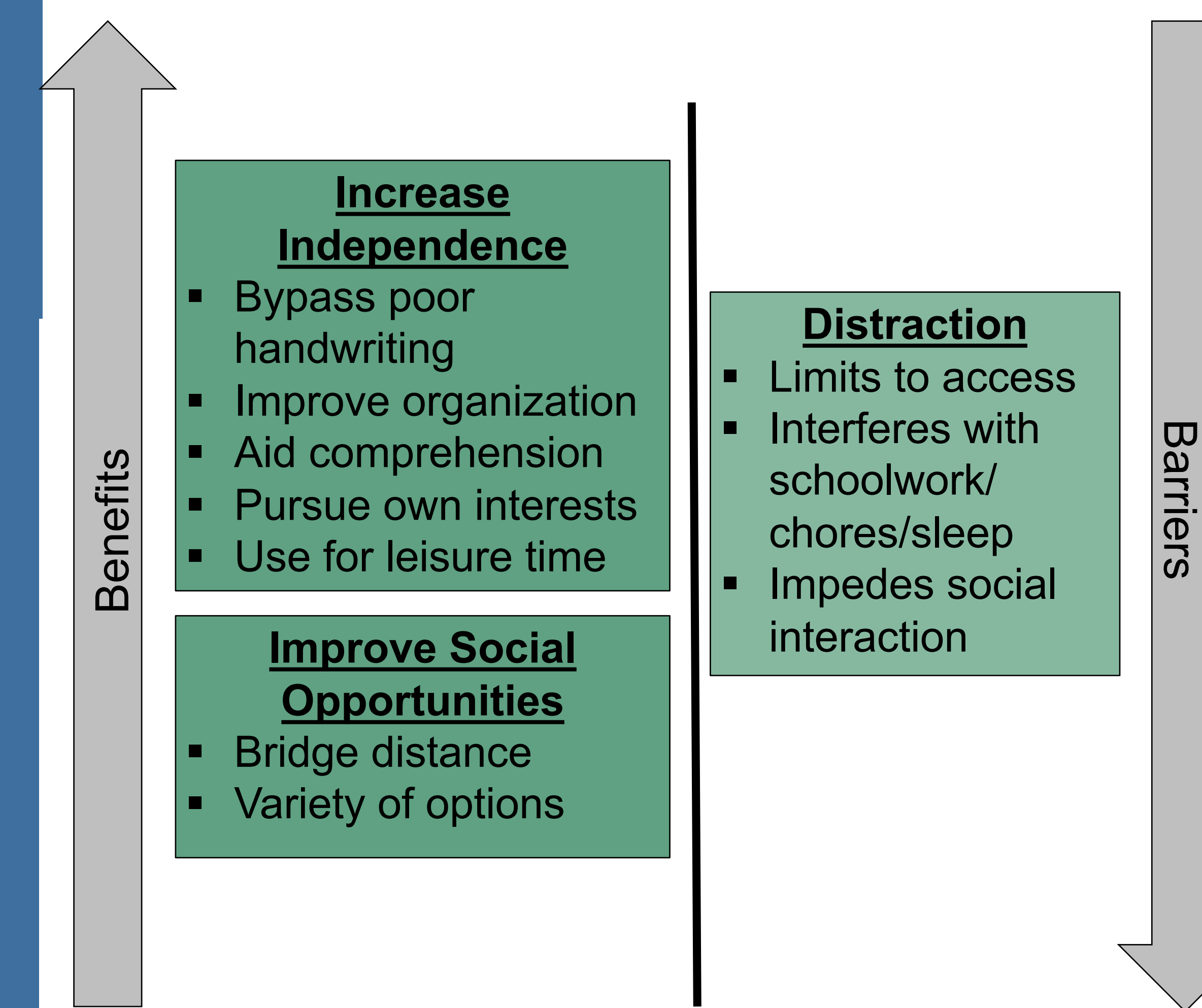
> "I think technology is the best industrial thing in our world because it gives us joy and curiosity into great things."
> - *Student Respondent, Survey*

94% of teens use technology to communicate/socialize

Technology Use Overall

- Video calls, 42%
- Facebook, 48%
- Email, 64%
- Text, 69%
- Phone, 79%

Barriers to Technology Use

- Technology can distract me: 57%
- Not allowed to use in all classes: 43%
- There are not people to help me learn to use tech: 31%
- Using tech to learn is hard: 28%
- No wi-fi access: 8%
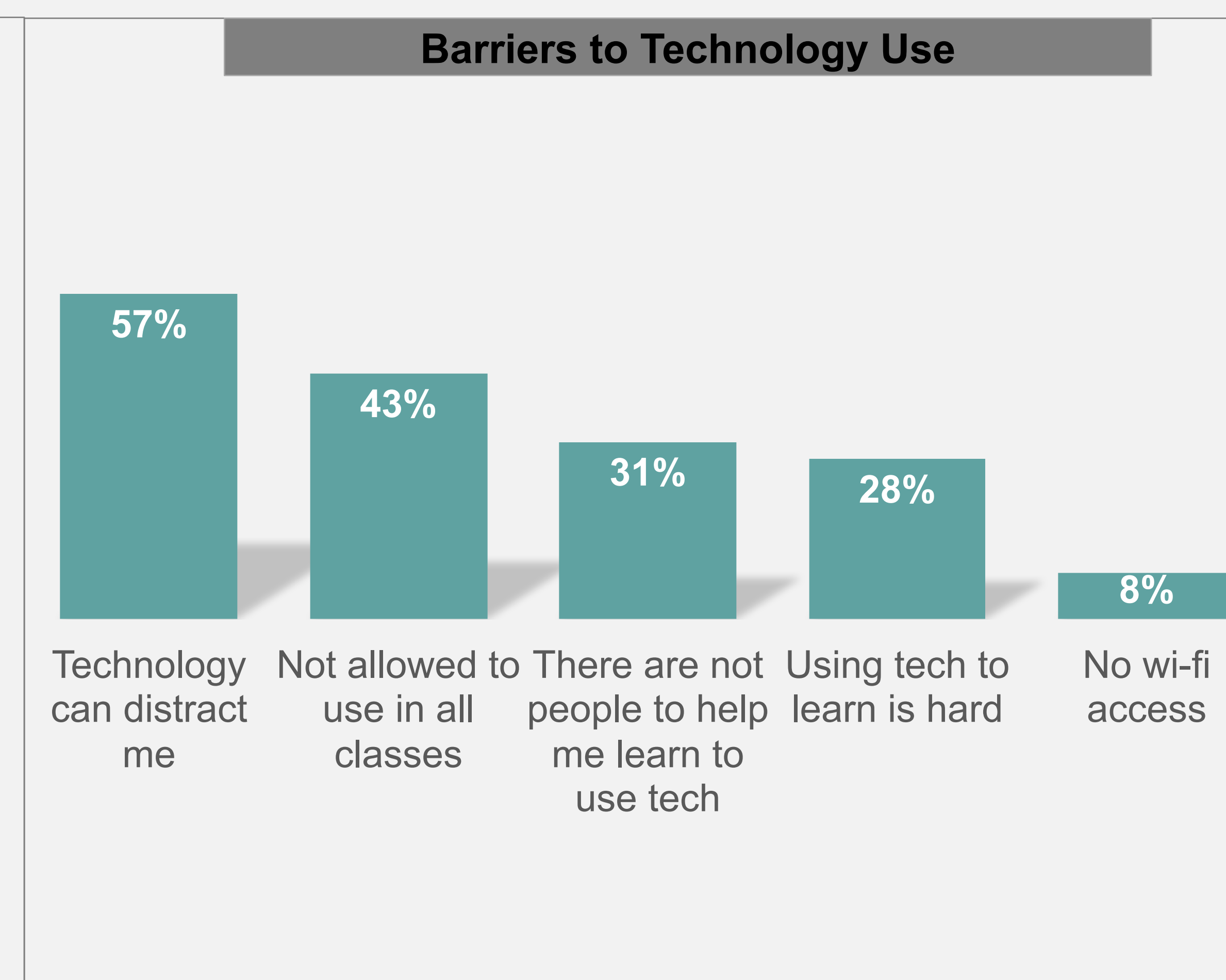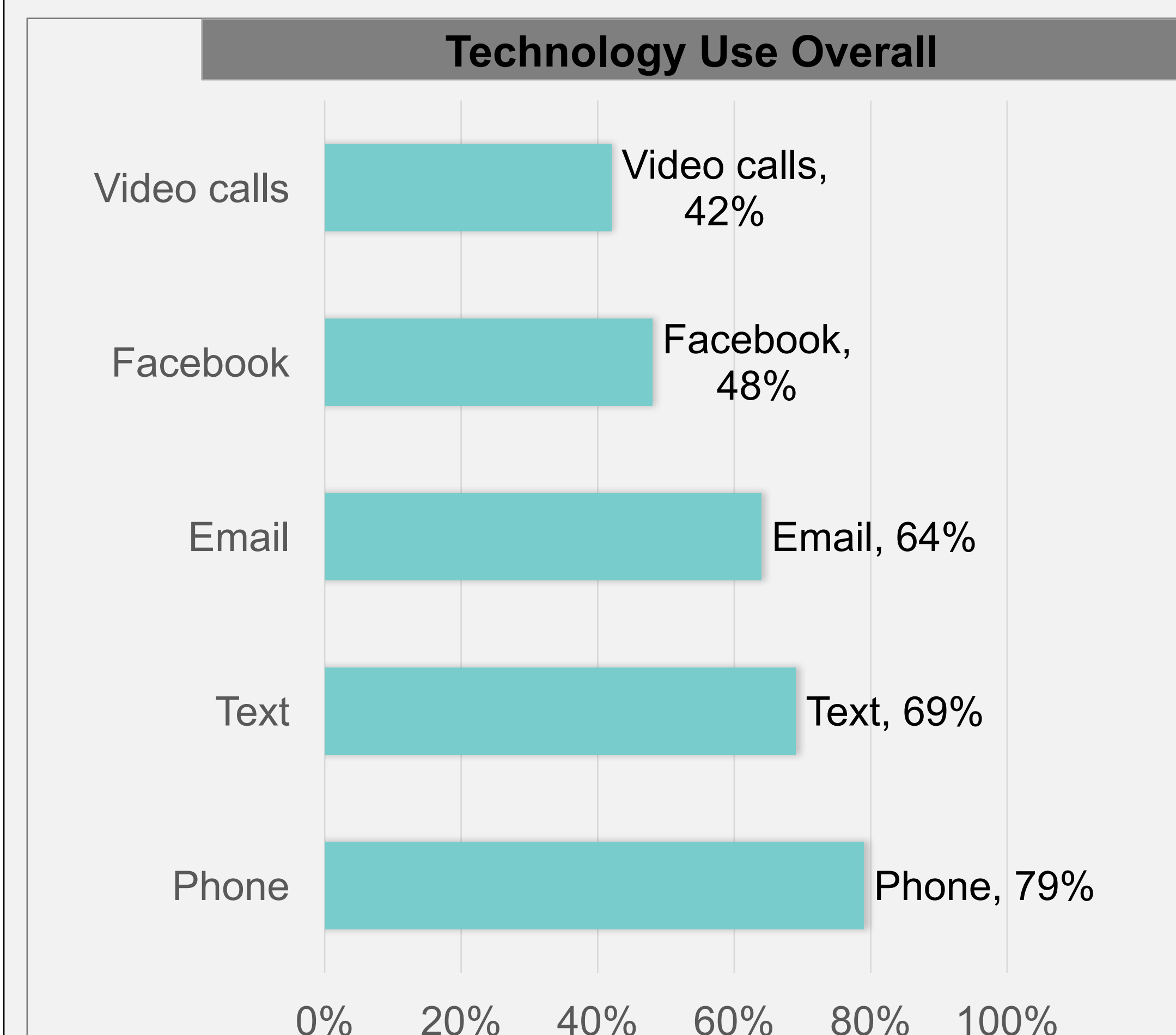
57% of teens with ASD indicate technology can be distracting

Interview Results

Benefits ↑

Increase Independence
- Bypass poor handwriting
- Improve organization
- Aid comprehension
- Pursue own interests
- Use for leisure time

Improve Social Opportunities
- Bridge distance
- Variety of options

Distraction
- Limits to access
- Interferes with schoolwork/chores/sleep
- Impedes social interaction

Barriers ↓

Conclusion

Practitioners/parents should leverage the use of everyday technologies to:
- Improve organizational skills,
- Promote independence,
- Reduce anxiety and stress
- Enhance social/communication opportunities

Researchers:
- Need for efficacy studies for the above uses

Limitations:
- Self-report only
- Lack of diversity in sample

References

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