



“Verizon Foundation Survey on Middle School Students’ Use of Mobile Technology” TOPLINE

Prepared by TRU | Contact: Kristi Sarmiento KristiS@tru-insight.com; 312-951-4812

Contact: Anne Glauber, anne.glauber@finnpartners.com, 212-593-6481

Background & Objectives

- > As part of an ongoing commitment to understanding and supporting the use of mobile technology in the classroom, as well as furthering student interest in STEM, the Verizon Foundation wanted to explore middle school students’ use of technology.
- > Specifically, the Verizon Foundation chose to explore this issue from the perspective of middle school students themselves:
 - > How interested are middle school students in STEM?
 - > Do middle school students use mobile devices for learning at school and / or at home?
 - > How do middle school students respond to the use of technology? Are there any connections to STEM achievement?
 - > Are there measurable differences to the above questions based upon family income level and student ethnicity?
- > Verizon Foundation commissioned TRU to conduct quantitative research to address these objectives.
- > This document provides topline findings from the research.

Quantitative Methodology in Brief

- > TRU conducted a total of 1,000 online interviews among 6th-8th grade students, ages 11-14, yielding a margin of error of ± 3.0 percentage points. Interviews were conducted from October 4th through October 12th, 2012, and were broken out as follows:

	MALES	FEMALES	TOTAL
6th Graders	166	166	332
7th Graders	166	166	332
8th Graders	167	167	336
TOTAL	500	500	1,000

- > A quota was also set to ensure a minimum of 200 respondents with a household income of \$25,000 or less. The final total for this quota is n=273.
- > Unless otherwise noted, all reported data is based from a statistically-reliable base size of n=100 or greater.

Reporting Notes for Comparison Data

- > Significance testing was conducted for all comparison groups.
 - > A capital letter next to a percentage indicates a significant difference at the 95% confidence level.



- > A lower-case letter next to a percentage indicates a significant difference at the 90% confidence level.
- > The absence of a letter next to a percentage indicates no significant difference.



KEY FINDINGS

- > Interest in STEM subjects is surprisingly high among middle school students, especially among Hispanic and African American children.
 - > One out of every two Hispanic and African American middle school students reported they have a strong interest in science and computer science.
- > An unexpected number of middle school students (from all ethnicities and incomes) say they are using mobile devices including smartphones and tablets to do their homework. Previous TRU research indicated that middle school students are using smartphones and tablets for communication and entertainment. However, this is the first TRU research that shows that middle school students are also using these mobile devices to complete homework assignments.
 - > More than one out of three middle school students report they are using smartphones (39%) and tablets (31%) to do homework.
 - > More than 1 in 4 students (26%) are using smartphones for their homework, weekly or more.
 - > Interestingly, Hispanic and African American middle school students are using the smartphones for homework more than Caucasian students. Nearly one half of all Hispanic middle school students (49%) report using smartphones for homework. Smartphone use for homework also crosses income levels with nearly one in three (29%) of students from the lowest income households reporting smartphone usage to do their homework assignments.
- > Despite the high numbers of middle school students using laptops, smartphones and tablets for homework, very few are using these mobile devices in the classroom, particularly tablets and smartphones. A large gap exists between mobile technology use at home and in school.
 - > Where 39% of middle school students use smartphones for homework, only 6% report that they can use the smartphone in classroom for school work. There is also a gap in tablet use. Although 31% of middle school students say they use a tablet for homework, only 18% report using it in the classroom.
- > Yet, significantly more students who use mobile devices in the classroom express a strong interest in STEM subjects than students who do not use these devices in the classroom.
- > Two out of three students (67%) who use laptops in class say that it helps them learn math and science better and more than half of all students who use tablets in class (55%) say it helps them learn math and science better.
- > Students also say using mobile devices like tablets makes them want to learn more.
- > Despite these benefits, more than half of all middle school students (54%) say they are not allowed to use laptops in the classroom for learning purposes, (68%) of students are not allowed to use a tablet for learning purposes, and (88%) say they are not allowed to use smartphones for learning in the classroom.

Significant Opportunity

- > A significant opportunity appears to exist for middle schools to more deeply engage students by increasing their use of mobile devices in the classroom.
 - > Access to mobile devices at home is high among this group, and students are already turning to these devices to complete homework assignments. Therefore, it is only natural and highly beneficial for students to extend this mobile device usage into the classroom.



- > Teacher education and training on the effective integration of mobile technologies into instruction may provide significant benefits for all. Mobile device usage in class appears to have the potential to sustain, if not increase interest in STEM subjects as students progress into high school.



Interest in STEM

Middle school students exhibit strong interest in STEM subjects. More students claim to be very interested in STEM subjects, such as math, science, and computer science than in non-STEM subjects, such as English, social studies, and foreign language.

% who are very interested in...	Total respondents n=1,000
Science	49%
Computer science	46%
Math	37%
English	32%
Social studies	30%
Foreign language	23%

- > This interest in STEM appears to peak in the 6th grade and trail off slightly in the 7th and 8th grade.

% who are very interested in...	6 th grade n=330 (A)	7 th grade n=334 (B)	8 th grade n=336 (C)
Science	51%	50%	45%
Computer science	51% bc	44%	43%
Math	40% c	38%	34%

- > More African-American and Hispanic students than Caucasian students express strong interest in STEM.

% who are very interested in...	Caucasian n=576 (A)	AA n=236 (B)	Hispanic n=164 (C)
Science	47%	52%	49%
Computer science	42%	50% a	53% A
Math	33%	44% Ac	35%

- > While Interest in STEM increases by students' household income level, even the lowest income group expresses a strong interest in STEM.

% who are very interested in...	HH Income <\$25K n=273 (A)	HH Income \$25K - \$50K n=238 (B)	HH Income \$50K+ n=426 (C)
Science	41%	48%	55% AB
Computer science	39%	46%	51% A
Math	31%	47%	42% A



I. Mobile Device Usage

Many middle school students are using mobile devices at home.

- > Nearly two in three (65%) middle school students use a laptop at home.
- > Half (49%) use a smartphone at home.
- > More than one in three (36%) use a tablet at home.
- > As expected, smartphone usage at home increases with age.

	6th grade n=330 (A)	7th grade n=334 (B)	8th grade n=336 (C)
% who use device at home			
Smartphone	42%	47%	57% AB

- > More African-American and Hispanic students than Caucasian students claim to use a smartphone at home!

	Caucasian n=576 (A)	AA n=236 (B)	Hispanic n=164 (C)
% who use device at home			
Smartphone	45%	57% A	54% A

- > As expected, device usage at home tends to increase among higher income households; however usage is still considerable even among the lowest income students.

	HH Income <\$25K n=273 (A)	HH income \$25K - \$50K n=238 (B)	HH income \$50K+ n=426 (C)
% who use device at home...			
Laptop	55%	69% A	70% A
Smartphone	39%	45%	57% AB
Tablet	21%	31% A	49% AB

Notably, many middle school students are using the mobile devices they have at home to complete homework assignments – and they’re using them frequently!

- > 64% of middle school students use a laptop to complete homework assignments.
- > 57% use a laptop for homework on a weekly basis or more often.
 - > More than half (53%) of the lowest income students (HH income <\$25K) use a laptop to complete homework (n=273).
 - > Nearly as many (45%) do so on a weekly basis or more often (n=273).
- > 39% of middle school students use a smartphone to complete homework assignments.
- > More than one in four students (26%) use a smartphone for homework on a weekly basis or more.
 - > 29% of the lowest income students (HH income <\$25K) use a smartphone to complete homework (n=273)!



- > Nearly as many (22%) do so weekly or more often (n=273).
- > 31% of middle school students use a tablet to complete homework.
- > One in four students (25%) use tablets for homework on a weekly basis or more often.
 - > More Hispanic students claim to use mobile devices for homework than African-American or Caucasian students:

	Caucasian n=576 (A)	AA n=236 (B)	Hispanic n=164 (C)
% who use device for homework			
Laptop	62%	64%	68%
Smartphone	36%	42% a	49% A
Tablet	31%	30%	38% Ab

- > And, more Hispanic students than Caucasian or African-American students are using these devices for homework on a weekly basis or more often:

	Caucasian n=576 (A)	AA n=236 (B)	Hispanic n=164 (C)
% who use device for homework			
Laptop	54%	57%	65% A
Smartphone	22%	27%	38% AB
Tablet	24%	26%	32% A

Despite the prevalence of mobile device usage at home, as well as the large number of students using these devices to complete homework assignments, mobile device usage is much lower in the classroom.

- > Two in three (65%) use a laptop at home, 64% use a laptop for homework, yet only 31% use a laptop in the classroom.
- > Half (49%) use a smartphone at home, 39% use a smartphone for homework, yet only 6% use a smartphone in the classroom.
- > More than one in three students uses a tablet at home (36%), nearly as many use a tablet for homework (31%), yet only 18% use a tablet in the classroom.
 - > And, these numbers dip even lower among the lowest income students.

	HH Incomes <\$25K n=273	
	Use device at home	Use device in class
Laptop	55%	23%
Smartphone	39%	2%
Tablet	21%	11%

Those who use mobile devices in class are using them frequently!

- > Of the 18% of students who use tablets in class (n=176), 86% are using them on a weekly basis, if not more often.
- > Of the 31% of students who use laptops in class (n=310), 88% are using them on a weekly basis, if not more often.



- > *The same trend appears to exist among students who use smartphones in class, but the base size is too small for comparison (n=56).*

Half of all students who use tablets in class bring their tablets from home, while students who use laptops in class say the school provides their laptops.

- > Half (49%) of those who use tablets in class bring their own tablet to school (n=176).
 - > Just over half (55%) of those who use tablets in class say their school provides them with tablets to use (n=176).
- > Only one in four (26%) students who use laptops in class bring their own laptop to school (n=310).
 - > More than three in four (77%) of those who use laptops in class say their school provides them with laptops to use (n=310).
- > *Students who use smartphones in class tend to bring their own smartphones to school. However, given the low base size (n=56), this finding should be considered directional, at best.*

II. Benefits of Mobile Devices in the Classroom

Students who use mobile devices in the classroom say using these devices motivates learning.

- > Of the 31% who use laptops in class (n=310), two in three (67%) say using the tablet in class makes them want to learn more.
- > Of the 18% who use tablets in the classroom (n=176), two in three (67%) say using the tablet in class makes them want to learn more.
 - > *The same trend appears to exist among students who use smartphones in class, but the base size is too small for comparison (n=56).*

Using these devices in the classroom inspires self-confidence and excitement.

- > More than half of all students who use some form of technology in the classroom (n=409) say doing so makes them feel...
 - > Smart (61%)
 - > Excited (54%)
 - > Happy (52%)

And, there is a particular benefit of mobile device usage in the classroom in the areas of math and science.

- > Two in three students who use laptops in the classroom (67%) say using a laptop in class helps them learn math and science better (n=310).
- > More than half of all students who use tablets in the classroom (55%) say using a tablet helps them learn math and science better (n=176).
 - > *The same trend appears to exist among classroom smartphone users, but the base size is too small for comparison (n=56).*



- > Significantly more students who use a laptop, tablet, and/or smartphone in the classroom express a strong interest in STEM subjects than students who do not use these devices in the classroom.

% who are very interested in...	Laptop, tablet, and/or smart phone users in the classroom n=409 (A)	Non-users of laptops, tablets, or smart phones in the classroom n=591 (B)
Science	54% B	45%
Computer science	53% B	41%
Math	42% B	34%

- > And, more students who use some form of technology in the classroom and who are interested in STEM feel good about using technology in the classroom.

% who say using tech in class makes them feel...	Classroom tech user with strong interest in STEM n=364 (A)	Classroom tech user with no strong interest in STEM n=100 (B)
Smart	64% B	52%
Excited	56% B	43%
Happy	56% B	39%

III. Opportunity to Increase Mobile Device Usage in the Classroom

Despite the evidence that using laptops, tablets, and smartphones in the classroom produces excitement and a desire to learn (particularly in the STEM subjects) among students, many students do not use or are not allowed to use these devices in class.

- > More than half (54%) of middle school students are not allowed to use a laptop in the classroom for learning purposes.
- > 68% of middle school students are not allowed to use a tablet in the classroom for learning purposes.
- > A full 88% of middle school students are not allowed to use a smartphone in the classroom for learning purposes.
 - > More “lower income” students than “higher income” students claim they are not allowed to use mobile devices in class.

% who are NOT allowed to use devices in class...	<\$25K n=273 (A)	\$25K - \$50K n=238 (B)	\$50K+ n=426 (C)
Smartphone	92% C	92% C	84%
Tablet	75% bC	68%	63%
Laptop	62% bC	54%	47%

And, among those who are allowed to use mobile devices in the classroom, even fewer actually take advantage.

- > 46% claim they are allowed to use a laptop in the classroom, yet only 31% actually do so.
- > 32% claim they are allowed to use a tablet in the classroom, yet only 18% actually do so.



- 12% claim they are allowed to use a smartphone in the classroom, yet only half as many (6%) actually do so.



Appendix

- > Q.8 – Which of the following technology devices do you use at home? *Please check all that apply.*

	Total respondents
Laptop computer	65%
Desktop computer	63%
MP3 player	57%
Smartphone	49%
Regular cell phone	41%
Tablet	36%
e-Reader	19%
Netbook	9%
None of these	1%

- > Q.9 – Which, if any, of the following technology devices are allowed and/or used in the classroom for learning purposes?

Used in class for learning purposes	Total respondents
Desktop computer	58%
Laptop computer	31%
Tablet	18%
e-Reader	11%
Netbook	9%
Smartphone	6%
MP3 Player	5%

- > Q.12 – How often do you use the following technology devices for your homework before or after school?

Ever use for homework	Total respondents
Laptop	64%
Smartphone	39%
MP3 Player	32%
Tablet	31%
e-Reader	15%
Netbook	8%