

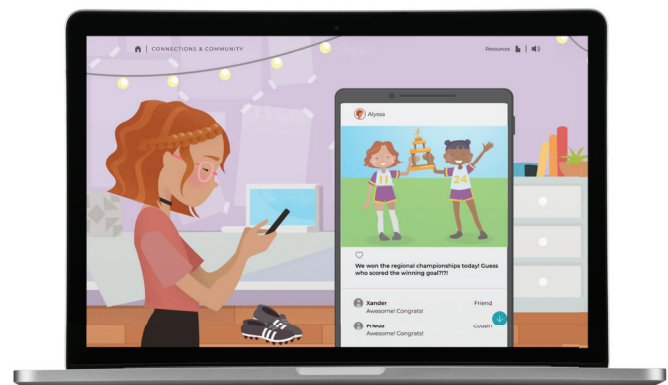


Impact Research

Ignition Digital Wellness & Safety

Executive Summary

- This research was designed to meet ESSA Tier 3 standards for “Promising” evidence of impact.¹
- Students in Middle School are incredibly susceptible to cyber-bullying as well as social comparison.^{2,3}
- *Ignition* was originally created (and re-released in 2019) to equip students with the skills needed to be responsible and safe digital citizens.
- EVERFI believes impact goes beyond just learning. That is why course design and measurement of impact focused on changes to attitudes, in addition to knowledge.
- Students who started and completed the course in October 2021 exhibited a statistically significant positive increase in knowledge over time.
- *Ignition* helped prepare female-identifying students to combat social comparison.
- Overall, students also demonstrated positive, but not significant, shifts in attitudes related to their prosocial digital behaviors, wellness, and safety.



Grade Level: 6 - 9

Total Lessons: 6 lessons, 20-30 minutes each

Curriculum Fit: Health, Library Science, Homeroom
Computer Skills, Advisory, and CTE

Available Translations: English, Spanish, and French

“I liked that this course was able to show all sides of staying safe online and [how to keep] a good online and offline balance.”

-Ignition Student

Background

Student Digital Wellness Education

As students navigate and connect with others in online spaces, they are met with an overwhelming amount of information of varying quality and intentions, threats to their privacy and security, and endless scrolling that can negatively impact their wellbeing.⁴ In particular, middle school students are at high risk for bullying and social comparison in the digital space.^{2,3}

Dedicated education programs on digital wellness and well-being are a necessary approach, and have been shown, to mitigate the risks students face in digital, and digitally-mediated environments.^{5, 6, 7}

Ignition, recently rebooted in 2019, is a digital course that tackles some of the most pressing digital issues facing students today, preparing them to be better digital citizens for their lifetime. *Ignition* lessons are aligned to ISTE (International Society for Technology in Education) student standards, CASEL (Collaborative for Academic, Social, and Emotional Learning) competencies, and CCTC (Common Career Technical Core) standards to support effective and meaningful instruction. The course instructs students on the skills they need to safely and confidently navigate the digital world. Despite 85% of students reporting they spend at least 3 hours per day on social media, only 63% acknowledge that technology has a big influence on their lives. In *Ignition*, students are encouraged to take practical steps to protect their balance between online and offline activity, their privacy and safety, while also teaching them how to evaluate content for accuracy, perspective, and motive.



Percent of 8th graders who said...

62.53%

“technology has a big influence on my life”

85.17%

they spend 3+ hours a day on social media

“I think our students really need to learn about digital literacy. They were surprised by things like how fast information spreads on social media.”

- Fall 2021 *Ignition* Educator

Method

This study aimed to determine the effectiveness of EVERFI's *Ignition* course in increasing students' knowledge about key concepts related to digital citizenship and in shifting attitudes aligned with prosocial and safe online interactions.

Data was collected from students who started and completed all 6 lessons of *Ignition*, in any order, on the EVERFI K-12 Platform during October 2021. Secondary analyses were conducted on student data collected from the course surveys and quizzes.



Lesson Topics

Connections & Community

Students learn about the permanence of their online posts and how to manage online relationships (including instances of cyber-bullying, harassment, or “digital drama”)

Screen Time vs Offline Time

Students learn the benefits and risks of online time, as well as ways to identify if they spend too much time online and how to manage their online time.

Rights & Literacy

Students learn how to responsibly create or co-create content online, including their rights, responsibilities, and restrictions in creating and sharing content.

Safety & Privacy

Students learn what a digital footprint is, how to protect their personal information, why to be wary of digital tracking, and how to get help when they need it.

Technology & Data

Students learn how to protect their data online, how to recognize and avoid online threats, and how to create a secure password.

Evaluating Content

Students learn how to conduct effective searches online, how to evaluate content for accuracy and perspective, and how to differentiate news from native ads.

Participants

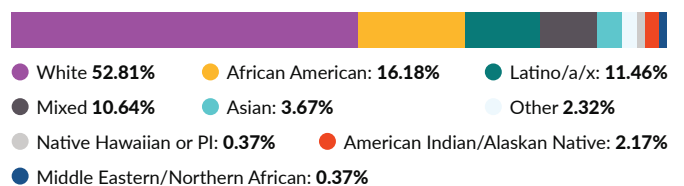
Survey information was collected nationally from students who self-reported they were 13 years or older at the time of course enrollment. Therefore, this study limited data collection to students in Grade 8, even though there were other grade levels that took the course in practice. Only students who completed all lessons, quizzes, and surveys in October 2021 were included (n = 1,113).

The breakdown of student demographics for the study sample can be found to the right. The sample is very similar to the wider population that took *Ignition* in the 2021-22 school year with slightly less race/ethnicity diversity.

Gender

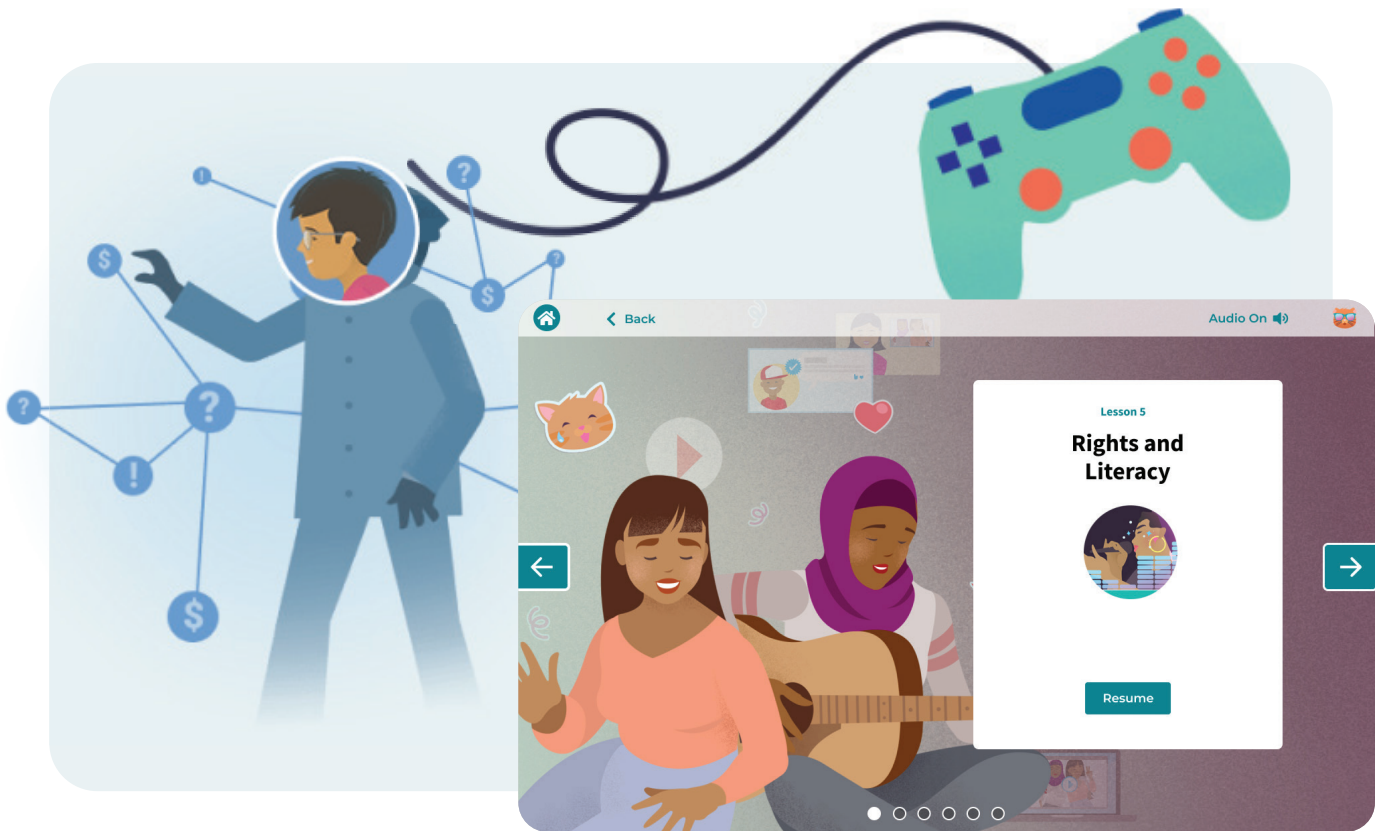


Race/Ethnicity



LMI Status





Measurement

Quizzes

To assess the acquisition of knowledge, students answered pre-and post-quizzes before and after each lesson. Students saw the same questions on both the pre- and post-quiz. However, students did not receive the answers or a score on the pre-quiz. In total, 30 multiple choice questions were given to students targeting areas covered in the course: data privacy and sharing, screen time, respectful social engagement, and media literacy.

For example, participants were asked, “When is it okay to share your password with a friend?” with the following answer options: “if your friend promises not to tell anyone”, “if you change your password right away”, “if it’s your best friend”, “it’s never okay to share your password (correct answer).” All questions had four answer choices and one answer that best aligned with the curriculum in the course. The quiz items were determined to have a high internal consistency⁸. Quiz scores from the first quiz attempts for each student were averaged and used for analysis.

Surveys

Students who reported they were 13 years or older at the time their teachers enrolled them in the course were also given optional pre- and post-surveys to measure attitudes. In addition to attitudes, the pre-survey collected self-reported student demographic information, while the post-survey collected course-related feedback.

Students were asked to rate on a 5-point Likert scale how strongly they agreed, or felt prepared, to engage in prosocial behaviors aligned to digital wellness and safety concepts⁹. Separate repeated-measures ANCOVAs were conducted for each question to surface meaningful information at the item level.

Lastly, teachers were asked to answer a survey following the fall semester to provide context around their course implementation experience and glean product-focused feedback. School-level low-to-moderate income (LMI) status was obtained from the National Center for Education Statistics.

Results

Knowledge

Students took 4 ½ days, on average, to complete the course, meaning they were completing a little over a lesson a day.

As shown by the bar graph, students demonstrated an increase in knowledge and understanding of concepts related to digital wellness and safety, even after controlling for the effect of gender, race, and school LMI status.¹⁰

Students were scoring, on average, 58.8% on the pre-quizzes. After completing *Ignition* lessons, students demonstrated an average increase of nearly 10 points (15.7%), or a letter grade difference.

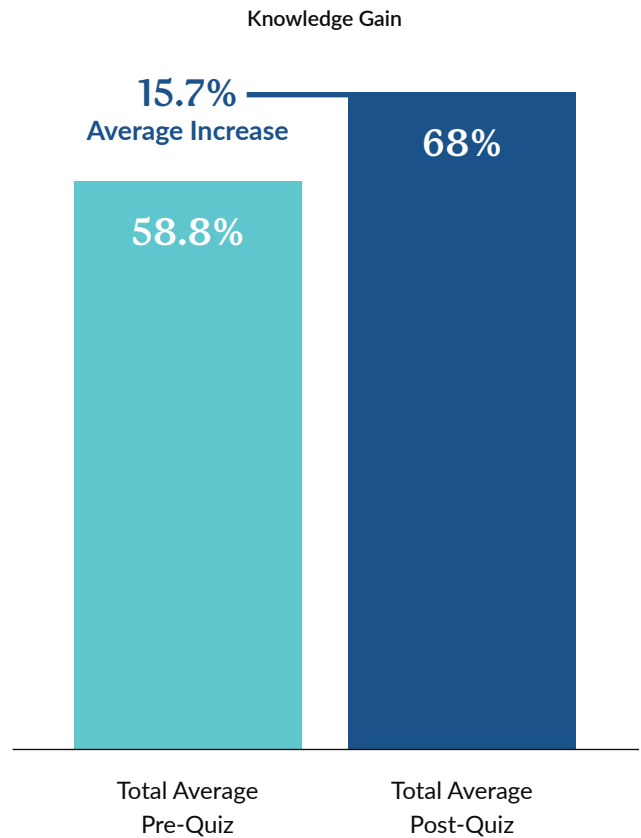
“I liked how the course covered a ton of online situations that could legitimately happen to me or anyone I know.”

- *Ignition* Student

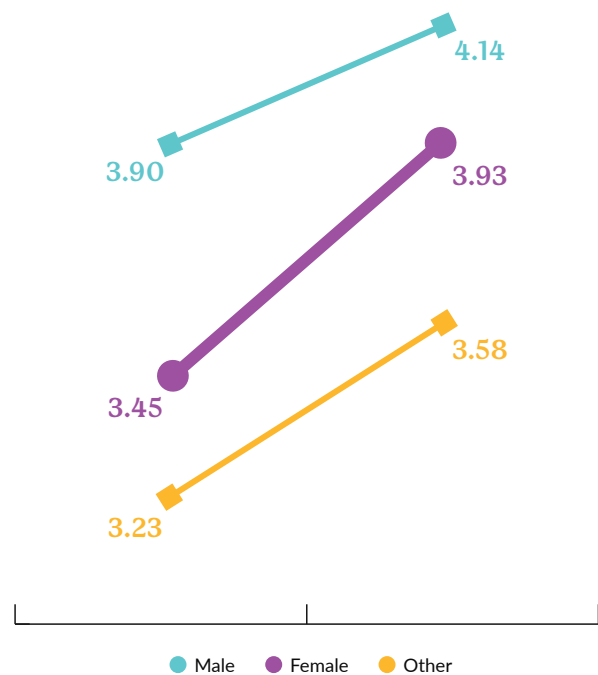
Attitudes

In past research, educators and researchers evaluating digital wellness programs have observed that students can often demonstrate an understanding of safe online behaviors, but they do not always follow through in practice.¹¹ The current study is no exception. While students significantly increased their average preparedness to “Identify the difference between created and curated content” online¹², other results showed differences in the same positive direction, but not to the point of significance: “Avoid comparing myself to others”¹³; “Protect my safety online”¹⁴; “I know what to say to diffuse a situation online”¹⁵; and “Ask an adult for help dealing with an issue I am facing online”.¹⁶

It is important to point out that prior research has found gender differences in technology use and social comparison.¹⁷ ¹⁸The current study corroborates this and found that there were notable differences in preparedness to “avoid comparing myself to others,” with female-identifying students, and students identifying as ‘other’ scoring significantly lower than male-identifying students prior to the course. After *Ignition*, preparedness to avoid social comparison increased for all students, however, most significantly for female-identifying students (a 14% increase) helping to close the marked gap with male-identifying students.¹⁹



Pre to Post Change in Preparedness to Avoid Social Comparison by Gender



Conclusions

After taking *Ignition*, the percent of 8th graders who said...

71%

Agree or Strongly Agree
Ignition helped them protect their mental well-being online.

69%

Agree or Strongly Agree
Ignition made them more aware of how their data and information can be used by others online.

66%

Agree or Strongly Agree
That spending time offline is just as important as spending time online.

Discussion

This study highlighted promising evidence that *Ignition* is having a positive impact on student knowledge and, to a lesser extent, attitudes. In an increasingly digital world, education on how to both benefit from a digital community and navigate the inherent pitfalls of digital spaces is incredibly important. During adolescence, students are shifting away from adults to peers as their main source of social information.²⁰ Therefore changing strong beliefs in students through direct education, especially on a topic in which they feel skilled, is particularly difficult.⁶ Given this challenge, the findings from this study are not surprising as students reported directionally positive, but generally not statistically significant, shifts in attitudes related to making healthy decisions online, as well as feeling more prepared to protect their safety and wellbeing. Educators who used *Ignition* in the Fall of 2021 reported overwhelmingly positive experiences using the course with students. However, given the brief nature of the learning experience, more context around implementation fidelity and if the supplemental materials EVERFI provides to extend learning were used is needed. Ultimately, *Ignition* was found to equip students with the information needed to safely explore the digital world. This is only half of the battle with a digital native generation; it is critical to continue encouraging students to use this knowledge in their daily lives.

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EVERFI, Inc., a Blackbaud company, empowers educators to bring real-world learning into the classroom and equip students with the skills they need for success - now and in the future. 3 of 5 U.S. school districts use EVERFI's digital resources to teach topics like financial literacy, social-emotional learning, career readiness, and prevention education.

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Ignition can help schools receiving discounts offered by the E-rate Program meet the Children's Internet Protection Act (CIPA) requirement.



"[*Ignition*] tackles challenging topics in a kid friendly way using scenarios they can relate to."

-*Ignition* Teacher

Percent of *Ignition* Educators who said ...

92%

the course was interesting for their students.

97%

the course fit easily into their curriculum.

89%

they used either the grades or participation in *Ignition* towards their students' classroom grades.

94%

they plan on using EVERFI again next year.

Ready to start using *Ignition*?
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References

1. US Department of Education. (2016). *Non-regulatory guidance: Using evidence to strengthen education investments*. Retrieved from <https://www2.ed.gov/policy/elsec/leg/essa/guidanceuseinvestment.pdf>
2. Kalender, M. K., Keser, H., & Tugun, V. (2019). Middle and high school students' opinions, experiences and responses regarding to cyberbullying. *Education and Science*, 44(198).
3. Keles B, McCrae N, Grealish A. (2019) A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. *Int J Adolesc Youth* 2019;25(1):79-93.
4. Feerrar, J. (2020). Supporting digital wellness and wellbeing. In *Student Wellness and Academic Libraries: Case Studies and Activities for Promoting Health and Success*. ACRL Press.
5. Oh, C., Carducci, B., Vaivada, T., & Bhutta, Z. A. (2022). Interventions to promote physical activity and healthy digital media use in children and adolescents: a systematic review. *Pediatrics*, 149(6).
6. Bickham, D. S., Moukalled, S., Inyart, H. K., & Zlokower, R. (2021). Evaluating a middle-school digital citizenship curriculum (Screenshots): Quasi-experimental study. *JMIR Mental Health*, 8(9), e26197.
7. Mishna, F., McInroy, L. B., Lacombe-Duncan, A., Bhole, P., Van Wert, M., Schwan, K., ... & Johnston, D. (2016). Prevalence, motivations, and social, mental health and health consequences of cyberbullying among school-aged children and youth: Protocol of a longitudinal and multi-perspective mixed method study. *JMIR Research Protocols*, 5(2), e5292.
8. Given a non-standardized measurement of knowledge was used, the reliability of the quiz items were collectively assessed and determined to have high level of internal consistency ($\alpha = .79$).
9. An exploratory factor analysis (EFA) was run on a 16-item survey ($\alpha = .95$) that measured attitudes and intended behaviors related to digital wellness and safety. KMO = .97, which is 'marvelous' according to Kaiser. Bartlett's test of sphericity was statistically significant ($p < .001$), indicating that the data was likely factorizable. EFA revealed one factor that had an eigenvalue greater than one and which explained 95.81% of the total variance. Visual inspection of the scree plot indicated that one factor should be retained. The measure was deemed likely unidimensional.
10. A one-way repeated measures ANCOVA was conducted to determine whether there were statistically significant differences in quiz scores before and after the students were exposed to *Ignition* content. There were some, but no extreme outliers, and the data were initially not normally distributed, as assessed by boxplot, Shapiro-Wilk test ($p > .05$) and Q-Q Plot, respectively. Therefore, a reflect and logarithmic transformation was applied to remediate the moderate negative skew. The assumption of normality was then met. After controlling for gender and race/ethnicity, and designating school low-to-moderate income status as a between-subjects factor, the course elicited statistically significant changes in knowledge over time, $F(1,1108) = 84.31, p < .001, \eta_p^2 = .07$.
11. Hui, B., & Campbell, R. (2018). Discrepancy between learning and practicing digital citizenship. *Journal of Academic Ethics*, 16(2), 117-131.
12. One-way repeated measures ANCOVA analyses examined whether there were significant differences in attitude item scores before and after students were exposed to *Ignition* content. All items were normally distributed. All analyses controlled for gender and race/ethnicity, and included designated school low-to-moderate income status as a between-subjects factor. Students significantly increased their mean preparedness to "Identify the difference between created and curated content" (Pre-Survey = 3.42; Post-Survey = 3.91; $F(1,1108) = 11.33, p < .001, \eta_p^2 = 0.01$).
13. Pre-Survey = 3.65; Post-Survey = 3.98; $F(1,1108) = 0.55; p = .46; \eta_p^2 = 0.00$
14. Pre-Survey = 4.19; Post-Survey = 4.22; $F(1,1108) = 0.06; p = .80; \eta_p^2 = 0.00$
15. Pre-Survey = 3.69; Post-Survey = 3.89; $F(1,1108) = 1.02; p = .31; \eta_p^2 = 0.00$
16. Pre-Survey = 3.62; Post-Survey = 3.91; $F(1,1108) = 2.28; p = .10; \eta_p^2 = 0.00$
17. Bergagna, E., & Tartaglia, S. (2018). Self-esteem, social comparison, and Facebook use. *Europe's Journal of Psychology*, 14(4), 831.
18. Nesi, J., & Prinstein, M. J. (2015). Using social media for social comparison and feedback-seeking: Gender and popularity moderate associations with depressive symptoms. *Journal of Abnormal Child Psychology*, 43(8), 1427-1438.
19. There was a significant interaction between time and gender, $F(1, 1105) = 4.96, p = .01$. Bonferroni-adjusted comparisons indicated that, before taking *Ignition*, students who male-identified reported preparedness scores .44 points higher than females ($p < .001$, 95% CI of the difference .26 to .63) and .66 points higher than those who identified as other ($p = .01$, 95% CI of the difference .12 to 1.20). Preparedness scores increased for students who identified as male (from 3.90 to 4.14; $\chi^2(1) = 1.09, p = 0.30$) and those who identified as other (from 3.23 to 3.58; $\chi^2(1) = 2.59, p = 0.11$), though slope contrasts indicated this change over time was not significant. However, there was significant change over time among female students, with scores increasing from 3.45 before *Ignition* to 3.93 after taking *Ignition* ($\chi^2(1) = 299.76, p < .001$), a 14% increase.
20. Gifford-Smith, M., Dodge, K. A., Dishion, T. J., & McCord, J. (2005). Peer influence in children and adolescents: Crossing the bridge from developmental to intervention science. *Journal of Abnormal Child Psychology*, 33(3), 255-265.