



Teacher Attitudes about Digital Games in the Classroom



Prepared by: VeraQuest, Inc.

Date of Survey: March 15-26, 2012

In March 2012, VeraQuest conducted a survey on the behalf of the Joan Ganz Cooney Center. The survey was conducted among U.S. K-8th grade classroom/specialist teachers who use digital games.

Questions focused on the following:

- Types and frequency of digital game use in the classroom
- Benefits of digital game use in the classroom
- Barriers to digital game use in the classroom
- Budgetary concerns/issues with digital game use
- Initial involvement with and sources for further learning of digital games

Conclusions and Implications

- Teachers overall seem to have a very positive opinion of digital games in the classroom as it relates to the impact on students. They cite benefits like more collaboration among students and the capacity of digital games to help students sustain attention on specific tasks. The benefits also extend to students who are lower-performing with respect to improved levels of engagement, enhanced ability for individualized attention and even improved attendance.
- When asked about the largest barriers to utilizing digital games in the classroom, cost and technology resources top the list. Familiarity with technology was only considered a barrier by 13% of teachers. These findings are consistent with other research on technology in the classroom conducted by VeraQuest. However, when we view the results in a more indirect fashion, we see that
 - Teachers who are “very” comfortable with digital game technology have a more favorable impression of digital games than those who are not; furthermore that favorability crosses a number of student-oriented issues and dimensions
 - The more dollars that are spent in the classroom on technology or the belief that allocations for digital games will increase in the near future also seem to heavily influence whether teachers are positively pre-disposed to digital games in the classroom.

Conclusions and Implications

- The study suggests that teachers who struggle with technology would benefit greatly from programs that identify and educate teachers on the use of digital games. It's important that these programs not just focus on the weakest teachers or the most advanced, but identify the large group of teachers who classify themselves as “moderately” comfortable with digital games or 46% of all teachers surveyed.
- Finally, two-fifths of all teachers surveyed have no idea how much is spent in the classroom on digital games, however, among those familiar with how much is spent it is clear that the amount of money perceived to be spent in the classroom is positively correlated with how teachers feel about digital games. In other words, the act of making money available for digital games (and visible to the teacher) may encourage teachers to become more familiarized with digital games and therefore more comfortable. The more comfortable they are, the more likely they will be to use the technology and see the benefits first-hand.

Summary Findings

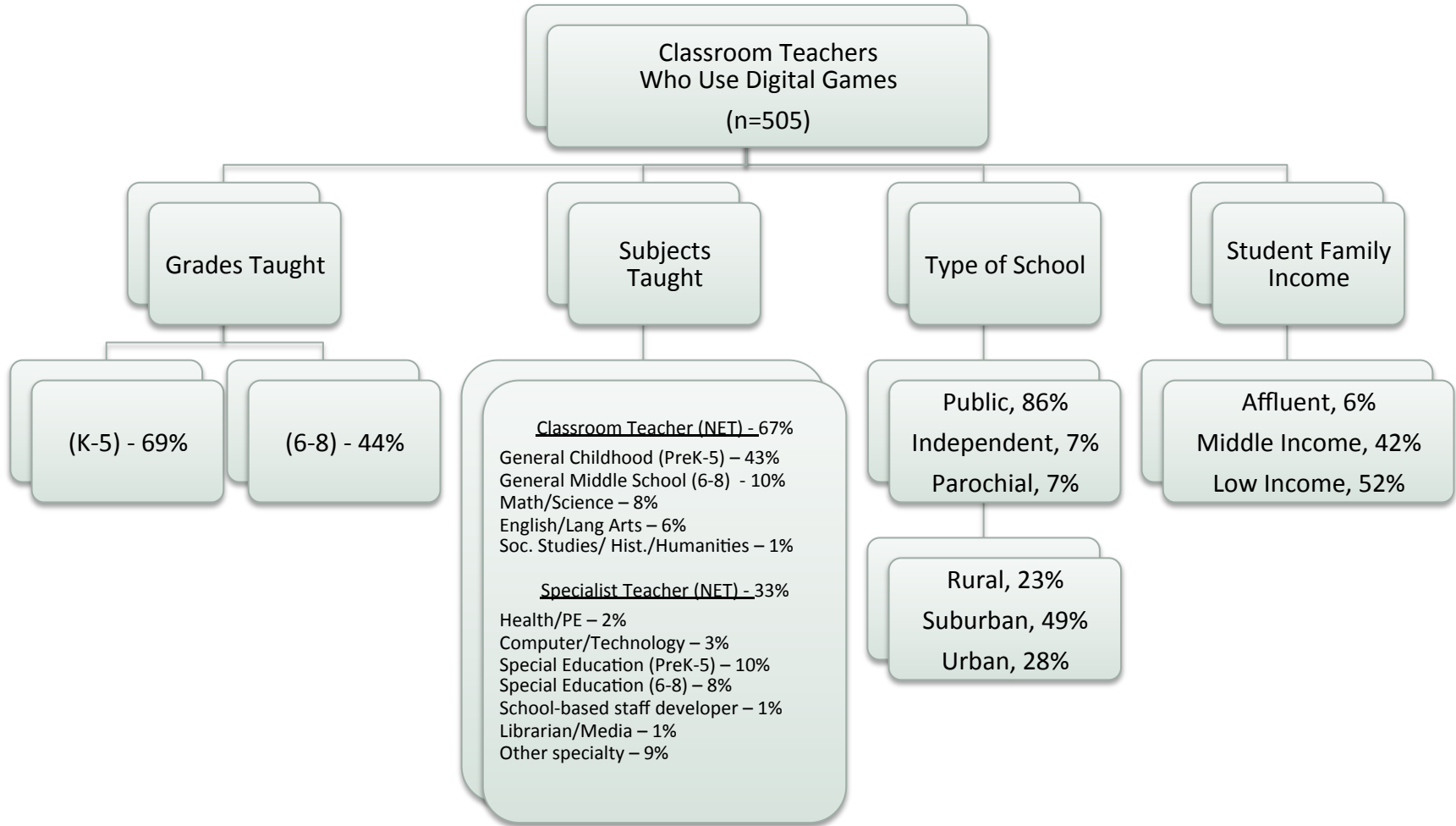
- The vast majority of teachers say they are either very (47%) or moderately (41%) comfortable with technology. That said, the attitudinal differences with respect to the impact of classroom-based digital games between those who classify themselves as very comfortable and those who do not is significant. The differences are evident across a range of dimensions. Teachers who are very comfortable feel digital games foster more observable collaboration among students and enable students to sustain focus on specific tasks. Moreover, teachers who are very comfortable with digital technology have a more positive impression of digital games on lower-performing students, such as: the way it can engage them, enable personalized attention, enable teachers to teach groups with varying abilities and even improve student attendance.
- There is also a strong relationship between the perceived dollar spend on digital technology in the classroom and teachers' levels of comfort: the more dollars spent, the more comfortable teachers are with digital games.
- Digital games are used fairly frequently, with half of teachers using them two or more days a week. Frequency tends to be higher among teachers in grades K-5 than 6-8.

Summary Findings

- As one might expect, traditional platforms are the most predominant type of platform for accessing digital games in the classroom: 85% of students can access digital games using PC's or Mac's. Two-fifths, however, can use interactive whiteboards and a quarter can access digital games via an iPad or other type of tablet.
- Digital games are used most often for reading/literacy applications (50%) and math (35%).
- Two-fifths of teachers say they have seen students become better collaborators and have increased attention to specific tasks. Similarly, three-fifths also feel that lower-performing students show increased engagement with content.
- When asked specifically about lower-performing students, teachers say that digital games engage and motivate students (69%), makes it easier to teach groups of mixed ability (62%) and enables them (teachers) to personalize instruction (60%).
- Cost is the number one barrier to using digital games in the classroom (50%), followed by access to technology resources (46%). Teaching to standardized tests also appears to be a substantial barrier.

Summary Findings

- In-service professional development plays an important role in how teachers first become acquainted with digital games (46%). Self-directed study (35%) is also important. When asked what sources they use for on-going education about digital games, 66% of teachers say other teachers within the district, 50% say they self-teach, while 42% cite seminars, conferences and conventions.



Research Design

Sample

Respondents were recruited from the uSamp panel (www.usamp.com). This panel has over 2 million members in the U.S. who have been recruited through a number of different panel enrollment campaigns. Panelists are required to double opt-in to ensure voluntary participation in the surveys they are invited to complete. Respondents receive points for the surveys they complete that can be accumulated and redeemed for a variety of products.

Adult respondents were randomly selected from a targeted uSamp panel of K thru grade 8 classroom teachers to be generally proportional of the demographic strata of total U.S. Teachers. Once selected, respondents were sent an invitation to a protected web-based survey which ensured that only the intended recipient could complete the survey, and that the survey could only be completed once. There were 505 respondents from the U.S. who reported being teachers and who completed the survey.

Computing Weights

Data for this study are not weighted

Statistical Significance

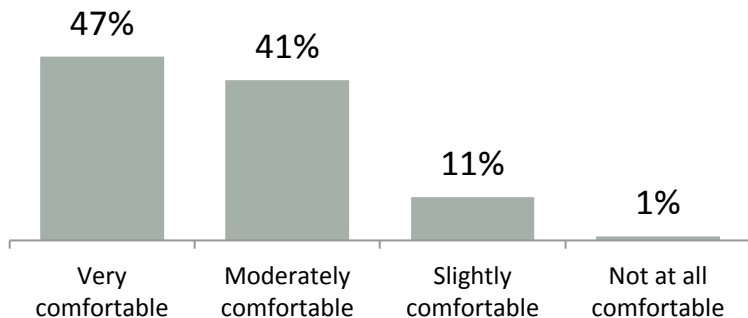
Stat testing completed at 90% confidence level. In some instances, percentages may not add to 100% due to rounding.

Key Findings

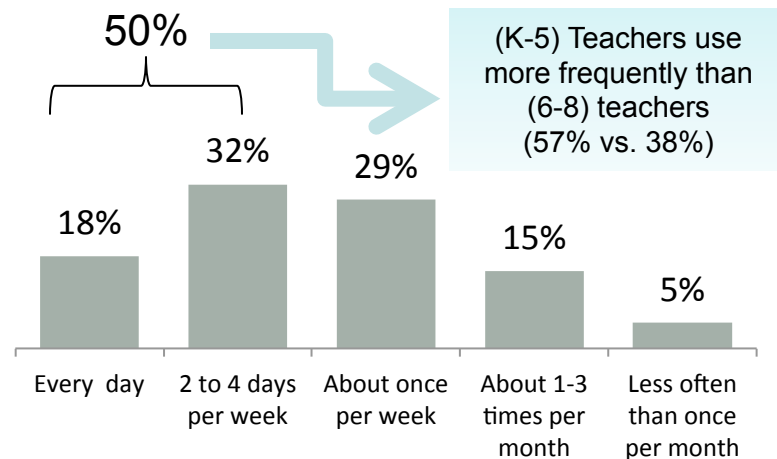
The vast majority of teachers say they are either very (47%) or moderately (41%) comfortable with technology; however, the way in which they categorize themselves appears to influence how they feel about technology in the classroom. See the summary slide on pages 20 and 21 for detail.

Digital games are used fairly frequently, with half of teachers using them two or more days a week. Frequency is higher among teachers in grades K-5 than 6-8.

Comfort Level Using Digital Games as a Teaching/Learning Tool



Frequency of Digital Game Use

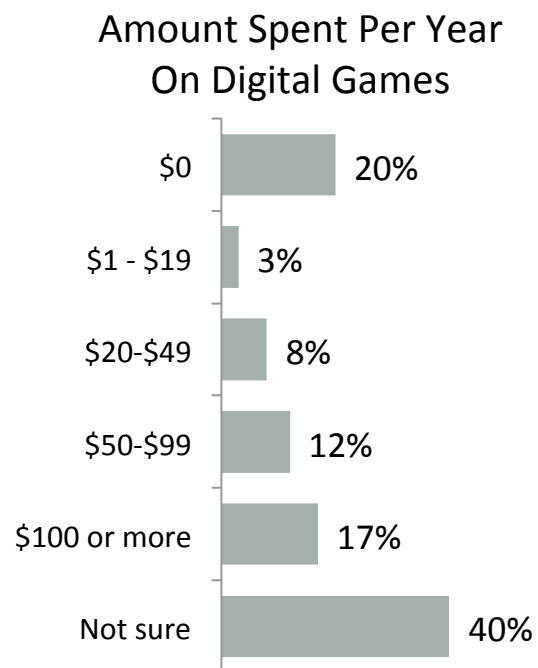


Q410 How would you describe your comfort level using digital games as a teaching and learning tool?

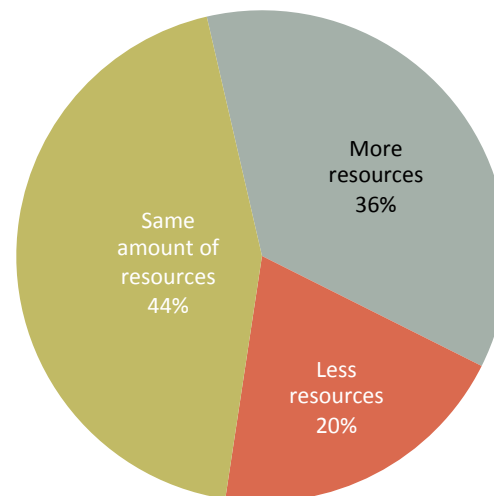
Q415 How frequently would you say your students use digital games in your classroom?.

A plurality of teachers (40%) don't know how much is spent on digital games for their classroom. Among those who offer estimates, about half say \$50 or more and half say less than \$50. A full-third of teachers say no dollars are spent on digital technology in their classroom.

Although the majority of teachers (44%) feel the expected allocation for digital games will remain the same over the next three years, more feel the number will rise versus decline, 36% vs. 20%, respectively.



Expected Allocation For Digital Games
Over Next 3 Years

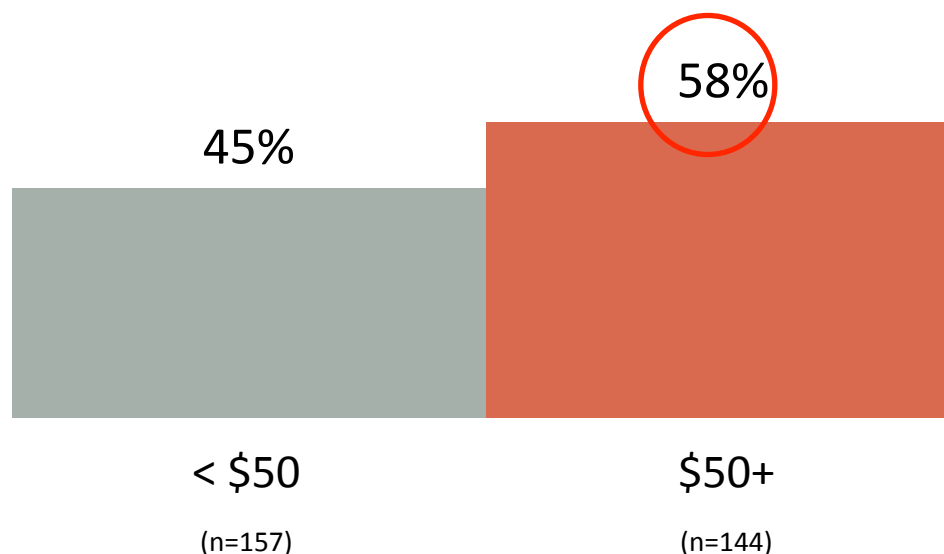


Q421 Including subscription services, how much does your classroom spend on digital games per year?

Q422 Do you believe your school will allocate ... of resources towards integrating digital games in classroom instruction over the next 3 years?

While 40% of teachers don't know how much is spent on digital game technology in the classroom, those who believe it's more than \$50 are significantly more likely to feel very comfortable. While there is no evidence of causality, it's logical that the more dollars spent, the more likely teachers are to use the technology. The more they use it, the more comfortable they are with it.

% Very Comfortable Using Digital Games by Annual Classroom Spend

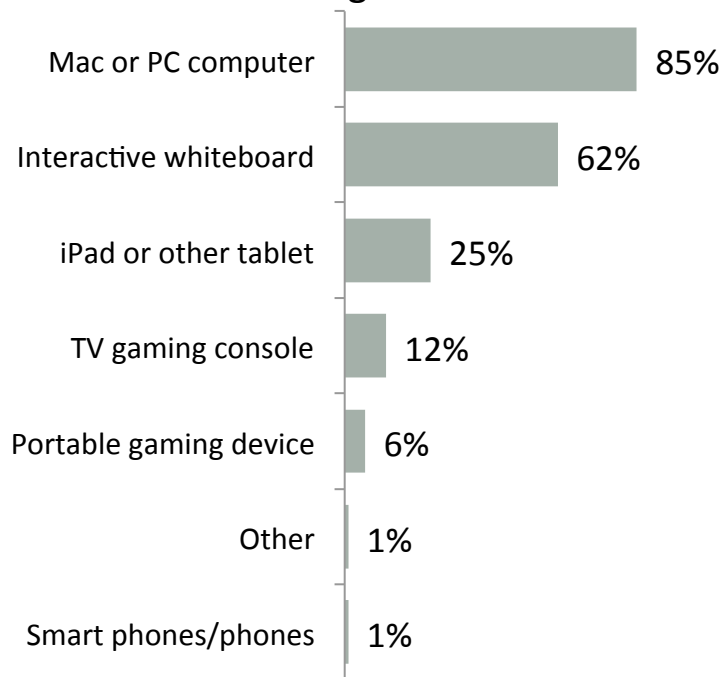


Q410 How would you describe your comfort level using digital games as a teaching and learning tool?
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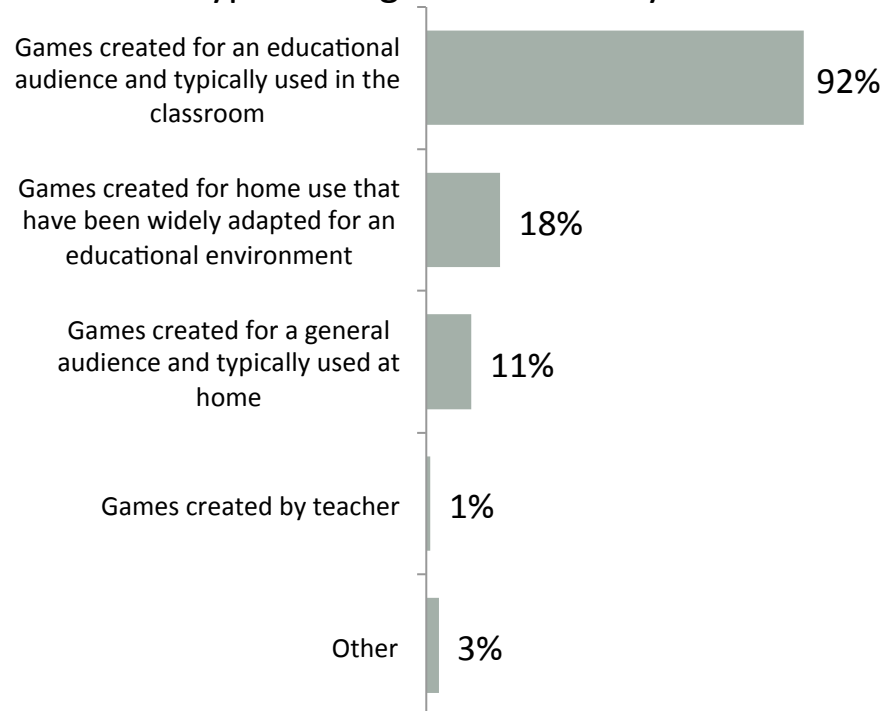
An overwhelming percent of teachers (85%) say that students use PC's or Mac's and about two-fifths (62%) say they use an Interactive Whiteboard. A quarter of all teachers say students use an iPad or some other type of tablet.

The digital games students play in the classroom are ones created predominantly (92%) for an educational audience.

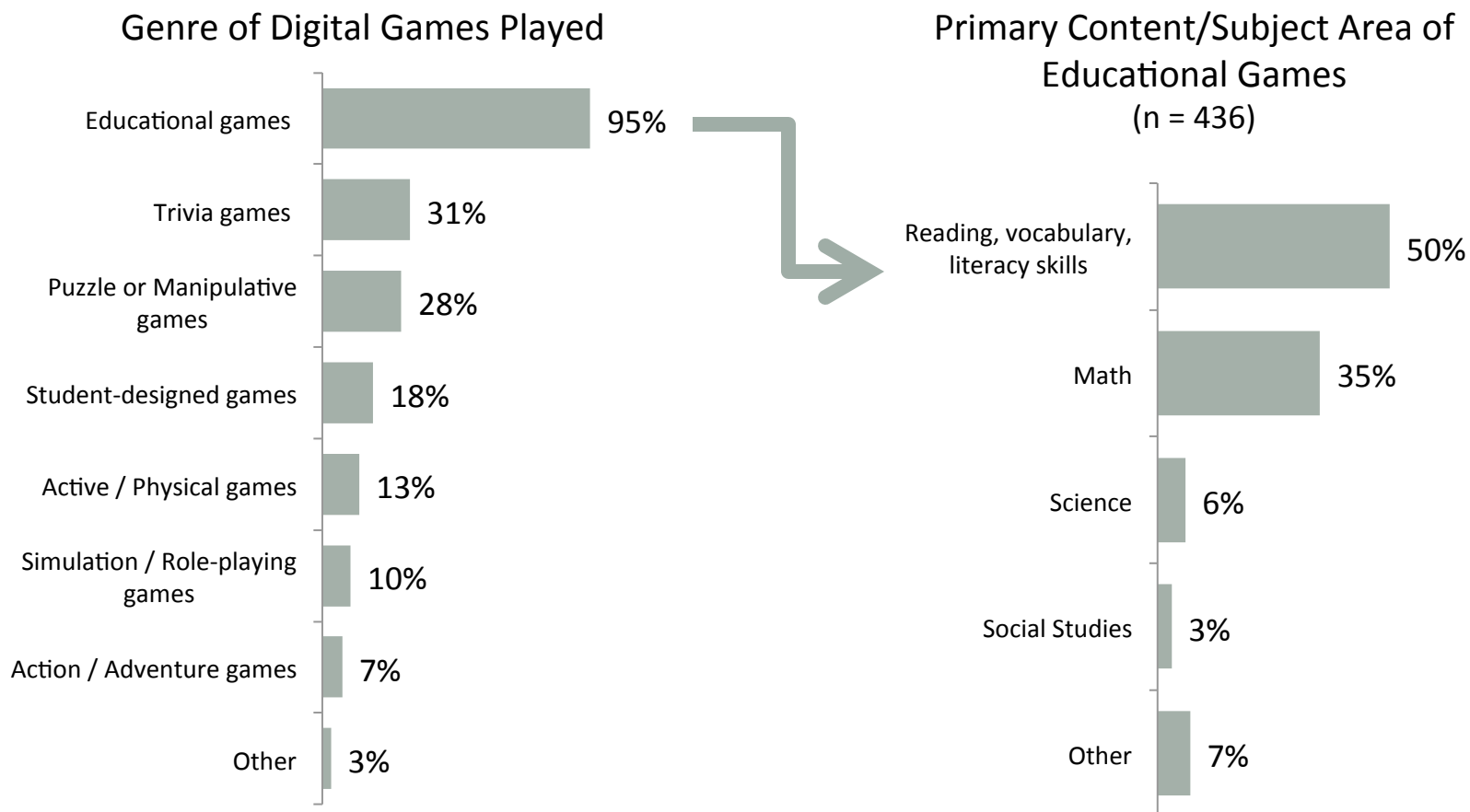
Types of Devices Used to Access Digital Games



Types of Digital Games Played



Educational games that focus on literacy and math are the primary genre of digital games used in the classroom.



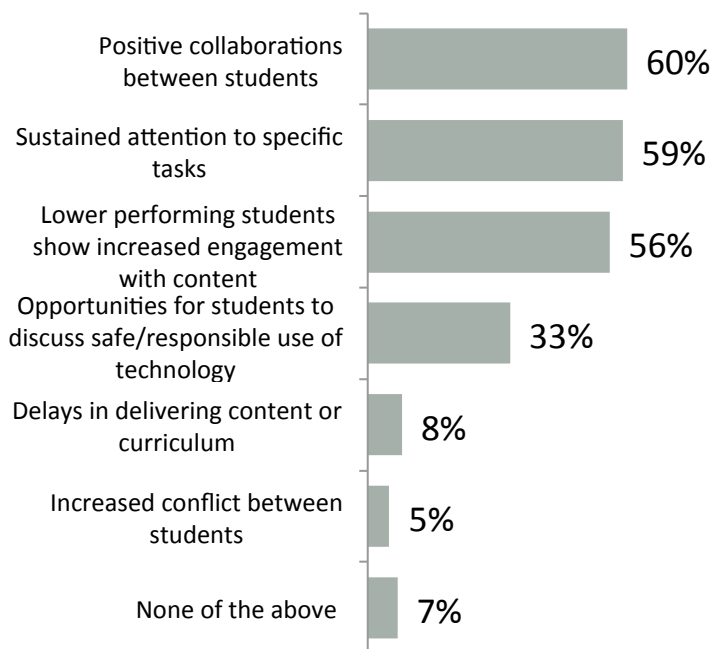
Q413. What genre of digital games do your students play during class time? Please select all that apply.

Q413B What is the primary content or subject area represented in the educational digital games you use? Please select one response.

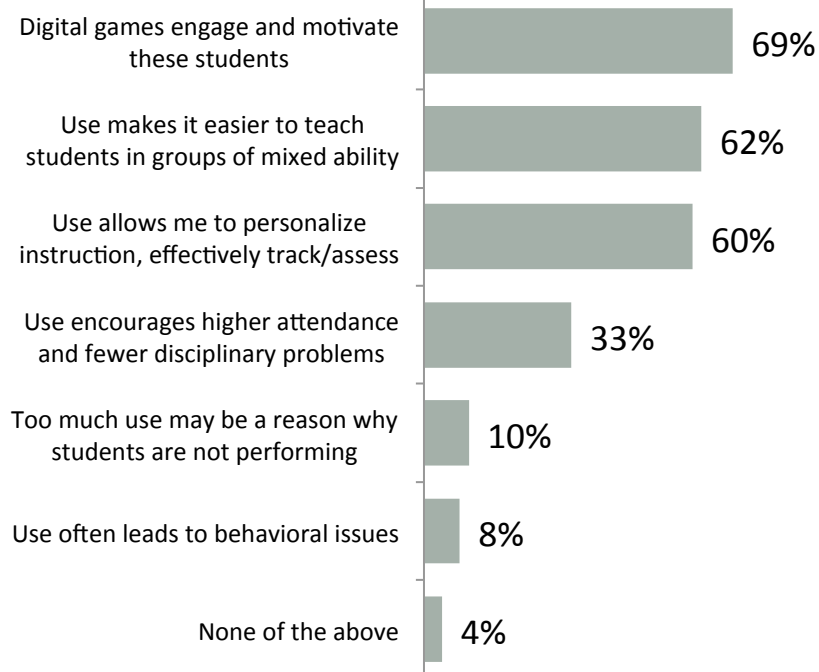
Three-fifths of teachers say they have seen students become better collaborators and have increased attention to specific tasks. The same proportion also feel that lower-performing students show increased engagement with content.

When asked specifically about lower-performing students, teachers say that digital game technology engages and motivates students (69%), makes it easier to teach groups of mixed ability (62%) and enables them (teachers) to personalize instruction (60%).

Observations Since Integrating Digital Games



Observations Among Lower Performing Students

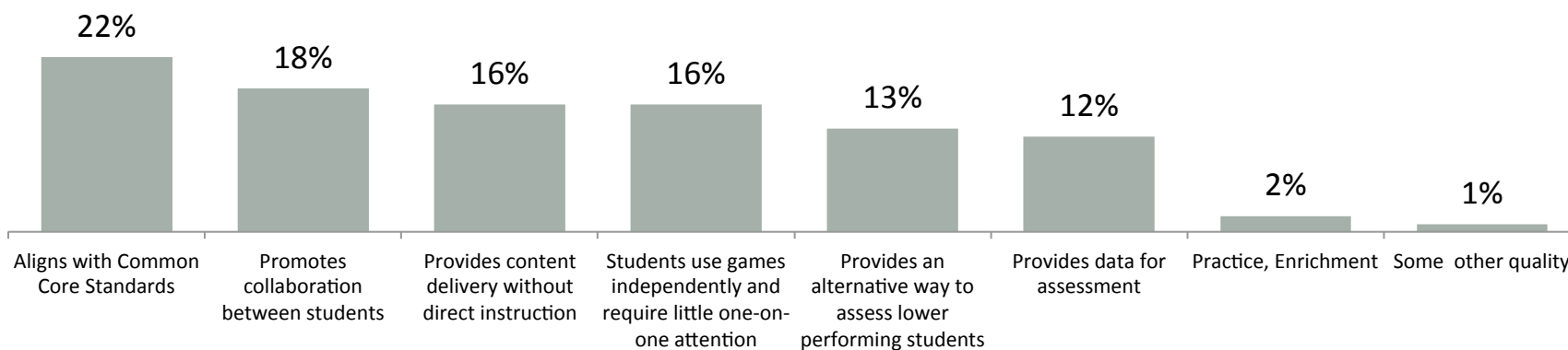


Q416 Since integrating digital games into your teaching, have you observed any of the following classroom situations?

Q417 In considering the students in your class who are performing below average, please indicate all of following observations which apply.

When asked about which aspect of digital games stands out most, their responses are evenly distributed across several dimensions. Aligns with Common Core Standards got the most votes with 22%, followed by promotes collaboration (18%), provides content delivery without direct instruction (16%), and students using games independently (16%).

Most Valuable Quality of Digital Games

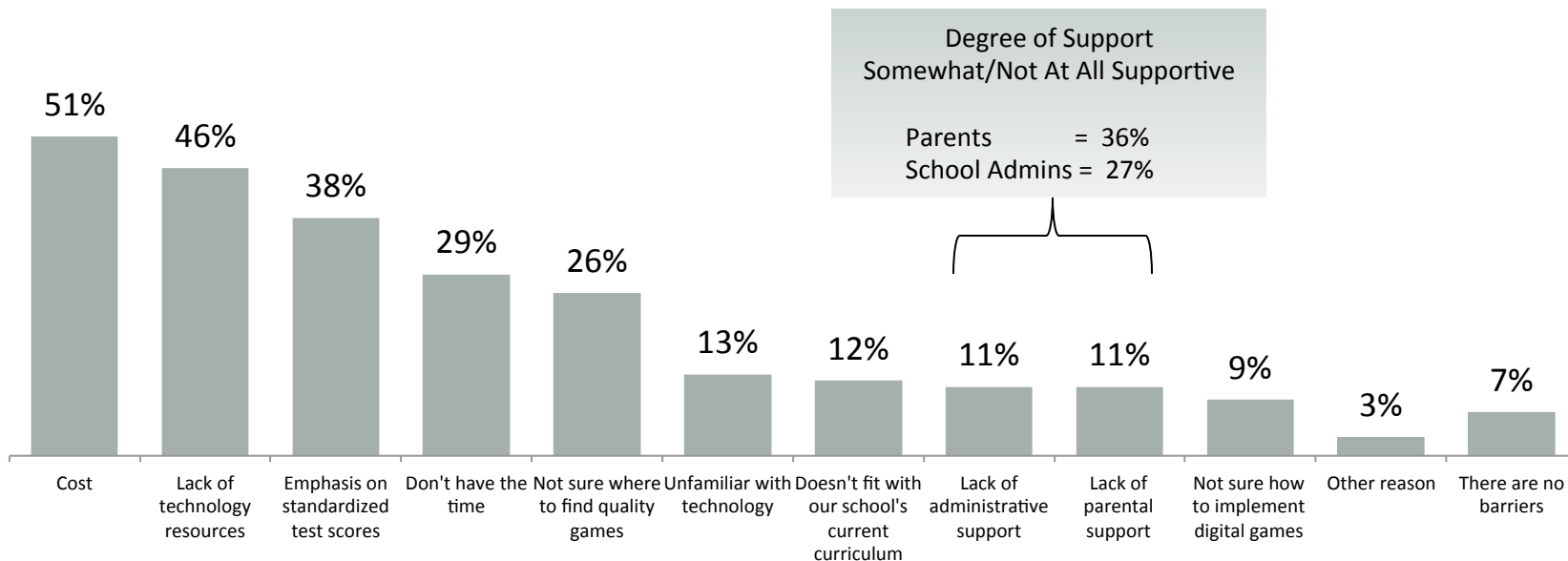


Q419 Which quality of digital games do you find most valuable?

Cost and Lack of Technology Resources are deemed by teachers to be the greatest barriers to the use of digital games in the classroom, 51% and 46%, respectively. Emphasis on standardized scores is also considered to be a barrier by 38% of teachers.

While only 11% of teachers indicate the lack of support from both parents or school administrators presents barriers, support for digital games from these stakeholders are not overwhelming: 36% say parents and 27% say administrators are only somewhat or not at all supportive of the use of digital games.

Greatest Barriers Regarding Use of Digital Games

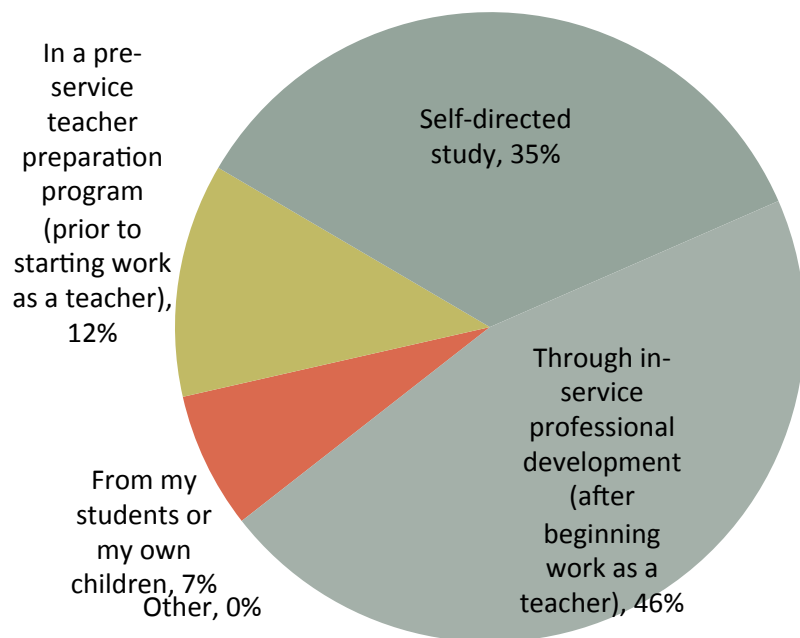


Q420 What are the greatest barriers for you and/or other teachers in your school regarding the use of digital games in the classroom?
Please select all that apply.

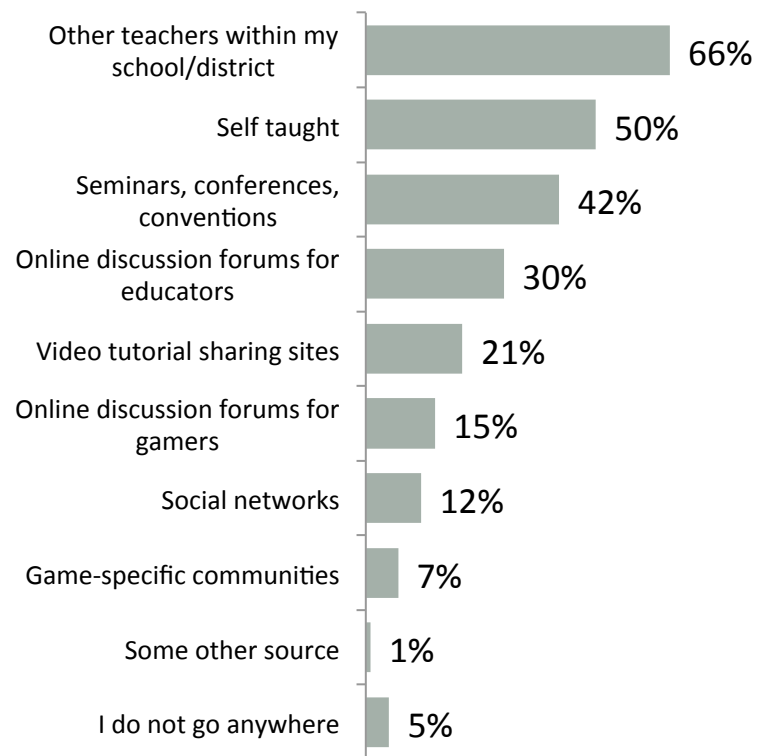
Q425 On a scale of 1 to 4 where 1 = Not at all supportive; 2 = Somewhat supportive, 3 = Moderately supportive, and 4 = Very supportive, please rate the extent to which each group supports you in using digital games as a teaching tool.

The majority of teachers report first learning about using digital games from in-service professional development (46%), followed by self-directed study (35%). Sourcing of on-going education about digital games comes from other teachers within the district (66%), being self-taught (50%), and seminars, conferences and conventions (42%).

First Learned About Digital Games



Sources for Ongoing Learning About Digital Games



Q423 How did you first learn about using digital games in the classroom?

Q424 Where do you go for ongoing professional learning about integrating digital games into your teaching practice?

The relationships between three dimensions among teachers (comfort level with technology, expected allocation of budget over the next three years and estimated classroom dollar spend) appears to heavily influence the opinions of teachers regarding how classroom-based digital technology can impact students.

Where there is greater comfort with the technology, higher expected allocation of budget and higher expected annual classroom spend, the following also occur:

- Students access a greater variety of technology types (e.g. Interactive Whiteboards and iPads and tablets) and genres of games (e.g, trivia and puzzles)
- The technology is used much more frequently
- Teachers observe greater collaboration among students and more sustained focus on specific tasks
- More positive impact on lower-performing students, such as engaging students, enabling personalized attention, teaching groups of with varying abilities and improving student attendance

	Total	Comfort Level		Expected Budget Allocation			Annual Classroom Spend	
		Very	Bottom 3	More	Same	Less	< \$50	\$50 +
Base	N=505	N=237	N=268	N=184	N=222	N=99	N=157	N=144
Q410 - Comfort Level with Technology								
Very Comfortable (Top box)	47%	100%	-	51%	42%	50%	45%	58%
Q411 - Devices Used to Access Games								
PC or Mac	85%	87%	84%	82%	88%	86%	88%	85%
Interactive whiteboard	62%	67%	58%	69%	57%	60%	56%	70%
iPad or other tablet	25%	31%	20%	33%	19%	25%	18%	39%
Q412 - Types of Games Played								
Created for education	92%	92%	91%	92%	94%	87%	93%	93%
Created for home but adapted	18%	23%	13%	21%	15%	16%	15%	26%
Q413 - Genre of Games Played								
Educational	95%	96%	94%	92%	98%	94%	92%	96%
Trivia	31%	37%	25%	35%	28%	27%	26%	45%
Puzzles	28%	35%	22%	32%	24%	31%	26%	42%
Q413b - Primary Content of Educational Games *								
Reading/Literacy	50%	49%	51%	57%	46%	47%	41%	61%
Math	35%	37%	32%	28%	38%	39%	34%	31%
Q415 - Frequency of Use								
Everyday	18%	27%	11%	22%	15%	18%	12%	29%
2 - 4 times a week	32%	37%	28%	36%	30%	31%	26%	38%

* Asked only of those that selected "Educational" in Q413

	Total	Comfort Level		Expected Budget Allocation			Annual Classroom Spend	
		Very	Bottom 3	More	Same	Less	< \$50	\$50 +
Base	N=505	N=237	N=268	N=184	N=222	N=99	N=157	N=144
Q416 - Observations after Integrating Technology								
Positive collaboration between students	60%	69%	51%	63%	58%	58%	55%	77%
Sustained attention	59%	62%	55%	63%	57%	55%	59%	67%
Opportunities to discuss safe technology use	33%	42%	24%	39%	29%	29%	32%	44%
Q417 - Observations of Lower Performing Students								
Engages and motivates to master skills	69%	73%	65%	70%	69%	65%	65%	72%
Easier to teach in mixed groups	62%	68%	57%	66%	63%	54%	54%	74%
Enables personalized instruction and assessment	60%	64%	56%	63%	60%	54%	56%	72%
Encourages better attendance	33%	40%	26%	34%	31%	33%	26%	49%
Q420 - Barriers to Using Technology								
Cost	51%	56%	47%	49%	51%	58%	49%	58%
Lack of tech resources	46%	47%	44%	36%	50%	54%	54%	36%
Not enough time	29%	27%	30%	22%	34%	30%	36%	17%
Not sure where to find quality games	26%	23%	28%	26%	29%	18%	31%	19%
Q423 - How First Learned about Technology								
In-service development	46%	40%	52%	53%	41%	46%	33%	50%
Self-directed	35%	41%	29%	29%	38%	36%	49%	26%
Pre-service prep program	12%	13%	11%	11%	12%	13%	10%	17%

The Teacher Attitudes about Digital Games in the Classroom survey is part of research being conducted by the Games and Learning Publishing Council with the aim of identifying areas of innovation in the games and learning space. The Games and Learning Publishing Council, convened by the Cooney Center and E-Line Media, is generously funded by the Bill & Melinda Gates Foundation, the John S. and James L. Knight Foundation. This survey was conducted in collaboration with and support from BrainPOP.

Conducted by VeraQuest, Inc., the survey sampled 505 U.S. school teachers online within the United States in March 2012. Respondents were randomly selected from a targeted panel of classroom/specialist teachers of kindergarten through eighth grade to be generally proportional of the demographic strata of total U.S. teachers. The estimated sampling error for the sample of 505 respondents is +/- 4.4% at a 95% confidence level. These statements conform to the principles of disclosure of the National Council on Public Polls.

www.joanganzcooneycenter.org