# Interest in the Use of Video Games in History Education

# Purpose of study and research questions

- To assess the affect on students' interest in using video game learning in high school history education.

- RQ1- Does the previous performance of students in history education affect students' interest in using video games in the classroom?

- RQ2- Does the assigned teacher have an affect on students' interest in using video games in history education.

# Web link to survey

https://niu.az1.qualtrics.com/SE/?SID=SV_0iWutvMGLDUVXwx

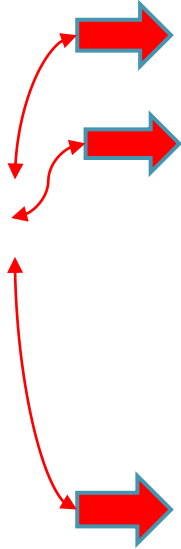# Primary variables: Alignment to survey items

| Primary variables | Associated survey items |
|---|---|
| Students' interest towards the use of video games in history education | 6-item Likert scale (see subsequent slide) |
| Previous performance in history education | Single item: "What do you normally receive for a grade in your previous history classes?" (5 categorical options) |
| Assigned teacher | Single item: "Who is your teacher for World History?" (3 categorical options) |

# Student Attitudes Toward the Use of Video Games in the Classroom

Select the response that best fits how you feel for each topic. Each topic relates to how the use of the video game in your classroom affected how you felt about participating in class activities.

| | Strongly Disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|---|---|---|---|---|
| The video game made class more interesting. | ○ | ○ | ○ | ○ | ○ |
| The video game distracted from my ability to learn. | ○ | ○ | ○ | ○ | ○ |
| I prefer to learn from books and not using media sources (i.e. games, videos, and audio). | ○ | ○ | ○ | ○ | ○ |
| The video game improved my learning effectiveness in class. | ○ | ○ | ○ | ○ | ○ |
| Video games and other media help to enhance my learning experience in the classroom. | ○ | ○ | ○ | ○ | ○ |
| The use of video games in class detracted from my ability to maintain focus. | ○ | ○ | ○ | ○ | ○ |

Reverse-coded

Item responses coded 1 = SD to 5 = SA

Composite score computed as the sum of the item scores

# Auxiliary variables: Alignment to survey items

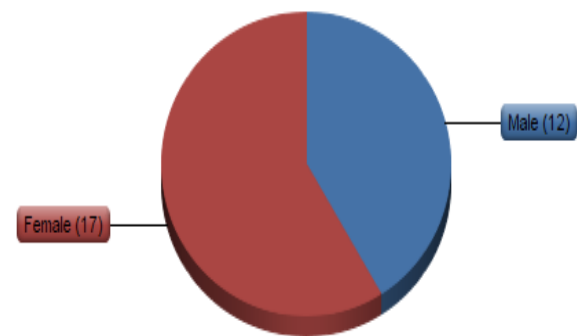| Auxiliary variables | Associated survey items |
|---|---|
| Gender | Single item: "What is your gender?" (Male/Female) |
| Grade level | Single item: "What is your grade level?" (4 options: Freshman, Sophomore, Junior or Senior) |
| Race | Single item: "What is your racial/ethnic background?" (6 options: Hispanic, Non-Hispanic (Caucasian), African American, Asian, Middle Eastern, or Other/Mixed) |
| Class period World History taken | Three items: "What class period do you have *teachers name*?" (3 options for each item with the options being specific to the teachers class schedule) |

# Sample page illustrating survey layout

# Sample

- 9th-12th grade history students from a rural Midwestern high school in the U.S.
- Convenience sampling was used
  - Students were enrolled in history classes at the time
  - $N$ = 31 students responded

# Demographic characteristics of sample

Gender distribution

Male (12)

Female (17)

What is your grade level?

| Grade | Count |
|-------|-------|
| Freshman | 4 |
| Sophmore | 6 |
| Junior | 8 |
| Senior | 11 |

What is your racial/ethnic background?

What is your racial/ethnic background?
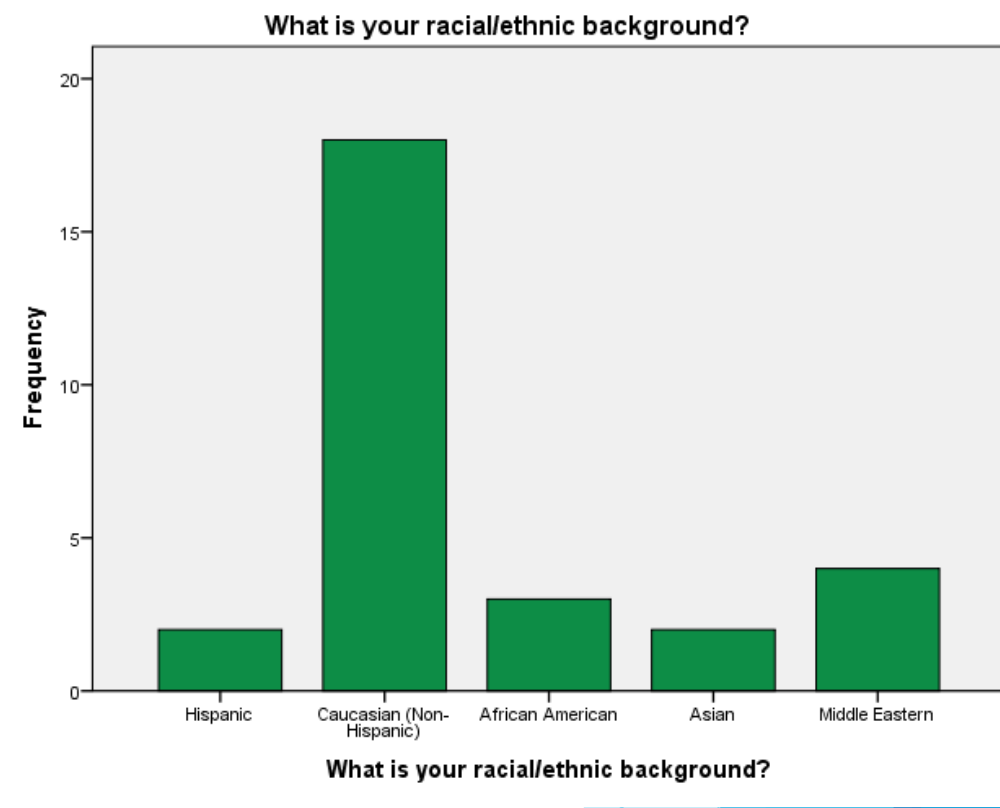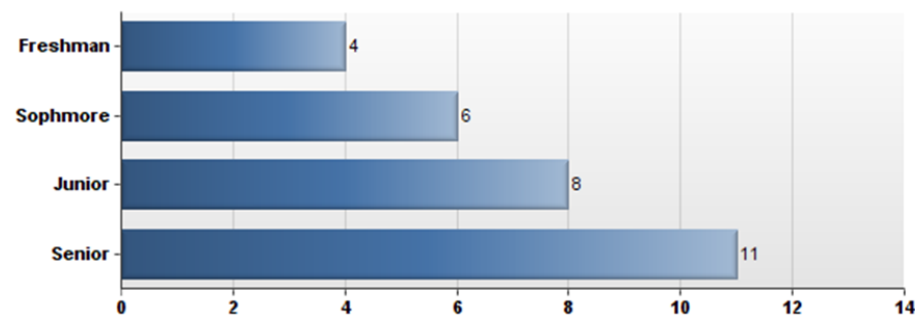
What is your racial/ethnic background?

Results from coding of open-response item:
In no more than 2 sentences, how would you describe the affect the use of a video game in your World History class helped or hurt your achievement?

| Response | Percent of respondents |
| --- | --- |
| Enjoyed | 10% |
| Kept interesting and engaged | 19% |
| Learned more | 10% |
| Reinforced learning | 3% |
| To challenging | 3% |
| Disliked | 16% |
| Non-response | 35% |

# Reliability information for *Interest in the Use of Video Games in the History Classroom scale*

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .882 | 6 |

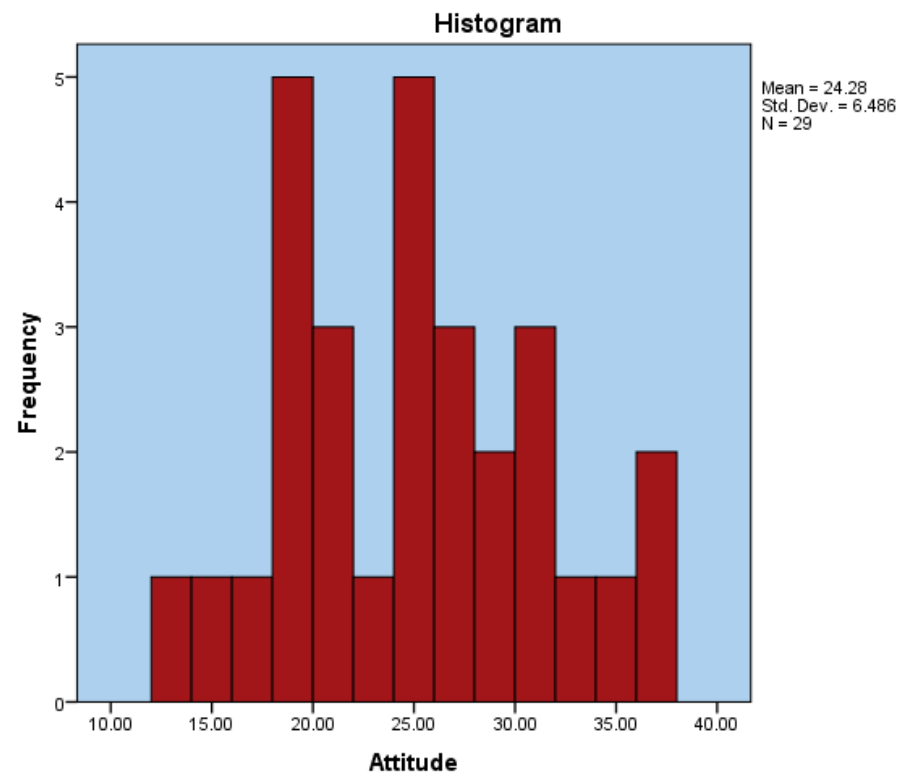Reliability of scores is good (greater than .70 criterion)

**Item-Total Statistics**

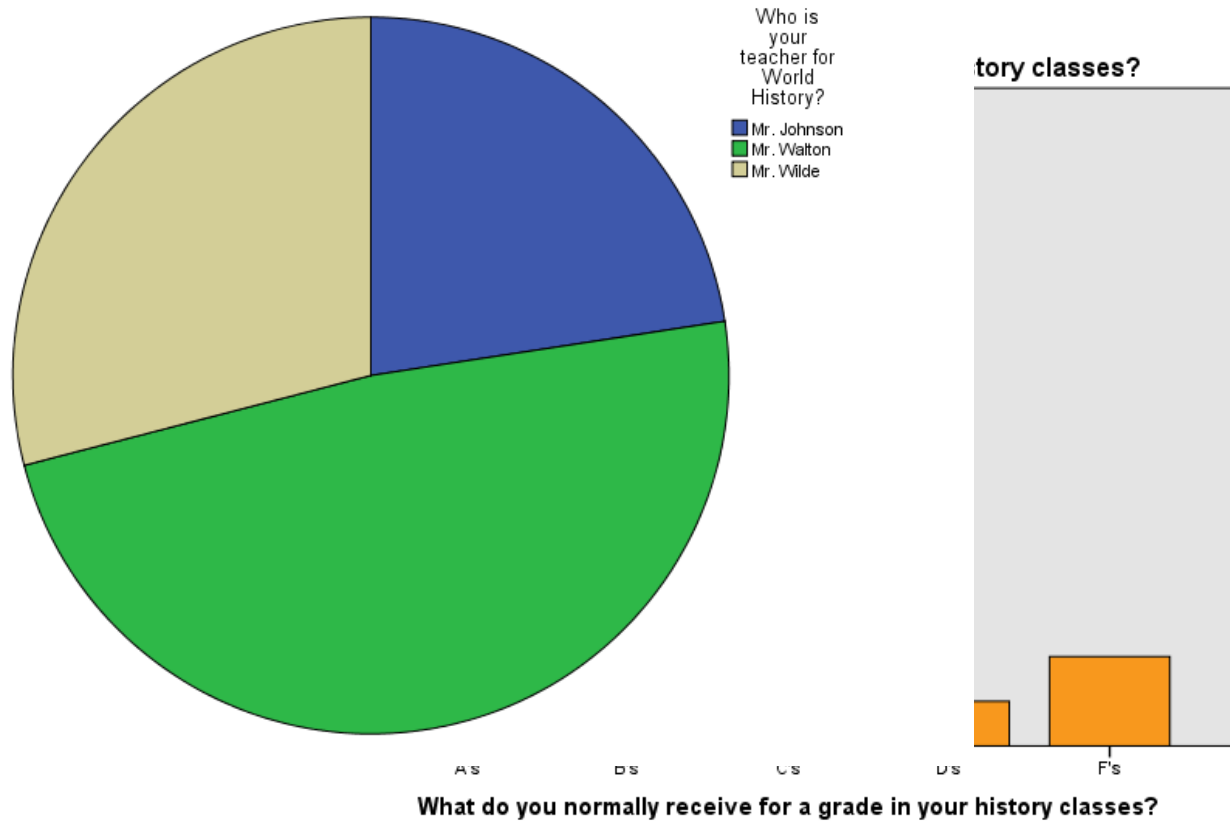| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| ...response that ...w you feel for Each topic ...ow the use...-...game | 24.0625 | 28.996 | .661 | .867 |
| Select the response that best fits how you feel for each topic. Each topic relates to how the use...-The video game distracted from my ability to learn. | 23.5000 | 28.933 | .700 | .861 |
| Select the response that best fits how you feel for each topic. Each topic relates to how the use...-The use of video games in class detracted from my ability to maintain focus. | 23.8125 | 27.629 | .730 | .855 |
| Select the response that best fits how you feel for each topic. Each topic relates to how the use...-The video game made class more interesting. | 21.7500 | 27.400 | .552 | .894 |
| Select the response that best fits how you feel for each topic. Each topic relates to how the use...-The video game improved my learning effectiveness in class. | 22.1250 | 27.717 | .703 | .860 |
| Select the response that best fits how you feel for each topic. Each topic relates to how the use...-Video games and other media help to enhance my learning experience in the classroom. | 21.6250 | 27.583 | .897 | .833 |
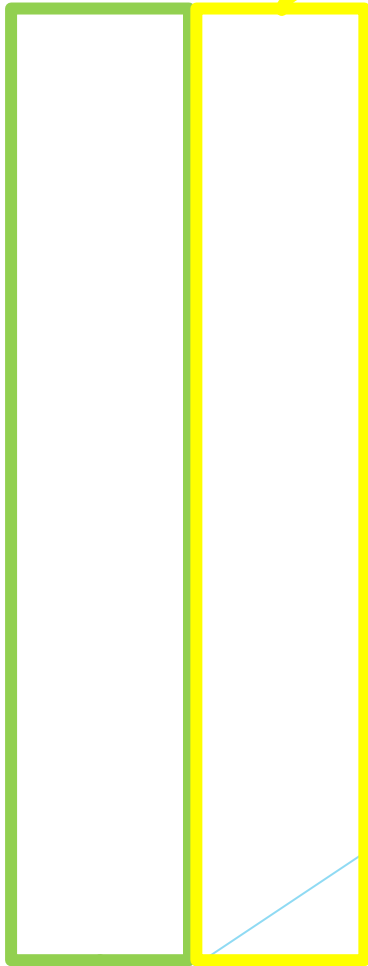
Cronbach's alpha becomes only slightly higher if 1 out of the 6 items are removed, if 5 out of the 6 items are removed it becomes slightly lower. One item could be removed, but removing it would not have a large effect.

4 of out 6 items correlate strong with the composite score, indicating good mostly good items

# Distribution of composite for *Interest in the Use of Video Games in the History Classroom* scale scores



Histogram

Mean = 24.28
Std. Dev. = 6.486
N = 29

# Distribution of other primary variables in survey



Who is your teacher for World History?
- ■ Mr. Johnson
- ■ Mr. Walton
- ■ Mr. Wilde

...tory classes?

A's          B's          C's          D's          F's

What do you normally receive for a grade in your history classes?

# Analysis plan

- RQ1- Does the previous performance of students in history education affect students' interest in using video games in the classroom?

  - Analysis: Logistic regression to relate the students' previous performance in history education classes to their interest in the use of video games in history education.

- RQ2- Does the assigned teacher have an affect on students' interest in using video games in history education.

  - Analysis: Chi-squared test to compare the teacher that the student had towards their interest in the use of video games in the history classroom.