

# **UCIrvine**



## **Study Protocol:**

Understanding Perceptions and Use of AI in K-12 Education Using a Nationally Representative Sample – Parent/Teacher Survey

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## **SCREENER**

**PARENT**. Are you the parent or legal guardian of any children in the following age ranges? *Please select all that apply.* 

## **RESPONSE OPTIONS:**

- 1. Yes, age 0-1
- 2. Yes, age 2-5
- 3. Yes, age 6-12
- 4. Yes, age 13-17
- 5. Yes, age 18 +
- 6. No

## [SHOW IF PARENT=2,3,4,5]

K12PARENT. Are any of your children in grades K-12 (kindergarten - 12th grade)?

#### **RESPONSE OPTIONS:**

- 1. Yes
- 2. No

## [SHOW IF K12PARENT=1]

**OLDEST.** How old is your oldest child in grade K-12?

[NUMBOX, RANGE 4-20]

**EMPLOY.** Which statement best describes your current employment status?

- 1. Working as a paid employee
- 2. Working self-employed
- 3. Not working on temporary layoff from a job
- 4. Not working looking for work
- 5. Not working retired
- 6. Not working disabled

7. Not working – other

## [SHOW IF EMPLOY1=1]

INDUSTRY20. What kind of business or industry best describes your current employer or business?

#### **RESPONSE OPTIONS:**

- 1. Agriculture, Forestry, Fishing and Hunting
- 2. Mining, Quarrying, and Oil and Gas Extraction
- 3. Utilities
- 4. Construction
- 5. Manufacturing
- 6. Wholesale Trade
- 7. Retail Trade
- 8. Transportation and Warehousing
- 9. Information
- 10. Finance and Insurance
- 11. Real Estate and Rental and Leasing
- 12. Professional, Scientific, and Technical Services
- 13. Management of Companies and Enterprises
- 14. Administrative and Support and Waste Management and Remediation Services
- 15. Educational Services
- 16. Health Care and Social Assistance
- 17. Arts, Entertainment, and Recreation
- 18. Accommodation and Food Services
- 19. Other Services (except Public Administration)
- 20. Public Administration

## [SHOW IF INDUSTRY20=15]

K12TEACH. How would you describe your job position?

## **RESPONSE OPTIONS:**

- 1. Preschool teacher
- 2. K-12 teacher
- 3. College or university professor
- 4. Educational administrator
- 5. Teacher's assistant
- 6. Educational support/IT
- 7. Other, please specify: [TEXTBOX]

## Part A. Knowledge and Use of AI

## Section 1. Al Knowledge

Q1. What things come to mind when you first think of artificial intelligence (AI)?

## [TEXTBOX]

Q2. If you had to tell someone what artificial intelligence (AI) is, what would you say?

## [TEXTBOX]

#### Section 2. Al Use

Q3. Have you heard of any of these tools? Please select all that apply.

## **RESPONSE OPTIONS:**

- 1. Search engines, like Google or Bing
- 2. Learning apps or learning games, like Prodigy, STMath, MATHia, or Cognii
- 3. Apps that create images or music, like DALL-E, Adobe Firefly, or MusicLM
- 4. Apps that answer questions or write text, like ChatGPT, Bing Chat, or Gemini
- 5. Apps that listen to you and type what you say to text, like Otter AI or Dragon
- 6. Apps that read out loud, like Speechify, Natural Reader, or Epic
- 7. Apps that act as virtual friends, like Replika or Snapchat's My Al
- 8. Chatbots that help with mental health, like Wysa, Woebot, or Youper
- 9. None of the above

## [SHOW IF K12PARENT = 1] [GRID]

Q4. Does your family use this tool in your home?

## **GRID ITEMS:**

- A. [SHOW IF Q3=1] Search engines, like Google or Bing
- B. [SHOW IF Q3=2] Learning apps or learning games, like Prodigy, STMath, MATHia, or Cognii
- C. [SHOW IF Q3=3] Apps that create images or music, like DALL-E, Adobe Firefly, or MusicLM

- D. [SHOW IF Q3=4] Apps that answer questions or write text, like ChatGPT, Bing Chat, or Gemini
- E. [SHOW IF Q3=5] Apps that listen to you and type what you say to text, like Otter AI or Dragon
- F. [SHOW IF Q3=6] Apps that read out loud, like Speechify, Natural Reader, or Epic
- G. [SHOW IF Q3=7] Apps that act as virtual friends, like Replika or Snapchat's My AI
- H. [SHOW IF Q3=8] Chatbots that help with mental health, like Wysa, Woebot, or Youper

#### **RESPONSE OPTIONS:**

- 1. No
- 2. Maybe
- 3. Yes

## [SHOW IF Q3=1,2,3,4,5,6,7,8 AND K12PARENT = 1] [GRID]

Q5\_P. How often has your [INSERT IF NOT MISSING(OLDEST): OLDEST year old / INSERT IF MISSING(OLDEST): oldest child in K-12 education] used this tool in the past month (in the home, classroom, or elsewhere)?

#### **GRID ITEMS:**

- A. [SHOW IF Q3=1] Search engines, like Google or Bing
- B. [SHOW IF Q3=2] Learning apps or learning games, like Prodigy, STMath, MATHia, or Cognii
- C. [SHOW IF Q3=3] Apps that create images or music, like DALL-E, Adobe Firefly, or MusicLM
- D. [SHOW IF Q3=4] Apps that answer questions or write text, like ChatGPT, Bing Chat, or Gemini
- E. [SHOW IF Q3=5] Apps that listen to you and type what you say to text, like Otter AI or Dragon
- F. [SHOW IF Q3=6] Apps that read out loud, like Speechify, Natural Reader, or Epic
- G. [SHOW IF Q3=7] Apps that act as virtual friends, like Replika or Snapchat's My AI
- H. [SHOW IF Q3=8] Chatbots that help with mental health, like Wysa, Woebot, or Youper

- 1. Never
- 2. Less than once a week
- 3. Once a week
- 4. A few times a week
- 5. Every day
- 77. I don't know

## [SHOW IF Q3=1,2,3,4,5,6,7,8 AND K12TEACH=2] [GRID]

# Q5\_T. How often do <u>your students</u> use this tool in the classroom? **GRID ITEMS**:

- A. [SHOW IF Q3=1] Search engines, like Google or Bing
- B. [SHOW IF Q3=2] Learning apps or learning games, like Prodigy, STMath, MATHia, or Cognii
- C. [SHOW IF Q3=3] Apps that create images or music, like DALL-E, Adobe Firefly, or MusicLM
- D. [SHOW IF Q3=4] Apps that answer questions or write text, like ChatGPT, Bing Chat, or Gemini
- E. [SHOW IF Q3=5] Apps that listen to you and type what you say to text, like Otter AI or Dragon
- F. [SHOW IF Q3=6] Apps that read out loud, like Speechify, Natural Reader, or Epic
- G. [SHOW IF Q3=7] Apps that act as virtual friends, like Replika or Snapchat's My AI
- H. [SHOW IF Q3=8] Chatbots that help with mental health, like Wysa, Woebot, or Youper

#### **RESPONSE OPTIONS:**

- 1. Never
- 2. Less than once a week
- 3. Once a week
- 4. A few times a week
- 5. Every day

#### Section 3. Al Awareness

Q6. Which of these tools uses artificial intelligence (AI)? If you don't know that's okay, just make your best guess. *Please select all that apply*.

- 1. Search engines, like Google or Bing
- 2. Learning apps or learning games, like Prodigy, STMath, MATHia, or Cognii
- 3. Apps that create images or music, like DALL-E, Adobe Firefly, or MusicLM
- 4. Apps that answer questions or write text, like ChatGPT, Bing Chat, or Gemini
- 5. Apps that listen to you and type what you say to text, like Otter AI or Dragon
- 6. Apps that read out loud, like Speechify, Natural Reader, or Epic
- 7. Apps that act as virtual friends, like Replika or Snapchat's My Al
- 8. Chatbots that help with mental health, like Wysa, Woebot, or Youper

## Section 4. Use of Related Digital Technologies

Q7. On an average day, how many hours total do you spend online or on your phone? Include hours spent for work.

#### **RESPONSE OPTIONS:**

- 1. None
- 2. Less than 1 hour
- 3. 1-2 hours
- 4. 3-5 hours
- 5. 6-8 hours
- 6. 9 or more hours

## **Part B Perceptions and Behavior**

Section 1. Perceptions of Al Risks & Opportunities

## [GRID]

Q8. The following questions are about Generative AI. <u>Generative AI</u> is a type of smart computer that creates <u>new things, like art, music, or writing,</u> without help from humans by <u>learning from lots of examples</u>. Some examples of generative AI that you may have heard of are <u>ChatGPT</u>, <u>Bing chat</u>, and <u>DALL-E</u>. In these next questions, we will ask how much you agree or disagree with statements about <u>generative AI technologies like ChatGPT</u>, <u>Bing Chat</u>, and <u>DALL-E</u>.

Generative AI will...

## **GRID ITEMS:**

- A. Improve how children learn at school.
- B. Improve children's health.
- C. Stop children from being able to solve problems on their own.
- D. Cause children to have problems with their teachers or parents.
- E. Stop children from interacting with friends.
- F. Help children improve skills outside of school.
- G. Make it easier for children to cheat at school.
- H. Help children learn things that they will need to know in their future careers.
- I. Help children ask questions that they don't feel comfortable asking adults.
- J. Spread false or wrong information.

- K. Learn things about children that may be private.
- L. Help children when they're feeling lonely.

## **RESPONSE OPTIONS:**

- 1. No
- 2. Maybe
- 3. Yes

## Section 2. Use of ChatGPT

Q9. Have you ever used ChatGPT?

## **RESPONSE OPTIONS:**

- 1. No
- 2. Maybe
- 3. Yes

## [SHOW IF Q9=2,3 AND K12PARENT=1]

Q10\_P. Have you used ChatGPT to help with...? Please select all that apply.

## **RESPONSE OPTIONS:**

- 1. Your child/ren's homework
- 2. Planning learning activities at home
- 3. Parenting advice
- 4. Information about your child/ren's health or development
- 5. Providing support for child/ren with disabilities
- 6. Supporting your child/ren's mental or emotional health
- 7. Something else (specify): [TEXTBOX]

## [SHOW IF Q9=2,3 AND K12TEACH=2]

Q10\_T. As a teacher, have you used ChatGPT to help with...? Please select all that apply.

- 1. Lesson planning
- 2. Building background knowledge for lessons and classes
- 3. Generating creative ideas for classes

- 4. Grading or reviewing students' work
- 5. Communicating with students, parents, and colleagues
- 6. Assisting students with learning differences
- 7. Supporting students' mental health
- 8. Something else (specify): [TEXTBOX]

## [SHOW IF Q9=2,3]

Q11. How accurate do you think the information is that you get from ChatGPT and other types of generative AI on a scale of 0-100%?

[SLIDER SCALE; RANGE 0-100]

Section 3. Al integration in Education

## [SHOW IF K12TEACH=2] [GRID]

Q12\_T. Please answer no, maybe, or yes to the following statements about your use of AI technologies in education.

## **GRID ITEMS:**

- A. Using AI technologies in K-12 education is important.
- B. All children should use AI technologies in their classrooms.
- C. Using AI technologies makes students more motivated to learn.
- D. Using AI technologies makes learning more enjoyable for students.
- E. I encourage my students to use AI technologies for learning.
- F. I try to use AI technologies in the classroom.
- G. I am eager to participate in trainings about the use of AI in education.
- H. Al technologies help me better design my curriculum.
- I. Al technologies help me integrate the curriculum and real-world learning.
- J. AI technologies enhance students' learning.

## **RESPONSE OPTIONS:**

- 1. No
- 2. Maybe
- 3. Yes

[SHOW IF K12PARENT=1]

## [GRID]

Q12\_P. Please answer no, maybe, or yes to the following statements.

## **GRID ITEMS:**

- A. Using AI technologies in K-12 education is important.
- B. All children should use AI technologies in their classrooms.
- C. Using AI technologies makes children more motivated to learn.
- D. Using AI technologies makes learning more enjoyable for children.
- E. I encourage my child/ren to use AI technologies for learning.
- F. I try to use AI technologies with my child/ren for learning at home.
- G. I expect my child/ren's teacher to participate in training about the use of AI in education.
- H. AI technologies help teachers better design their curriculum.
- I. Al technologies help teachers integrate the curriculum and real-world learning.
- J. Al technologies enhance my child/ren's learning.

## **RESPONSE OPTIONS:**

- 1. No
- 2. Maybe
- 3. Yes

## Part C. Well-Being

Section 1. Well-being

## [GRID]

Q13. During the past month, how often did you feel...?

#### **GRID ITEMS:**

- A. Nervous
- B. Hopeless
- C. Restless or fidgety
- D. That everything was an effort
- E. So depressed that nothing could cheer you up
- F. Worthless

- 1. Never
- 2. A little of the time

- 3. Some of the time
- 4. Most of the time
- 5. All of the time

## Section 2. Self-Efficacy

## [SHOW IF K12PARENT=1] [GRID]

Q14. Please state how much you disagree or agree with the following statements.

### **GRID ITEMS:**

- A. Even though I may not always manage it, I know what I need to do with my child.
- B. I am able to do the things that improve my child's behavior.
- C. I can make an important difference to my child.
- D. In most situations, I know what to do to ensure my child behaves.
- E. The things I do make a difference to my child's behavior.

#### **RESPONSE OPTIONS:**

- 1. Strongly Disagree
- 2. Disagree
- 3. Neutral
- 4. Agree
- 5. Strongly Agree

## [SHOW IF K12TEACH=2] [GRID]

Q15. Please indicate your opinion about each of the statements below.

#### **GRID ITEMS:**

- A. How much can you do to motivate students who show low interest in school work?
- B. How much can you do to get students to believe they can do well in school work?
- C. How much can you do to help your students value learning?
- D. To what extent can you craft good questions for your students?
- E. How much can you use a variety of assessment strategies?
- F. To what extent can you provide an alternative explanation or example when students are confused?

- G. How much can you assist families in helping their children do well in school?
- H. How well can you implement alternative strategies in your classroom?

### **RESPONSE OPTIONS:**

- 1. Nothing
- 2. Very little
- 3. Some influence
- 4. Quite a bit
- 5. A great deal

## Part D. Demographics

You are almost done with the survey, we have just a few more questions about yourself.

**CHILDNUM**. How many children do you have?

[NUMBOX, RANGE 0-10]

[SHOW IF CHILDNUM=1-10] [NUMBOX, RANGE 0-50]

**CHILDAGE.** How old are your children?

## **ITEMS**:

- A. [SHOW IF CHILDNUM>0] Child 1 age (years) [NUMBOX, RANGE 0-50]
- B. [SHOW IF CHILDNUM>1] Child 2 age (years) [NUMBOX, RANGE 0-50]
- C. [SHOW IF CHILDNUM>2] Child 3 age (years) [NUMBOX, RANGE 0-50]
- D. [SHOW IF CHILDNUM>3] Child 4 age (years) [NUMBOX, RANGE 0-50]
- E. [SHOW IF CHILDNUM>4] Child 5 age (years) [NUMBOX, RANGE 0-50]
- F. [SHOW IF CHILDNUM>5] Child 6 age (years) [NUMBOX, RANGE 0-50]
- G. [SHOW IF CHILDNUM>6] Child 7 age (years) [NUMBOX, RANGE 0-50]
- H. [SHOW IF CHILDNUM>7] Child 8 age (years) [NUMBOX, RANGE 0-50]
- I. [SHOW IF CHILDNUM>8] Child 9 age (years) [NUMBOX, RANGE 0-50]
- J. [SHOW IF CHILDNUM>9] Child 10 age (years) [NUMBOX, RANGE 0-50]

## [SHOW IF K12TEACH=2]

**GRADE.** What grades do you teach? *Please select all that apply.* 

## **RESPONSE OPTIONS:**

- 1. Kindergarten
- 2. 1<sup>st</sup> grade
- 3. 2<sup>nd</sup> grade
- 4. 3<sup>rd</sup> grade
- 5. 4<sup>th</sup> grade
- 6. 5<sup>th</sup> grade
- 7. 6<sup>th</sup> grade
- 8. 7<sup>th</sup> grade
- 9. 8<sup>th</sup> grade
- 10. 9<sup>th</sup> grade
- 11. 10<sup>th</sup> grade
- 12. 11<sup>th</sup> grade
- 13. 12<sup>th</sup> grade
- 14. Not currently teaching

## [SHOW IF K12TEACH=2 AND GRADE =1-13]

**SCHOOL.** What kind of school are you currently teaching in?

## **RESPONSE OPTIONS:**

- 1. Public (traditional)
- 2. Public Charter
- 3. Public Magnet
- 4. Public Vocational
- 5. Private/Independent
- 6. Religious/Parochial
- 7. GED program
- 8. Homeschool
- 9. Other, please specify: [TEXTBOX]

**GENDER1.** What sex were you assigned at birth, on your original birth certificate?

- 1. Male
- 2. Female

## **GENDER2.** How do you describe yourself?

## **RESPONSE OPTIONS:**

- 1. Male
- 2. Female
- 3. Transgender
- 4. Do not identify as male, female or transgender

## **GENDER3.** Would you say you are?

## [SHOW IF GENDER2= 3]

## **RESPONSE OPTIONS:**

- 1. Transgender, male to female
- 2. Transgender, female to male
- 3. Transgender, gender non-conforming
- 4. Other (please specify): [TEXTBOX]

## [GRID]

## **SELF\_DIFF.** Do you have difficulty with...?

#### **GRID ITEMS:**

- A. Seeing, even if wearing glasses?
- B. Hearing, even if using a hearing aid?
- C. Walking or climbing steps?
- D. Remembering or concentrating?
- E. Self-care (such as washing all over or dressing)?
- F. Communicating?

#### **RESPONSE OPTIONS:**

- 1. Not at all
- 2. A little
- 3. A lot

## [SHOW IF K12PARENT=1] [GRID]

## **CHILD\_DIFF**. Do any of your children have difficulty with...?

## **GRID ITEMS:**

- A. Seeing, even if wearing glasses?
- B. Hearing, even if using a hearing aid?
- C. Walking or climbing steps?
- D. Remembering or concentrating?
- E. Self-care (such as washing all over or dressing)?
- F. Communicating?

- 1. Not at all
- 2. A little
- 3. A lot