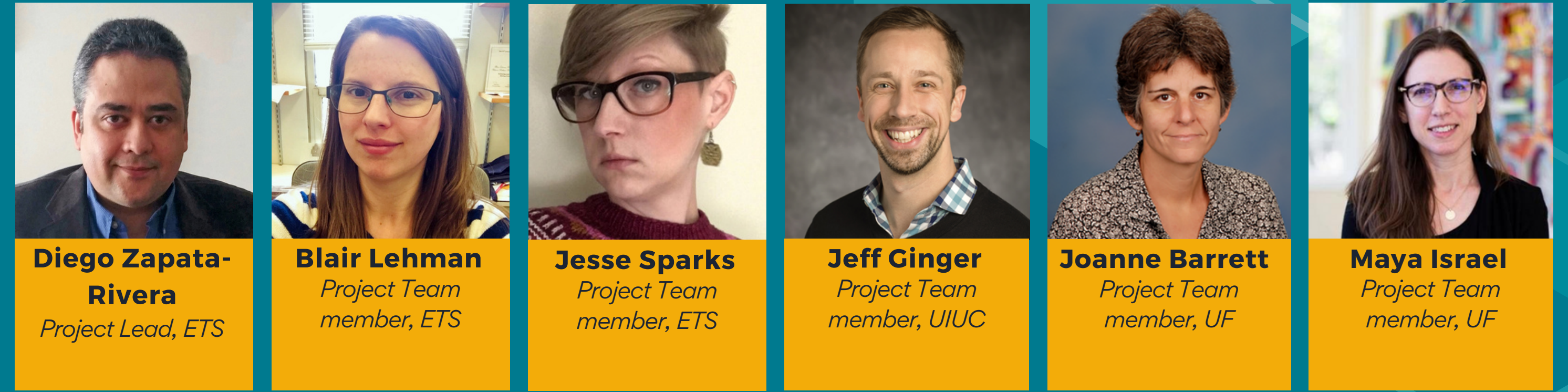


Exploring Learner Modeling, Privacy, & Trust issues with Teachers and Students



PROJECT SUMMARY

What types of learner models should be explored as part of INVITE? This project explores teachers' and student's perceptions of AI tools. It includes two main strands: (1) a **literature review** in the area of teachers' and students' perceptions of AI including potential benefits, concerns and types of data that could be used to implement AI, and (2) **user research** involving codesign activities, interviews and focus groups with teachers and students to explore the use of AI in education. This work considers cultural aspects and the experience of diverse groups of students and teachers in the interpretation of our findings.

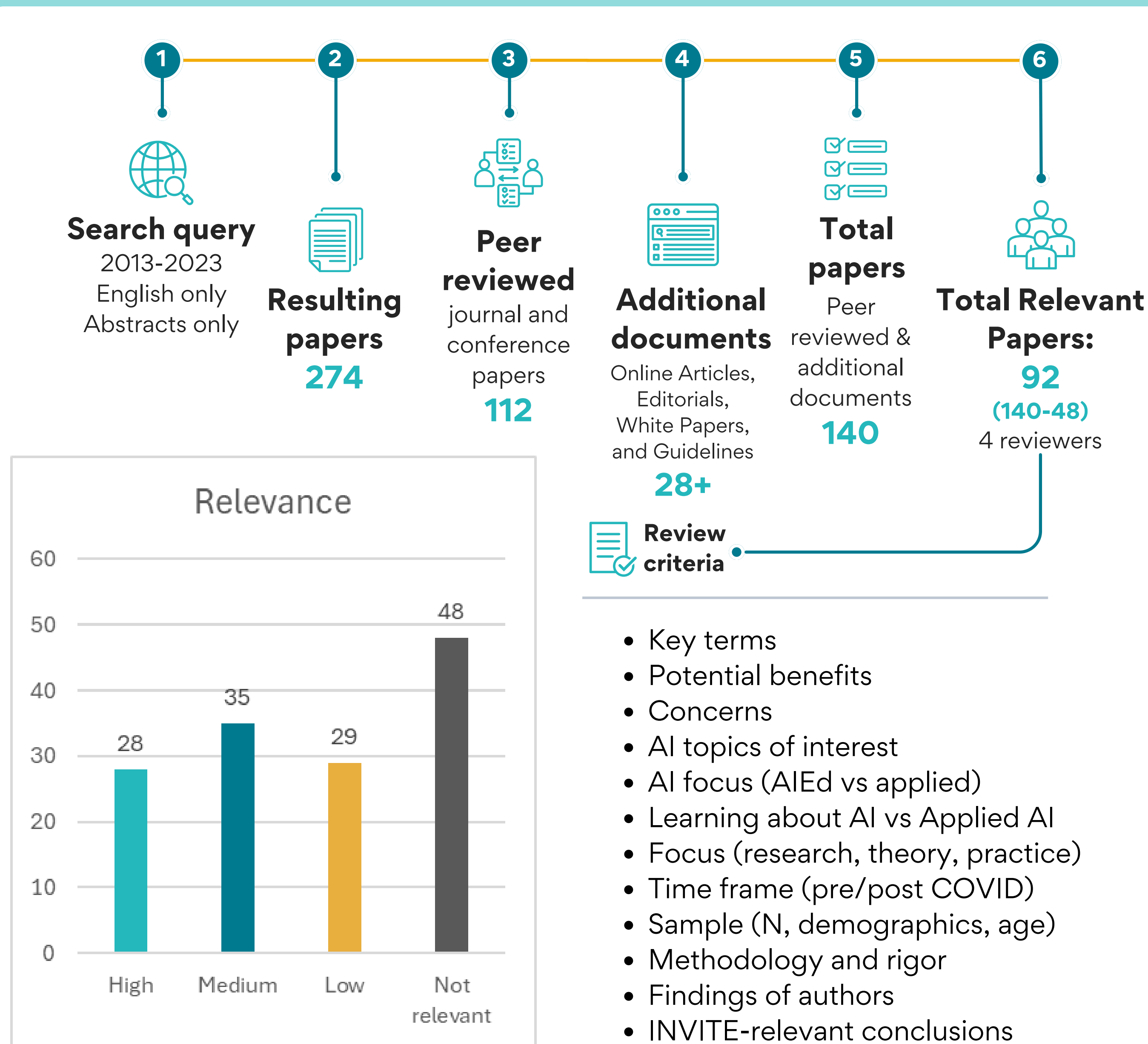
RESEARCH QUESTIONS

1. What are teachers' and students' perceptions of AI-enabled learning environments (*potential benefits and concerns*)?
 - a. What do teachers and students consider as AI?
 - b. How frequently do students and teachers interact with AI?
 - c. What tools and resources do teachers use in the classrooms?
2. How comfortable are teachers and students with AI tools that consider different types of data (e.g., *performance, persistence, Collaboration, academic resilience*) when providing feedback to/interacting with users?

LITERATURE REVIEW APPROACH

EBSCO Search Conducted: October 2023 to December 2023

Query: ("teacher*" OR "student*" OR "learner*" OR "pupil*" OR "instructor*") AND ("perception*" OR "perspective*" OR "opinion*") AND ("AI" OR "Artificial Intelligence" OR "ChatGPT" OR "LLM" OR "large language models" OR "machine learning" OR "artificial agent" OR "intelligent tutor" OR "intelligent system" OR "pedagogical agent" OR "Chatbot") AND ("K-5" OR "K-8" OR "pre-K" OR "kindergarten" OR "K-12" OR "elementary school" OR "middle school" OR "high school")



USER RESEARCH APPROACH

- Completed IRB materials and received conditional approval.
- Completed recruitment materials, intake form and interview protocol.
- Designed a codesign activity to refine focus group data collection materials.
- Currently recruiting teacher consultants and focus group participants.

STUDY INVITATION: TEACHER PERSPECTIVES ON AI

Excited about the promise of new AI tools for your classroom? Have some new lesson plan materials you generated with AI that you'd like to share? Do you have some concerns about AI in education?

WE NEED YOUR HELP!

The INVITE Institute is conducting a study on teacher perspectives on Artificial Intelligence (AI) in education. Specifically, we'd like to hear from K-12 public school teachers about their understandings, explorations, and outcomes related to AI in the classroom, including concerns, opportunities and views on best practices or tools. We're excited to include the knowledge and wisdom of teachers working in some of the most underserved settings to help inform effective and ethical future developments in AI and education.



Focus groups and interviews will be conducted via video call and are completely voluntary. Unless specifically

How comfortable are you with AI tools that collect and analyze these types of data to provide feedback to/interact with users?

Type of Data	Not at all	Slightly	Moderately	Very
Performance				
Persistence				
Collaboration				
Academic resilience				
Engagement				
Emotion data				
Context of learning				
Cultural aspects				
Navigation data				
Social network data				
Other [type your data type]				

Follow up questions: [Ask Why/Please elaborate on those data types classified as 'Not at all' or 'Slightly' comfortable]

In your opinion, how would you rate the potential benefits of these applications of AI in education?

Use Case	Not at all	Low	Medium	High
Generation of educational materials like lesson plans or visual aides				
Personalized feedback, systems that adapt to learner capabilities or interests				
Automated grading				
Interactive conversations with chat agents				
Tools for creating assessments				
Performance assistance through functions like search suggestions or code debugging				
Classroom management or class-wide analytics				
Brainstorming, creativity and assisted creation				
Open up new ways for students to collaborate				
Other [type your use case/application]:				

Follow up questions: [Ask Why/Please elaborate on those areas for some benefits as 'High,' 'Low,' or 'Not at all']

How concerned are you about these aspects of AI?

Areas of concern	Not at all	Slightly	Moderately	Highly
Data security and Privacy				
Inaccurate feedback, perpetuating bias				
Plagiarism or cheating				
Diminishing teacher or student agency				
Other [type your concern]:				

Follow up questions: [Ask Why/Please elaborate on those areas for concern classified as 'Highly' or 'Moderately']

Other related deliverables

- Zapata-Rivera, D. & Arslan, B. (in press). Learner Modeling Interpretability and Explainability in Intelligent Adaptive Systems. In Santoianni, F., Giannini, G., and Ciasull, A. (Eds.) Mind, Body, and Digital Brains. Springer Nature Switzerland AG.

NEXT STEPS

Literature Review

- Complete review of relevant documents -> analyze results -> write insights/recommendations.

User Research

- Hire teacher consultants -> Co-design materials with consultants -> Recruit teachers for focus group -> Conduct interviews and focus groups with teachers
- Design materials -> Recruit and collect data from students

Disclaimer:

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Scan for more info about INVITE, updates and more. Or visit: invite.illinois.edu

