The 13th Annual WP Educational Technology Conference

Friday, November 18, 2022, 8:30 AM - 3:10 PM (EST), Online

Artificial Intelligence in K-12 Education: Best Practices and Trends

The recent rapid growth of Artificial Intelligence (AI) has generated new attention in the K-12 education sector. AI has enormous potential to change the way teachers teach, and students learn while also empowering students' learning. This emerging field also has the potential to address challenges in education today, despite concerns and fears that many educators have. This year, we will clarify what AI technology entails and how it can be used for beneficial purposes in K-12 classrooms.

Conference Chairs: Heejung An and Gigi Mohamad

Virtual Meeting Place: Zoom will be used for the entire conference. The links will be emailed to the registrants one week before the conference.

Website: http://2022wpuedtechconference.weebly.com/

Conference Schedule

8:15 AM – 8:30 AM: Logging into the Main Room

8:30 AM – 8:40 AM: Welcome (10 minutes)

8:40 AM – 8:50 AM: Break (10 minutes)

8:50 AM – 9:50 AM: Concurrent Session I (60 minutes)

9:50 AM– 10:00 AM: Break (10 minutes)

10:00 AM – 11:00 AM: Concurrent Session II (60 minutes)

11:00 AM– 11:10 AM: Break (10 minutes)

11:10 AM – 12:30 PM: Keynote Session (80 minutes)

12:30 PM – 1:00 PM: Lunch Break (30 minutes)

1:00 PM – 2:00 PM: Concurrent Session III (60 minutes

2:00 PM – 2:10 PM: Break

2:10 PM – 3:10 PM: Concurrent Session IV (60 minutes)

Welcome: 8:30 AM – 8:40 AM, EST (10 minutes)

Welcome Remarks: Amy Ginsberg, Dean, College of Education, William Paterson University
House Keeping: Gigi Mohamad

Break: 8:40 AM – 8:50 AM, EST (10 minutes)

Concurrent Session I: 8:50 AM – 9:50 AM, EST (60 minutes)

Workshop 1: Problem-Solving with Data: A Fresh Squeeze on Data
By Annabel Hasty (Quest Academy)

With a strong female lead character, A Fresh Squeeze on Data is an engaging story with bright graphics and accompanying lesson plans that relate directly to the interests of upper elementary students. This story describes how a young girl named Clara sets up a lemonade stand to raise money for a local hospital and learns the importance of data with the help of her data scientist mom. Based on the Five Big Ideas of AI, this book focuses directly on Societal Impact and Learning. Now available in 7 languages, A Fresh Squeeze on Data teaches the importance of data and recognizing data bias around the world.

Target Audience: K-12 Teachers and Technology Coaches

Workshop 2: Teaching Artificial Intelligence to K-12: An Active Learning Approach with GRADE

*By Neelu Sinha (Fairleigh Dickinson University) and
Ryan F. Evans (Haskell School, Wanaque School District)*

This workshop will introduce different ways K-12 teachers can incorporate Artificial intelligence (AI) lessons in their classrooms using hands-on and active learning strategies. We will use a 5-step progressive process that builds up along the way, starting with empathy (observation and listening), then defining the problem based on observations to generate ideas for potential solutions, followed by research and building a prototype based on the ideas, and finally testing the prototype.

Target Audience: K-12 Teachers

Workshop 3: Artificial Intelligence in K-12 Education: Issues and Applications for Librarians and Teachers
By Gigi Mohamad (William Paterson University)

Technology literacy has become a required key skill for K-12 students. The concept has expanded to be embedded in many subject areas and curricula, including the library program. School librarians and teachers are always at the forefront of introducing their students to the latest technological trends.

Artificial Intelligence and Machine Learning are among the rapidly advancing technologies that both educators and students need to understand.
This presentation will focus on defining AI and machine learning and provide librarians and teachers with easy-to-implement activities that can be incorporated into various subject areas, library technology program, and makerspace curricula for learners of all ages.

Target Audience: K-12* Librarians and *Teachers

Concurrent Session II: 10:00 AM – 11:00 AM, EST (60 minutes)

Workshop 1. Artificial Intelligence and Educational Assessments
   By Heejung An (William Paterson University)

How does artificial intelligence technology impact assessments in K-12 education settings? This workshop explores how assessments built with AI technology such as intelligent tutoring systems can create engaging, effective, specific, and personalized assessments, as teachers gain a precise understanding of student progress and learning outcomes. In the course of understanding this concept, this workshop will provide in-depth discussions and an activity about different types of feedback that can be embedded.

Target Audience: K-12 Teachers, and Educational Technology Specialists/Coaches

Workshop 2. Voice Assistants: Learning Support Tool for Students at Home

By Rebecca Dwenger (Hamilton County Educational Service Center)

Voice assistants like the Amazon Echo (Alexa) are not just available as a separate stand-alone smart speaker but also accessible on phones, TVs, etc. During this session, you will learn how you can create home learning support/opportunities for students, share executive functioning supports, and communicate to families through devices they are already using at home. After hearing about all of the possibilities, you will leave with ideas on how you can provide extra support outside of the classroom.

Target Audience: K- 12 Teachers, Speech Therapists, Counselors, and Administrators

Workshop 3: Duolingo: Application of AI Driven Technology to Teach English
   By Zixi Li and Curtis J. Bonk (Indiana University)

The purpose of this concurrent session is to provide insight into using an AI-Driven tool, Duolingo, to facilitate English teachers to construct

meaningful instructional activities and promote meaningful language learning. This session will walk you through the basic features of Duolingo, the history and special features of Duolingo for Schools, and different instructional strategies to complement in-school language learning with Duolingo.

Target Audience: English language teachers of all levels in all settings, including but not limited to those working in K–12, higher education, and community centers

Break: 11:00 AM – 11:10 AM, EST (10 minutes)

Keynote Address: 11:10 AM – 12:30 PM, EST (80 minutes)

Introductory Remarks: Jonathan Lincoln, Associate Provost, William Paterson University
Introduction to the Keynote Speakers: Heejung An
Keynote Speakers: Elliot Soloway, The University of Michigan
Cathie Norris, The University of North Texas

Using Artificial Intelligence (AI) Responsibly in K-12

AI is everywhere – from AI managing your stock portfolio, defining a restaurant's luncheon menus, to AI controlling a just-in-time manufacturing plant. Similarly, in K-12, there are "adaptive learning programs" that manage a student's learning. (At best, though, they work in very narrow domains, e.g., math skills.) In contrast, in surgery, AI supports the surgeon as the surgeon uses a joystick and a video monitor to raise and lower surgical scalpels during a surgical procedure. The surgeon, not the AI, is in control. Following the T-shirt slogan "Hydrate Responsibly," – we believe that AI should play a supporting role in the K-12 classroom – assisting teachers and students.

The classroom teacher – like the surgeon – is in control at all times. Following this philosophy, we are carefully adding AI elements to the Collabrify Roadmap Platform, a visual, interactive, and effective learning environment that supports K-5 students as they engage in learning. For example, in MakeMyLetters, an app inside "Collabrify" that supports kindergartners learning to block print, AI is identifying children – to their teachers - with specific handwriting issues; and, in MediaWriter, another app inside "Collabrify" AI is identifying YouTube videos for teachers to better support struggling learners or accelerated learners. In our

presentation, then, we will describe the Collabrify Roadmap Platform and how we are using AI responsibly in support of teachers and learners.

Biography:

Cathleen Norris is a Regents Professor, in the Department of Learning Technologies at the University of North Texas, Denton, TX. From 1995-2001, Norris was President of the National Educational Computing Association, and led its merger with ISTE, the International Society for Technology in Education, creating the largest, international organization for technology-minded educators in the world. Norris was Co-President of ISTE from 2001-2004. Norris' 14 years in K-12 classrooms – receiving a Golden Apple Award from Dallas ISD along the way – has shaped her university R&D agenda: developing resources to support K-12 teachers as they move into 21st century classrooms. Norris is currently co-founder and Co-Director of the UMich. Center for Digital Curricula.

Elliot Soloway is an Arthur F. Thurnau Professor, Department of Computer Science and Engineering, College of Engineering, School of Education and School of Information, University of Michigan, Ann Arbor, MI. In 2001, undergraduates selected him to receive the "Golden Apple Award" as the Outstanding Teacher of the Year at UMich. In 2004 and in 2011, students in the College of Engineering HKN Honor Society selected Soloway to receive the "Distinguished Teacher of the Year Award." Towards supporting K-12's digital transformation, in 2019 Soloway co-founded the Center for Digital Curricula, whose mission is to provide free, deeply-digital curricula to K-12 teachers. Over the past years, 10,000+ K-5, children have used the Center's curricula – and demonstrated increased scores on standardized tests.

Lunch Break: 12:30 PM - 1:00 PM, EST (30 minutes)

Concurrent Session III: 1:00 PM – 2:00 PM, EST (60 minutes)

Workshop 1: You Can Teach AI - 3-5 Grade Band
By Amy Eguchi (University of California San Diego)

This session will introduce ideas and resources you need to integrate AI literacy in your 3-5 lessons.

Target Audience: 3-5 Teachers

Workshop 2: Use of Scratch to Introduce Artificial Intelligence to Students
By Diallo Sessoms (Salisbury University)

"Artificial intelligence (AI) is no longer the stuff of the future; today's students can expect to interact with AI in both their personal and professional lives" (ISTE, 2022). As AI is embedded into daily activities, it is critical for students to understand the new world they will continue to experience. This session will provide an overview of AI, examples of everyday applications, and a curated set of resources to support getting started with AI. Additionally, you will learn how to use Scratch to introduce AI to students. This session requires participants to have a laptop and a Scratch account.

Target Audience: 1-8 Teachers

Workshop 3: You Can Teach AI - 6-8 Grade Band
By Emily Thomford (California Department of Education)

This session will introduce ideas and resources you need to integrate AI literacy in your 6-8 lessons

Target Audience: 6-8 Teachers

Break: 2:00 PM – 2:10 PM, EST (10 minutes)

Concurrent Session IV: 2:10 PM – 3:10 PM, EST (60 minutes)

Workshop 1: Towards a Transdisciplinary Approach to Artificial Intelligence Education
By Aditi Singh (Kent State University) and Eryka Wilson (Keiser University)

This presentation explores the AI program piloted in Neom Community School and the larger Education, Research, and Innovation Sector in Neom, Saudi Arabia's new megacity under development. In this program, AI is both taught as a distinct subject and as a means of learning about other subjects within the school's curriculum, which deploys instruction through "Units of Inquiry." This approach to education connects subjects across a curriculum under one major guiding question

at a time. Introducing AI in this way presents an impactful approach to teaching AI, as it shifts AI from a subject that students "like" or "not like" to a subject that supports holistic transdisciplinary.

Target Audience: K- 12 Teachers

Workshop 2: Teaching Modeling to Understand AI, Based on the 6E Lesson Plan Design Stages
By Woonhee Sung (The University of Texas at Tyler)

This workshop will address ways to teach AI modeling concepts based on the 6E learning stages. Understanding modeling is part of AI Literacy. The tasks are designed to promote understanding toward modeling AI uses, as part of machine learning. The tasks will include scaffolding questions that teachers can think about and apply in their real-world practices.

Target Audience: 3-8 Teachers

Workshop 3: You Can Teach AI - K-2 Grade Band
By Vicky Sedgwick (Laurence School)

This session will introduce ideas and resources you need to integrate AI literacy in your K-2 lessons.

Target Audience: K- 2 Teachers

Workshop 4: You Can Teach AI - 9-12 Grade Band
By Rebecca Bailey (Computer Science Teachers Association California Far North Chapter)

This session will introduce ideas and resources you need to integrate AI literacy in your 9 - 12 lessons

Target Audience: 9 - 12 Teachers

Participants will receive **6.5** Professional Development Hours
Fee: **$49.00**
Registration: https://tinyurl.com/wpedtech
Contact: Brie Mesagaes at mesagaesb@wpunj.edu