Authors

Ryan Baker

Ryan Baker is Associate Professor at the University of Pennsylvania, and Director of the Penn Center for Learning Analytics. His lab conducts research on engagement and robust learning within online and blended learning, seeking to find actionable indicators that can be used today but which predict future student outcomes. Baker has developed models that can automatically detect student engagement in over a dozen online learning environments, and has led the development of an observational protocol and app for field observation of student engagement that has been used by over 160 researchers in 7 countries. Predictive analytics models he helped develop have been used to benefit over a million students, over a hundred thousand people have taken MOOCs he ran, and he has coordinated longitudinal studies that spanned over a decade. He was the founding president of the International Educational Data Mining Society, is currently serving as Editor of the journal Computer-Based Learning in Context, is Associate Editor of two journals, was the first technical director of the Pittsburgh Science of Learning Center DataShop, and currently serves as Co-Director of the MOOC Replication Framework (MORF). Baker has co-authored published papers with over 300 colleagues.

Tony Belpaeme

Tony Belpaeme is Professor at Ghent University and Professor in Robotics and Cognitive Systems at the University of Plymouth, UK. He received his PhD in Computer Science from the Vrije Universiteit Brussel (VUB) and currently leads a team studying cognitive robotics and human-robot interaction. He coordinated the H2020 L2TOR project, studying how robots can be used to support children with learning a second language, and coordinated the FP7 ALIZ-E project, which studied long-term human-robot interaction and its use in paediatric applications. He worked on the FP7 DREAM project, studying how robot therapy for Autism Spectrum Disorder. Starting from the premise that intelligence is rooted in social interaction, Belpaeme and his research team try to further the science and technology behind artificial intelligence and social human-robot interaction. This results in a spectrum of results, from theoretical insights to practical applications.

Alex J. Bowers

Alex J. Bowers is an Associate Professor of Education Leadership at Teachers College, Columbia University, where he works to help school leaders use the data that they already collect in schools in more effective ways to help direct the limited resources of schools and districts to specific student needs. His research focuses on the intersection of effective school and district leadership, organization and HR, data driven decision making, student grades and test scores, student persistence and dropouts. His work also considers the influence of school finance, facilities, and technology on student achievement. Dr. Bowers studies these domains through the application of data science, and big data analytics, such as data visualization analytics, multilevel and growth mixture modeling, and cluster analysis heatmap data dashboards. He earned his Ph.D. in K12 Educational Administration from Michigan State University, and previous to teaching and education research, spent a decade as a cancer researcher in the biotechnology industry, with a M.S. in Biochemistry, Microbiology and Molecular Biology, and a B.S. in Biochemistry.

Jack Buckley

Jack Buckley is Head of Assessment and Learning Sciences at Roblox, where our mission is to bring the world together through play. Roblox enables anyone to imagine, create, and have fun with friends as they explore millions of immersive 3D experiences, all built by a global community of developers. Prior to this role, he was president and chief scientist at Imbellus, a game-based assessment technology startup. He was previously senior vice president at the American Institutes for Research (AIR), where he led their research and evaluation area, and he still serves as Institute Fellow on several projects. Before joining AIR, he helped lead the redesign of the SAT at the College Board, where he served as senior vice president of research. Before that, he served as Commissioner of the US Department of Education's National Center for Education Statistics (NCES), where he was responsible for the measurement of all aspects of US education, including conducting the National Assessment of Educational Progress and coordinating participation in international assessments. While at NCES, he also acted as a senior technical adviser to Department of Education leadership and co-chair of its data strategy team. In addition, Jack has been a tenured associate professor of applied statistics at New York University and an an assistant professor of educational measurement at Boston College, an analytic methodologist in the intelligence community, and a US Navy surface warfare officer and nuclear reactor engineer.

Laura Colosimo

Pierre Dillenbourg

A former teacher in elementary school, Pierre Dillenbourg graduated in educational science (University of Mons, Belgium). He started his research on learning technologies in 1984. In 1986, he has been on of the first in the world to apply machine learning to develop a self-improving teaching system. He obtained a PhD in computer science from the University of Lancaster (UK), in the domain of artificial intelligence applications for education. He has been assistant professor at the University of Geneva. He joined EPFL in 2002. He has been the director of Center for Research and Support on Learning and its Technologies, then academic director of Center for Digital Education, which implements the MOOC strategy of EPFL (over 2 million registrations). He is full professor in learning technologies in the School of Computer & Communication Sciences, where he is the head of the CHILI Lab: «Computer-Human Interaction for Learning & Instruction ». He is the director of the leading house DUAL-T, which develops technologies for dual vocational education systems (carpenters, florists,...). With EPFL colleagues, he launched in 2017 the Swiss EdTech Collider, an incubator with 80 start-ups in learning technologies. He (co-)-founded 4 start-ups, does consulting missions in the corporate world and joined the board of several companies or institutions. In 2018, he co-founded LEARN, the EPFL Center of Learning Sciences that brings together the local initiatives in educational innovation. He is a fellow of the International Society for Learning Sciences. He currently is the Associate Vice-President for Education at EPFL.

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Sidney D'Mello

Sidney D'Mello (PhD in Computer Science) is an Associate Professor in the Institute of Cognitive Science and Department of Computer Science at the University of Colorado Boulder. He is interested in the dynamic interplay between cognition and emotion while individuals and groups engage in complex real-world tasks. He applies insights gleaned from this basic research program to develop intelligent technologies that help people achieve to their fullest potential by coordinating what they think and feel with what they know and do. D'Mello has co-edited seven books and published almost 300 journal papers, book chapters, and conference proceedings. His work has been funded by numerous grants and he currently serves(d) as associate editor for Discourse Processes and PloS ONE. D'Mello is the Principal Investigator for the NSF National Institute for Student-Agent Teaming.

Judith Good

Judith Good is a Professor of Human Factors and the Internet of Things at the University of Amsterdam. She wrote her chapter while Professor of Interaction Design and Inclusion at the University of Sussex. She has a background in psychology and artificial intelligence, and has worked at universities in both Europe and the United States. Her broad research focus has been on better understanding how people learn, and on how the development of innovative technologies can better support their learning. Within this area, she is particularly interested in looking at how best to support people with disabilities, particularly autism. In so doing, she aims to develop effective methods for involving the end users of such technologies in their design from the outset.

Dirk Ifenthaler

Dirk Ifenthaler is Professor and Chair of Learning, Design and Technology at University of Mannheim, Germany and UNESCO Deputy Chair of Data Science in Higher Education Learning and Teaching at Curtin University, Australia. Dirk's research focuses on the intersection of cognitive psychology, educational technology, data analytics, and organisational learning. He is the Editor-in-Chief of the Technology, Knowledge and Learning, Senior Editor of Journal of Applied Research in Higher Education, and Deputy Editor-in-Chief of International Journal of Learning Analytics and Artificial Intelligence for Education.
Contact: dirk@ifenthaler.info

Rebecca Kantar

Rebecca serves as the Entrepreneur in Residence at Roblox Corporation, a technology platform bringing the world together through play. Roblox acquired, Imbellus, a simulation-based assessment technology company that Rebecca founded and led. Rebecca started Imbellus with conviction that better educational assessments would drive better curriculum and instruction. Imbellus developed high-stakes tests that measured deep thinking skills like problem solving, systems thinking, and decision-making. Rebecca led Imbellus in raising over $23M, signing multimillion-dollar development contracts with Fortune 500 corporations and delivering operational, fair, reliable, and valid assessments. Prior to launching Imbellus, Ms. Kantar founded an expert network that Gerson Lehrman Group (GLG) acquired in 2012. Rebecca attended public school in Massachusetts and then Harvard College and currently lives in Massachusetts.

Marty McCall

Marty McCall is an Expert for the Game-based Innovation Laboratory at McKinsey & Company. The Laboratory combines scientific analysis with modern game design to create immersive digital experiences that engage users and provide meaningful insights for clients.

Before working at McKinsey, she was the Lead Psychometrician at Imbellus, a start-up producing game-based software. Prior to that she was the Director of Psychometrics for the Smarter Balanced Assessment Consortium, which produced assessments for public schools in a coalition of states. She was director of operational assessments at Northwest Evaluation Association, an organization that produces assessments for measuring academic growth throughout the school year. Her work at NWEA was preceded by work as a psychometrician for the states of Oregon and Washington.

Inge Molenaar

Inge Molenaar is associated professor Educational Sciences at the Behavioural Science Institute at Radboud University in the Netherlands. She has over 20 years of experience in the field of technology enhanced learning taking multiple roles from entrepreneur to academic.

Her research in the Adaptive Learning Lab focusses on technology empowered innovation to optimize students' learning. The application of data, learning analytics and Artificial Intelligence to understand how learning unfolds over time is central in her work. Artificial Intelligence offers a powerful way to make new steps towards measuring, understanding and designing innovative learning scenarios. Dr Molenaar envisions Hybrid Human-Systems that augment human intelligence with artificial intelligence to empower learners and teachers in their quest to make education more efficient, effective and responsive. In this endeavor collaboration between governments, schools, research and industry is essential to develop the next generation educational systems. Dr Molenaar has just received an ERC Starting Grant to develop the first Hybrid Human-AI Regulation system to train young learners' Self-regulated learning skills with the help of AI and she also recently became a Jacobs Foundation Fellow.

Dr Molenaar holds Master's degrees in Cognitive Psychology and International Business studies (Maastricht University) and a PhD in Educational Sciences (University of Amsterdam).

Natalie Smolenski

Head of Business Development, Hyland Credentials

Natalie Smolenski leads business development for Hyland Credentials, a solution for verifiable digital credentials anchored in blockchain technology. Hyland Credentials was previously Learning Machine, a software firm she helped found, grow, and successfully exit.

As an author and public speaker, Natalie focuses on the intersections of identity, technology, and government. Her doctoral work focused on the economic dimensions of human development and mental health. By bringing a scientific perspective to distributed digital technologies and social transformation, she helps audiences from all backgrounds understand how individuals connect to form communities and build the infrastructures of the future.

You can find a list of Natalie's publications and public speaking at www.nataliesmolenski.com.

Her latest project, VALUED., can be found at valued.nataliesmolenski.com.

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Erica Snow

Erica Snow is the Director of Learning and Data Science at Roblox, where our mission is to bring the world together through play. Roblox enables anyone to imagine, create, and have fun with friends as they explore millions of immersive 3D experiences, all built by a global community of developers.

Prior to this role, she was the Director of Learning and Data science at Imbellus, a game-based assessment technology startup. She was previously the Learning Analytics Lead Scientist at SRI international, where she led work focused on the evaluation and implementation of educational technologies within the classroom. Erica has over 60 peer-reviewed publications in the fields of Data Science, Cognitive Science, Educational Technology and Learning Science. In addition Erica is an adjunct professor at American University where she teaches predictive analytics for business.

Fumihide Tanaka

Fumihide Tanaka is an associate professor in the Faculty of Engineering, Information and Systems of the University of Tsukuba, Japan. After he obtained a Ph.D. from the Tokyo Institute of Technology in 2003, he joined Sony Corporation and worked for the research and development of entertainment robots. He then started the research of human-robot interaction (HRI) during the time he stayed in the University of California in San Diego between 2004 and 2007. A long-term field study conducted in a nursery school in that period has been regarded as a classic study of child-robot interaction, having been reported in major news media such as CNN, Nature, and Science. He moved to academia in 2008, and since then he has been working for robotics for education in the University of Tokyo and the University of Tsukuba. He supervised the development of an educational application for Pepper robot during the time he worked for SoftBank Corp. as a consultant. Currently he serves as a director for foreign affairs in the Robotics Society of Japan.

Stéphan Vincent-Lancrin

Stéphan Vincent-Lancrin is a Senior Analyst and Deputy Head of Division at the Organisation for Economic Co-operation and Development (Directorate for Education and Skills). He currently leads work on education during the covid-19 crisis, but also leads the OECD work on the digitalization in education, notably the project on "Smart data and digital technology in education: AI, learning analytics and beyond" -- including a blockchain component. He also leads work around disciplined innovation and change management, showing with the work on "Fostering and Assessing Creativity and Critical Thinking in Education" what kind of support, environment and tools school teachers and university professors could be given to improve their teaching and their students' learning. An example of capacity development through international professional learning communities. More generally, speaking he work on innovation, research and how new trends influence the futures of learning and education policy at the schooling and higher education levels.

From:

OECD Digital Education Outlook 2021

Pushing the Frontiers with Artificial Intelligence, Blockchain and Robots

Access the complete publication at:
https://doi.org/10.1787/589b283f-en

Please cite this chapter as:

OECD (2021), "Authors", in *OECD Digital Education Outlook 2021: Pushing the Frontiers with Artificial Intelligence, Blockchain and Robots*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/653606d5-en

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