Sania Zahra Zaidi
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PROFESSIONAL EXPERIENCE

Research Assistant Professor	2020-present
Learning Sciences Research Institute,	
The University of Illinois at Chicago	
Visiting Research Scientist	2018-2020
Learning Sciences Research Institute,	
The University of Illinois at Chicago	
Postdoctoral Research Associate: Learning Sciences	2016-2018
Learning Sciences Research Institute,	
The University of Illinois at Chicago	

EDUCATION

Ph.D., Educational Studies: Science Education	2016
School of Education, The University of Michigan, Ann Arbor	
M.S., Computational Natural Sciences	2011
International Institute of Information Technology (IIIT), Hyderabad, India	
B.S., Computer Science and Engineering	2010
International Institute of Information Technology (IIIT), Hyderabad, India	
B.S., Physics	2007
St Xavier's College, Mumbai, India	

RESEARCH INTERESTS

Science and Engineering Assessment Design for K-12
Technology-Enhanced Learning Environments
Culturally Relevant Curriculum and Assessment Design
Mixed Methods Approach in Program Evaluation

EDUCATION

Stanley E. & Ruth B. Dimond Best Dissertation Award ($500)	2017
Doctoral dissertation was recognized as an outstanding example of the use of mixed methods in the study of a science education intervention that informs the practices of formative assessment and scientific writing	
Winner of the University of Michigan's Innovation in Action (IIA) Education Design Challenge (*$11,000*)	2016
Developed a prototype of a dual language formative assessment system to support mathematical literacy of pre-Kindergarteners in low income communities in South Africa	
Rackham Pre-Doctoral Fellowship	2015-2016
Fellowship supports the research and dissertation writing of outstanding doctoral students who engage in creative, ambitious, and risk-taking research	
Dean's List for Academic & Research Excellence, IIIT-Hyderabad	2010

Recognized for excellence in computer science coursework and research in computational natural sciences

GRANTS

Supporting Instructional Decision Making: The Potential of Automatically Scored Three-dimensional Assessment System	2021-2025

Funding Agency: National Science Foundation (NSF)
Award Number: 2101166
Proposed Amount for UIC $596,575
Lead Institution: University of Georgia
Role: Co-Principal Investigator

Stackable, Instructionally-embedded, Portable Science(SIPS) Assessments Project	2021- 2023

Funding Agency: U.S. Department of Education (Federal grant to Nebraska with contract to EdCount and subcontract to UIC)
Amount: $649,983
Role: Science Assessment Development Lead

Improving Multi-dimensional Assessment and Instruction: Building and Sustaining Elementary Science Teachers' Capacity Through Learning Communities (Grades 3-5)	2018-2022

Funding Agency: National Science Foundation (NSF)
Award Number: 1813737
Amount: $1,650,521
Lead Institution: University of Illinois at Chicago (UIC)
Role: Senior Research Personnel

Illinois Science Assessment Partnership-Item Development and Scoring	2020-2022

Funding Agency: Illinois State Board of Education (ISBE)
Award Number: 217SIU sub SIUC20-23
Amount: $731,965
Role: Senior Research Personnel

Equipping Middle School Teachers with Resources to Monitor the Progress of Their Students' Science Learning	2018-2021

Funding Agency: Chan Zuckerberg Initiative
Award Number: 2018-194933
Amount: $1,000,000
Lead Institution: University of Illinois at Chicago (UIC)
Role: Co-Investigator

Designing Next Generation Assessments to Support the Teaching and Learning of Life Science	2016-2019

Funding Agency: Gordon and Betty Moore Foundation
Proposed Amount for UIC $2,246,168
Lead Institution: University of Illinois at Chicago (UIC)
Role: Senior Research Personnel

OTHER RESEARCH EXPERIENCE

Designing Online Classroom Assessments using Double-Blind Peer Review (Middle School) 2011-2016
Doctoral Dissertation Titled: A Novel Approach to Fostering Next Generation Science Knowledge in Middle School Students: Introducing Double-Blinded Reviews in Classroom Formative Assessments

Evaluating Large Scale Assessments in Mathematics & English Language Arts (PreK-3) 2014-2016
Role: Program Evaluation lead
Project: Sustaining the Boost: Longitudinal Impacts of the Boston Prekindergarten Program and Variation in Impacts. Funding Agency: Institute of Education Sciences (IES)

Designing & Program Evaluation of Curricula on Climate Change (Middle & High School) 2011-2014
Role: Curriculum lead for Middle School and Assessment Design lead
Project: Change Thinking—Developing Climate Change Curriculum for Middle and High School. Funding Agency: National Science Foundation (NSF)

COLLABORATIONS WITH OTHER ORGANISATIONS

Chicago Public Schools, Illinois 2017
Promoting classroom assessment literacy for middle school science teachers

Dupage County, Illinois 2016
Building teacher capacity in classroom based assessments in science

Science & Cooking, India 2016-2021
Curriculum design to engage children and youth in community based programs focused on the science behind cooking

EarlyBird @WorkEducare, South Africa 2016-2018
Assessment development for technology enhanced assessments in pre-kindergarten mathematics

The College Board, New York 2011-2013
Assisted in the review of the assessments, reports, and scoring guidelines for the College Board's AP Insight online assessment system in Biology

The Indian Ministry of Human Resources and Development 2009-2010
Assisted in content development for the virtual physics laboratory that allows under-resourced schools to engage high school students in laboratory work in physics

TEACHING EXPERIENCE

Teaching Apprentice, The University of Michigan, Ann Arbor Fall, 2013
EDUC 611: Classroom Assessment (Graduate Level Course)

Teaching Assistant, International Institute of Information Technology (IIIT), Hyderabad, India 2010
Introduction to Cognitive Science

Teaching Assistant, International Institute of Information Technology (IIIT), Hyderabad, India 2009
Natural Sciences for Engineers

Teaching Assistant, International Institute of Information Technology   2008
(IIIT), Hyderabad, India
Introduction to Computer Aided Drug Design

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PUBLICATIONS

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Zaidi, S.Z., McElhaney, K.W., & Alozie, N. (book proposal accepted). Unpacking and mapping the NGSS dimensions. In Harris, C. J., Krajcik, J. S., & Pellegrino, J. W. (Eds.) *Creating and using instructionally supportive assessments in NGSS classrooms*. NSTA Press.

Ko, M., Morales, C., & A, Zaidi, S.Z. (book proposal accepted). Using tasks in instructionally supportive ways. In Harris, C. J., Krajcik, J. S., & Pellegrino, J. W. (Eds.) *Creating and using instructionally supportive assessments in NGSS classrooms*. NSTA Press.

Gane,B.D., Lehman, E.M., Bates, M.S., Zaidi, S.Z., Lee-Hassan, A., Gaur, D., Madden, K., & Pellegrino, J.W. (2020). Building a Professional Learning Community around Science Assessment: Designing and Using Assessment Tasks to Support Multi-Dimensional Instruction. In M. Gresalfi and I. S. Horn (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 4* (pp. 2357-2358). Nashville, Tennessee: International Society of the Learning Sciences.

Gane,B.D., Zaidi, S.Z., & Pellegrino, J.W. (2018). Measuring what matters: Using technology to enable the assessment of multidimensional learning. *European Journal of Educ*ation, *53*(1), 1-12. https://doi.org/10.1111/ejed.12269

Pellegrino, J. W., Gane, B. D., Zaidi, S. Z., Harris, C. J., McElhaney, K. W., Alozie, N., Haugabook Pennock, P., Severance, S., Neumann, K., Fortus, D., Krajcik, J., Nordine, J., Furtak, E. M., Briggs, D., Chattergoon, R, Penuel, B., Wingert, K. Van Horne, K. (2018). The challenge of assessing "knowledge in use": Examples from three-dimensional science learning and instruction. In Kay, J. and Luckin, R. (Eds.). *Rethinking Learning in the Digital Age: Making the Learning Sciences Count, Proceedings of the 13th International Conference of the Learning Sciences (ICLS) 2018, 2,* 1211-1218. London, UK: International Society of the Learning Sciences.

Pellegrino, J. W., Harris, C., Krajcik, J., Gane, B. D., McElhaney, K. W., Pennock, P.H., Alozie, N., & Zaidi, S. Z. (2018). Design of next generation science assessments: Measuring what matters. In Kay, J. and Luckin, R. (Eds.). *Rethinking Learning in the Digital Age: Making the Learning Sciences Count, Proceedings of the 13th International Conference of the Learning Sciences (ICLS) 2018, 2,* 1212-1213. London, UK: International Society of the Learning Sciences.

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PEER REVIEWED CONFERENCE PRESENTATIONS

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Gane, B. D., Zaidi, S. Z., Zhai, X. & Pellegrino, J. W. (2020, April). Using Machine Learning to Score Tasks That Assess Three-Dimensional Science Learning [Symposium]. AERA Annual Meeting San Francisco, CA http://tinyurl.com/yxxwrnu5 (Conference Canceled).

Weiser, G., Harris, C.H., Gane, B.D., Pellegrino, J.W., & Zaidi, S. Z., (2020, March). Understanding external expert review of design artifacts in design-based research: A guide for the perplexed. NARST Annual International Conference, Portland, Oregon. (Conference Canceled).

Gane, B.D., Zaidi, S.Z., McElhaney, K.W., Pellegrino. J.W. (2019, April). Next Generation Science Standards Assessment Design Across Use Cases: From Formative Classroom Assessment to Large-Scale Accountability Assessment. Paper presented at the 2019 Annual Meeting of the American Educational Research Association (AERA), Toronto, Canada.

Alozie, N., Madden, K., Zaidi, S.Z., & Pennock, P. (2018, April). Challenges in designing instructionally supportive science assessments using culturally relevant principles for diverse students. Paper presented at the 2018 Annual Meeting of the American Educational Research Association (AERA), New York, New York.

Zaidi, S.Z, Pennock, P., Alozie, N. (2018, March). Instructionally supportive assessment tasks and classroom-based strategies for promoting three-Dimensional learning. Paper presented at the 2018 Annual National Conference of the National Science Teachers Association (NSTA), Atlanta, Georgia.

Zaidi, S.Z., Ko, M., Gane, B.D., Madden, K., Gaur, D., Pellegrino. J.W. (2018, March). Portraits of teachers using three-dimensional assessment tasks to inform instruction. Paper presented at the 91st NARST Annual International Conference, Atlanta, Georgia.

McElhaney, K.W., Zaidi, S.Z., Gane, B.D., Krajcik, J., Alozie, N., Harris, C., (2018, March). Designing NGSS-aligned assessment tasks and rubrics to support classroom-based formative assessment. Paper presented at the 91st NARST Annual International Conference, Atlanta, Georgia.

Gane, B.D., McElhaney, K.W., Zaidi, S.Z., Pellegrino. J.W. (2018, March). Analysis of student and item performance on three-Dimensional constructed response assessment tasks. Paper presented at the 91st NARST Annual International Conference, Atlanta, Georgia.

Alozie, N., Pennock, P, Madden, K., Zaidi, S.Z., Harris, C., Krajcik, J. (2018, March). An equity framework to inform the design and development of NGSS-aligned formative assessment tasks. Paper presented at the 91st NARST Annual International Conference, Atlanta, Georgia.

Gane, B.D., & Zaidi, S.Z. (2017, November). NGSS, 3-D learning, and the design and use of classroom assessments. Paper presented at the 2017 Regional Conference of the National Science Teachers Association (NSTA), Milwaukee, Wisconsin.

Pellegrino. J.W., Gane, B.D., Zaidi, S.Z., Harris, C., McElhaney, K.W., Alozie, N., Pennock, P.H., Krajcik, J., Damelin, D., Novak, N., & Sarna, J. (2017, September). Designing and using instructionally-supportive, NGSS-aligned science assessments for diverse learners. Structured poster session at the 2017 NCME Special Conference on Classroom Assessment, Lawrence, Kansas.

Zaidi, S.Z. (2017, April). Using anonymous peer and expert reviews to support middle school students in building science knowledge. Paper presented at the 2017 Annual Meeting of the American Educational Research Association (AERA), San Antonio, Texas.

Pennock, P., Lee, J., Alozie, N., Zaidi, S.Z, & Krista, D. (2017, March). Creating life science assessment tasks that integrate three-dimensional learning of the NGSS. Paper presented at the 2017 Annual National Conference of the National Science Teachers Association (NSTA), Los Angeles, California.

Zaidi, S.Z, & Songer, N.B. (2016, April). Do formative assessments providing customized feedback and revision opportunities promote learning in middle school students? Paper

presented at the 2016 Annual Meeting of the American Educational Research Association (AERA), Washington D.C.

Bricker, L.A., Zaidi, S.Z., & Barnard, R.A. (April, 2016). Stem Studio: Scientists and science educators learning and collaborating together about STEM-related educational design. Poster presented at the 2016 Annual Meeting of the American Educational Research Association (AERA), Washington D.C.

Zaidi, S.Z. (2015, June). An innovative approach to promoting anonymous argumentation in science: Introducing the double-blind-review process to middle school students. Poster presented at the Doctoral Consortium of the 11th International Conference on Computer Supported Collaborative Learning (CSCL), Gothenburg, Sweden.

Bricker, L.A., & Zaidi, S.Z. (2015, April). Employing a studio model for designers of science learning and teaching artifacts and environments: Tinkering, critique, and dialogue. Paper presented at the 88th NARST Annual International Conference, Chicago, Illinois.

Zaidi, S.Z., & Songer, N. B. (2014, April). Using curriculum-embedded formative assessments to promote scientific argumentation in middle school students. Paper presented at the Graduate Student Roundtable (Division H) of the 2014 Annual Meeting of the American Educational Research Association (AERA), Philadelphia, Pennsylvania.

Songer, N.B., & Zaidi, S.Z. (2013, April). Online embedded assessments for evidence of NGSS fused knowledge. Paper presented at the 86th NARST Annual International Conference, Rio Grande, Puerto Rico.

Zaidi, S.Z., & Indurkhya, B. (2011, April). A study on the modes of content representation in science textbooks. Poster presented at the Canada International Conference on Education (CICE), Toronto, Canada.

Zaidi, S.Z., Ojha, A., & Indurkhya, B. (2010, August). The effect of color on retrieval of Textual Information. Poster presented at the 33rd European Conference on Visual Perception (ECVP), Lausanne, Switzerland.

DESIGNED PRODUCTS

Middle School Classroom Based Assessments- Lead Assessment Designer
http://nextgenscienceassessment.org/task-portal/
Middle School Science Curriculum-Lead Writer
Songer, N.B., Dewey, T., Peters, V., Reicher, M., Kwok, A., Zaidi, S., Tupper, B., Hammond, G., Myers, P. (2014). *Climate Change and Impacts on Ecosystems: A Middle School Curricular Unit.* Ann Arbor, MI: The University of Michigan.
High School Science Curriculum - Lead Writer
Songer, N.B., Dewey, T., Peters, V., Reicher, M., Kwok, A., Zaidi, S., Tupper, B., Hammond, G., Myers, P. (2014). *Climate Change and Impacts on Ecosystems: A High School Curricular Unit.* Ann Arbor, MI: The University of Michigan.

INVITED SPEAKER SESSIONS & WORKSHOPS

Presenter at the 2021 DRK-12 PI Meeting   June, 2021

Session Title: *Improving Multi-Dimensional Assessment and Instruction: Building and Sustaining Elementary Science Teachers' Capacity through Learning Communities*

Session Title: *Structured Poster Session on Assessment: Improving Multi-Dimensional Assessment and Instruction: Building and Sustaining Elementary Science Teachers' Capacity through Learning Communities*

Expert Committee Member to guide equity in measurement and assessment organized by Education First and Chan Zuckerberg Initiative   April, 2021

Feedback for the Project: *Whole-Child Assessments and Measurements: A Framework for Equitable Design and Practice*

Presenter at the Science Assessment Task Resource Symposium organized by the Learning Policy Institute   March, 2021

Title of Presentation: Overview and Illustration of the Next Generation Science Assessment (NGSA) tasks
Presenters: Pellegrino, J.W., Zaidi, S.Z, & Nyaema, M.

Guest Speaker for Doctoral Seminar at the University of Virginia

Course: Readings and Research in Science Education   March, 2020
Title of talk: Perspectives of Assessment in Science Education.

Workshop at The Peggy Notebaert Nature Museum's Partner Teacher Conference   January, 2020

Title of session: Evaluating NGSS Assessments for Classroom Use
Presenters: Zaidi, S.Z., Bates,M., & Gane, B.D.

Workshop at The Peggy Notebaert Nature Museum's Partner Teacher Conference   January, 2019

Title of session: Assessing the NGSS in the Classroom
Presenters: Zaidi, S.Z., Bates,M., & Lee-Hassan, A.

Full day Workshop conducted for the 13th International Conference of the Learning Sciences (ICLS) 2018. London, UK.   June, 2018

Title: Designing knowledge-in-use assessment tasks and rubrics to assess and promote deep learning in science classrooms.
Presenters: Harris, C. J., Krajcik J. S., Severance, S., Pellegrino, J. W., Zaidi, S. Z., & Gane, B. D.

Guest Speaker for Doctoral Seminar at UIC   November, 2016

Course: LSRC 500: Introduction to the Learning Sciences
Title of talk : What does it mean to learn in Science?

Workshop for Science Teachers in Dupage County, IL   November, 2016

Title: NGSS, 3-D Learning, and the Design and Use of Classroom Assessment

LSRI Seminar Series, University of Illinois, Chicago   September, 2016

Title of talk : A Novel Approach to Fostering Next Generation Science Knowledge in Middle School Students: Introducing Double-Blinded Reviews in Classroom Formative Assessment

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

The National Association for Research in Science Teaching (NARST)
The American Educational Research Association (AERA)
International Society of the Learning Sciences (ISLS)

National Science Teachers Association (NSTA).

SERVICE

Reviewer for Academic Journals
- European Journal of Education   Since 2018
- Journal of Research in Science Teaching   Since 2017
- Journal of Curriculum Studies   Since 2015

Reviewer for Conference Proposals
- American Education Research Association (AERA)   Since 2016
- Annual NARST Conference   Since 2013