University at Buffalo | Community for Global Health Equity

Global Innovation Challenge: 2016

Photograph: *The Music of Love*, Ario Wibisono, National Geographic Photo Contest, 2010.

May 16-21 | 8a-5p M-F, 9a-12p Sa

"Field Guide"

On any given day, more than a billion children are in school…in permanent or temporary buildings, in tents or under trees…developing their potential and enriching their lives. But schooling is not always a positive experience for children. It can mean shivering in cold, unheated buildings or sweltering in hot, airless ones. It can mean being forced to stand in unfurnished classrooms, being hungry, thirsty or unwell; it can also mean being frightened by the threat of punishment, humiliation, bullying or even violence at the hands of teachers and fellow pupils. These conditions thwart learning.

- UNICEF, *Child Friendly Schools*

Special thanks go to the sponsors of the 2016 Global Innovation Challenge: the Healthy World Foundation, the Randwood Foundation, and the University at Buffalo Community for Global Health Equity.

Background

Beginning in 2000, the United Nations, along with its member states, worked to achieve the Millennium Development Goal for water and sanitation. At the close of this 15-year campaign, 2.6 billion people gained access to improved drinking water and 2.1 billion people gained access to improved sanitation. Despite these efforts and the recognition of the human right to sanitation, 2.4 billion people still lack access to improved sanitation facilities. Millions more with disabilities are unable to access or use existing facilities.

Diminished access to sanitation leads to multiple public health risks, and, for the 100 million children and teens with disabilities worldwide, the lack of adequate sanitation is a primary barrier to school attendance. While sanitation is only one facet, more than one third of school-age children with disabilities in India are not enrolled in schools. In Uganda, 94% of students with disabilities drop out of school prior to completion. Likewise, in both countries, due to perceived and real threats of verbal and physical assaults, girls entering puberty are equally vulnerable to not completing school.

With the 2015 adoption of its 17 Sustainable Development Goals, the United Nations has placed “water and sanitation for all” and “inclusive and equitable education for all” as top priorities for the next 15 years. Equitable sanitation and schooling, however, are not simply about building facilities. Barriers include three primary sets of “actors” and their respective spheres of influence:

1. *society*, who may exhibit negative attitudes and behaviors regarding disability and gender

2. *service providers*, who may (knowingly or not) perpetuate non-inclusive water, sanitation, and hygiene solutions

3. *institutions*, who may not enact policies that ensure safe, equitable sanitation

Achieving equity in sanitation, therefore, requires highly creative and integrative approaches to the social, technological, economic, environmental, and policy factors at play. The aim is to mainstream disability, gender, and other forms of social diversity in education, rather than marginalizing them.

The Challenge

Develop strategies that motivate “actors” to prioritize inclusive water, sanitation, and hygiene in schools, in turn, promoting the education of all children, irrespective of gender, age, or ability.

Considerations

Many built solutions to sanitation exist. While it is important to understand the variety of architecture, engineering, and planning technologies, do not focus the bulk of your time on designing new prototypes. Focus your energies on how to motivate change—how to encourage a more widespread deployment, use, and maintenance of existing or transformed prototypes. As you work, continue to ask and answer the following questions:

1. What strategies can be developed to promote positive change in societal attitudes? How might we promote community activism? How might we motivate the families of adolescent girls and children with disabilities to identify and address the challenges their children face?

How might we assist children, themselves, toward confident and effective peer- and self-advocacy?

2. What strategies can be developed to promote positive change in the thinking, processes, and outcomes of the people who provide sanitation systems and services? How can we educate engineers, architects, and builders on designing inclusive sanitation in school design? What incentives could improve the construction and maintenance of sanitation facilities?

3. What strategies can be developed to promote positive changes in policies or institutional structures? What federal, state, or local laws could be written to ensure equitable sanitation for vulnerable populations, such as adolescent girls and children with disabilities? What agencies could be created to promote and oversee school sanitation initiatives?

Educational Goals

The Global Innovation Challenge has three major educational goals (and several embedded objectives).

Goal 1 is to explore the challenges of inclusive sanitation in schools. You will get snapshots into the daily life of children and families in low-resource settings, and we will help deepen your understanding of the social, technological, economic, environmental, and institutional challenges to providing inclusive sanitation and education.

Goal 2 is to learn how to identify, test, and develop ideas as part of an interdisciplinary team. We will discuss disciplinary differences as well as differences in problem-solving personalities, gaining a deeper understanding of your own preferences and tendencies and how to more effectively work as part of a team. You will also gain experience in collective decision making that leads to a cohesive proposal.

Goal 3 is to practice and develop skills of effectively presenting complex challenges and solutions. You will receive coaching on how to effectively deliver a “pitch” to a panel of experts. This will include feedback on both verbal and visual techniques.

Ultimately, the organizers hope you find the week challenging yet inspirational and fun, with lots of learning in a short time.

Contributors

Central to the Global Innovation Challenge is the input of external experts. Jane Wilbur, Equality, Inclusion, and Rights Advisor at WaterAid (United Kingdom) has been instrumental in leading international water, sanitation, and hygiene initiatives for people with disabilities and other vulnerable populations. She has also been a key organizer of the Global Innovation Challenge and will connect remotely to present the challenge. Joining us for the week to provide expert knowledge will be Ashabrick Nantege Bamutaze, Senior Training and Development Officer at the Appropriate Technology Centre for Water and Sanitation (Mukono, Uganda); Mahesh Chandrasekar, Director of Research and Advocacy at Dream a Dream (Bengaluru, India), and Dr. Reena Sen, Executive Director of the Indian Institute of Cerebral Palsy (Kolkata, India). Faculty experts at UB will join us, as well, at various times throughout the week.

Andy Burnett and Izzy Mamnoon, representatives from Know Innovation, a leading international organization that specializes in accelerating interdisciplinary innovation, will facilitate the forming of teams and the creative process. Faculty and staff affiliated with the Community for Global Health Equity have served as organizers and will provide stewardship throughout the week. (Note: For students registered for course credit, END395/URP586, Korydon Smith will serve as the professor of record.)

The Process

The week will begin with short presentations from guests, coupled with small- and whole-group discussions. As major discussion themes emerge, teams will surface through a combine approach of self-organizing and facilitator organizing. As the teamwork progresses, each group will be encouraged to focus their proposed strategies toward a specific country (India or Uganda), geography (urban or rural), group (e.g., children with mobility impairments, adolescent girls, etc.), and educational activity (e.g., traveling to school, eating lunch, etc.). Teams will be coached on how to present their ideas, and will get practice and feedback prior to the "pitch" to the jury on Saturday morning. Throughout the week, external partners and UB faculty and staff will serve as partners, mentors, provocateurs, and, ultimately, judges.

Judging Criteria

The work will be evaluated in regards to the following:

1. How well did the team communicate its understanding of the barriers to delivering equitable sanitation in schools in low- or middle-income country contexts?
2. How clear and impactful was the team's verbal presentation?
3. How clear and effective was the team's visual presentation?
4. How well developed is the proposal, how likely is it to succeed, how likely is it to influence one or more of the "actors," and to what degree are the ideas/concepts mutually reinforcing?
5. To what extent did the team align the proposal with a specific country, geography, group, and educational activity?

Grading

Only students registered for course credit will receive a grade. Grades will be linked to the fulfillment of the learning goals and full engagement in the activities of the week. Grades, generally, are as follows, with +/- used for borderline cases:

A This grade is for students who arrive prepared and on time to each session, and who work continuously and thoughtfully throughout the day. The student shows a high ability to engage in critical dialogue with faculty members and peers. The work exhibits a proactive seeking of and response to criticism. The work is complete, punctual, very well crafted, and insightful, and illustrates consistent, rigorous progress. Learning goals are met.

B This grade is for students who arrive prepared and on time to each session, and who work continuously and thoughtfully throughout the day. The student shows a moderate ability to engage in critical dialogue with faculty members and peers. The work exhibits a general willingness to accept and respond to criticism. The work is complete, punctual, and illustrates consistent progress. All or most learning goals are met.

C This grade is for students who struggle to arrive prepared or who struggle to work consistently throughout the day. The student shows minimal ability to engage in critical dialogue with faculty members and peers. The work exhibits minimal acceptance of and response to criticism. The work shows minimal progress. Some learning goals are not met.

F Frankly, there is no reason to earn an "F." The week will be challenging and engaging. If you arrive prepared and on-time, work hard, ask questions, and engage your peers and guests, you will do well. If you are absent or late multiple times, or are unwilling to participate as a team member, you might consider registering for a different course (or a grade of "F" will be assigned).

If you are absent due to illness, family emergency, etc., please contact the instructors via e-mail or phone as soon as possible. Students absent from all or part of a session must gather all information, handouts, and discussion notes from their colleagues. Given it is a short week, if you are not able to attend multiple sessions, due to any circumstances, we recommend that you withdraw from this year's challenge and rejoin us next year. Given the short duration and team-based approach, a grade of "incomplete" will not be given for this course; students will, instead, be de-registered.

Academic Integrity

The Global Innovation Challenge provides a collaborative learning environment, including a large reliance on one another for idea and information sharing. Likewise, teams will utilize the ideas and feedback of other teams, invited guests, and other resources. It is important to keep track of the sources and evolution of the team's work, and, for the final "pitch," you are expected to cite all borrowed images and concepts.

Accessibility Resources

Students with any specialized needs are advised to speak with the professor as well as the appropriate campus agency (e.g., Office of Accessibility Resources) as soon as possible in order to provide clarity on any accommodations that may be needed.

Final Statement

While you may think of yourself only as a student, we believe you are here both to learn and to teach. We believe you are capable of teaching—of teaching yourself and of teaching one another. Reciprocally, the professors and guests are here not only to teach but also to learn. Nevertheless, please be particularly respectful of our invited guests, aiming for openness and humility in the cultural and scientific expertise they bring. We all will strive toward clarity with one another in speaking and in listening. Clarity and high-quality education are underpinned by integrity—honesty with your instructors, honesty with your colleagues, and honesty with yourself. Please be generous in sharing your questions, concerns, satisfactions, and recommendations as we move through the week.

APPENDIX 1. SCHEDULE

Monday May 16	Tuesday May 17	Wednesday May 18	Thursday May 19	Friday May 20	Saturday May 21
Breakfast					
Intro **Welcome** Korydon Smith, UB Community for Global Health Equity **Introductions of Sponsors and Guests** Pavani Ram, UB Community for Global Health Equity **Prepping for the Challenge** Andy Burnett and Izzy Mamnoon, Know Innovation **Presentations of Compelling Cases/Personal Experiences** Ashabrick Bamutaze, Centre for Water and Sanitation (Uganda), Mahesh Chandrasekar, Dream a Dream (India), and Reena Sen, Indian Institute of Cerebral Palsy (India) **Presentation of the Challenge** Jane Wilbur, WaterAid (U.K.)	**Team Forming** **Team Forming and Review of *Foursight*** Know Innovation **Problem Framing and Visioning** Know Innovation w/ Invited Guests	**Feedback** **Presentations, Feedback, and Project Development** Know Innovation and Invited Guests w/ Li Lin, School of Engineering and Applied Sciences **Team Check-in and Development** Know Innovation	**Feedback** **Identify Gaps in Thinking/Project Development** Invited Guests w/ Mara Huber, UB Undergraduate Research and Experiential Learning; James Lemoine, UB School of Management; **Team Check-in and Development** Know Innovation	**Finalizing the Proposal** **Practice and Revise Pitch with Guest Feedback** Invited Guests and Assistance as Needed	**The Pitch** **Public Presentations and Celebration of the Week's Work** All sponsors, guests, participants, and the public
Lunch					
Problem Landscape **15-minute Expert Presentations** Chandrasekar, Bamutaze, and Sen **Discuss, Cluster, and Prioritize Questions and Ideas** Know Innovation w/ James Jensen, UB School of Engineering and Applied Sciences; James Lenker, UB School of Public Health and Health Professions	**Ideation** **Prototyping and Testing** Know Innovation w/ Invited Guests **Perspectives on Assistive Technology and Inclusive Design** James Lenker	**Proposal Development** **Proposal Development and Provocation** Know Innovation and Invited Guests w/ Samina Raja, UB School of Architecture and Planning; Shaanta Murshid, School of Social Work	**Prepping for the Pitch** **Pitch Workshop** Thomas Ulbrich, UB School of Management, and Hadar Borden, UB Blackstone LaunchPad **Pitch Development** Steven Harvey, WNY Consortium of HIED; Alex Pelc, Center for Entrepreneurial Leadership; Cynthia Shore, School of Management	**Revising the Pitch** **Finalize Verbal and Visual Presentation** Ram **Set Up for Pitch** Smith	
Reflective Journal Writing					

APPENDIX 2. RESOURCES

Useful resources are included in the Google Drive folder shared via email.

APPENDIX 3: SUPPLIES LIST
Throughout the week, please plan to bring the following:

- **Drawing and notetaking supplies:** While some supplies will be on hand, we recommend that you bring pens, pencils, markers, and other media you prefer to use while finding and developing ideas, along with paper, sketchbooks, and/or notebooks.

- **Computing:** A laptop with internet access is required for all sessions. While not every student is required to have it, software for writing and graphic design is needed for each team (e.g., Microsoft Word, PowerPoint, Photoshop, Illustrator, etc.).

- **Food:** Breakfast and lunch will be provided.

APPENDIX 4. TEAMWORK SURVIVAL GUIDE
The Global Innovation Challenge is an intense, engaged, collaborative, *thinking-learning-doing* environment. It simulates the intense, interdisciplinary setting of many modern work environments that tackle complex, ill-defined problems. Problem definition and solution finding are often cyclical and iterative, not linear. Likewise, the methods used are often diverse, and the process is often not fully planned at the outset, but becomes clearer over time (what some call "emergent design"). Flexibility, in both working and thinking, is essential, particularly as problems and solutions come from multiple domains and multiple scales. Often times, individual success depends on team success and vice versa.

Good teamwork comes from an awareness of oneself, as well as an awareness of the dynamics of the group. Differences in gender and sexuality, race and ethnicity, personality type, life experiences, and a host of other factors influence discussions and, therefore, the progress of the team. Please be mindful and respectful of these differences. Enrollment in the course implies consent with the guidelines below, which are adaptations from and additions to Susskind and Cruikshank's "Suggested Ground Rules" in *Breaking Robert's Rules* (Oxford: Oxford University Press, 2006).

1. Each person agrees to fully participate, through active listening and speaking, in all studio discussions.
2. Only one person shall speak at a time. Everyone else shall listen keenly, not "wait to talk."
3. Each person is responsible for making sure she/he understands what has been said. Each person shall ask questions of clarification when necessary.
4. Each person shall be as succinct and direct as possible, giving time for others to speak.
5. Each person shall express her/his own views, not speak for others. (E.g., do not preface your comments with "we think"; instead consider saying: "I think.")
6. Each person shall make her/his best effort to stay on topic and follow the trajectory of the conversation.
7. Each person is responsible for stating when she/he disagrees and, then, provide an alternative.
8. Each person shall make every effort to be open-minded and to evaluate others' comments based on the merits of what is being said, not based on personality or biases.
9. Each person shall make clear, when speaking and when listening, the difference between factual statements and statements of opinion.
10. Each person shall seek to identify and clarify multiple sides of a debate (issue), and, simultaneously, seek to provide a common ground (resolution).
11. No one shall ask individuals in the Global Innovation Challenge about their religion, sexuality, ethnicity, other personal information, etc., and at no time will anyone make derogatory or inflammatory comments about individuals or groups based on religion, sexuality, and ethnicity.
12. No one shall make personal attacks. The instructor reserves the right to dismiss anyone from the Global Innovation Challenge and pull anyone aside who does not abide by this or other policies.