Science, technology, engineering and mathematics (STEM) curricula are currently a major emphasis in high schools. High quality STEM experiences are believed to help develop critical thinking skills, increase science literacy and encourage innovators. Lois Weis, SUNY Distinguished Professor, along with her colleagues are leading research studies funded by the National Science Foundation to investigate the following question:

How well are STEM programs serving non-selective urban high schools and their students?

Weis and her team examined non-selective STEM focused high schools versus comprehensive high schools that serve comparable low-income historically underrepresented minorities. The team conducted three-year participant observation research in classrooms and in-depth interviews with students, parents and educators. The research study also followed students beyond high school to determine the impact of attending a STEM focused versus comprehensive school on STEM related outcomes such as college attendance and major.

Key findings: While educators and underrepresented minority students who attend non-selective high schools in large urban districts continue to value STEM-focused programs, the enthusiasm and effectiveness of these programs may wane over time. The factors impacting this decreasing enthusiasm and effectiveness include broad based federal and state accountability goals, class size and staffing requirements, competing reform agenda, and lack of availability of a range of key core mathematics and science courses. The findings further suggest that struggling urban schools considering a shift to a STEM-focused curriculum need to carefully consider how to navigate these intervening factors to maximize a successful transition to and sustainability of this curriculum.

More information about this research can be found in the following publications:


While bullying of youth has been described and discussed in the mainstream media for several years, little has been reported about individuals with intellectual and developmental disabilities who may be involved in bullying. A recent initiative led by the University at Buffalo’s Alberti Center for Bullying Abuse Prevention director and UB Professor, Amanda Nickerson, aims to investigate this issue. Supported through a grant from the New York State Developmental Disabilities Council, Nickerson gathered information from multiple groups—parents, teachers and the students with disabilities to answer the following question:

Are the issues of bullying and experiences of individuals with intellectual and developmental disabilities different from those individuals without disabilities?

A broad-based needs assessment and strategic planning effort was conducted in partnership with key stakeholders to address the needs and priorities of the New York State Developmental Disabilities Planning Council (NYS DDPC) in relation to the issue of bullying and individuals with intellectual and developmental disabilities. The project team identified several areas to investigate through surveys and focus groups. These included gathering detailed information about bullying victimization and perpetration experiences, effects and coping, and asking stakeholders about their ideas for the types of activities that the NYS DDPC might initiate and fund to reduce bullying of and by individuals with developmental disabilities.

Key findings: There is a higher level of bullying toward individuals with disabilities as compared to individuals without disabilities. This bullying can likely be attributed to the perceived differences between those doing the bullying and those being bullied. Surprisingly, the research also suggests that bullying exists even within communities of individuals with disabilities, such as special education classrooms. On the positive side, individuals with disabilities who are bullied are empowered by the support that they receive from friends, families and teachers.

This information is key for helping the team within the Alberti Center for Bullying Abuse Prevention begin to generate solutions that address this problem and evaluate how well these changes work. This work is also having an immediate impact as the results have been shared with the New York Developmental Disabilities Council to help the state initiate changes in policy and practice that will reduce the negative effects of bullying on students with disabilities.

### More information about this research can be found in the following publications:


The preservation of information is no longer limited to books—it includes all media such as images, sounds and video. The field of library science has responded to the changing digital age and is expanding while continuously updating its practices through research. Guillaume Boutard, assistant professor from the Department of Library and Information Sciences is studying the best way to document technology developed and used in musical compositions and performances by seeking answers to the following questions:

How does one document a professional activity in a context where boundaries are constantly challenged by technological obsolescence?

Which dimensions and strategies do performers use when transmitting and simultaneously constructing this expertise in a collaborative process?

And how does this expertise relate to other musical performances?

In his study funded by the Provincial Research Agency in Quebec, Boutard had musical performers all perform the same musical pieces involving digital technologies. The similarities and differences in the performances were then analyzed, with the goal of providing new collaborative documentation methods grounded in differences and similarities of technological uses.

Boutard’s research is interdisciplinary, combining his expertise in information science with creative arts. The intended goals of Boutard’s work are clear: improve collaborative methods of curation of complex digital objects. By working together across these two fields, this research may accelerate the impact of this work in the area of digital preservation and curation.

Key findings: This study provides us with a better understanding of the appropriation of live electronics by instrumentalists, the strategies for transmitting an expertise, and proposes theoretical and practical grounds for new frameworks for documenting and disseminating mixed music with live electronics. Future research in this area should investigate the convergence of qualitative and quantitative methods to help further disseminate the repertoire in relation to performance expertise, which is always in the process of co-constitution.

Guillaume Boutard’s research interests include digital curation and preservation; documentation methodologies for creative processes, in relation to arts and technology; and computer-supported collaborative work and learning. His interdisciplinary studies on the creative processes in contemporary music with live electronics or mixed-music have been funded by the Canadian Social Sciences and Humanities Research Council, the Quebec’s Fonds de Recherche Société et Culture, as well as the Centre for Interdisciplinary Research in Music Media and Technology.

More information about this research can be found in the following publication:


Hear more about this study from the researcher. Visit:
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