

**NATHANIEL WALKER PIPER**

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**EDUCATION**

Michigan State University

**Master's of Art in Educational Technology**

**2018-2020**

Ongoing coursework in pursuit of Master of Art in Educational Technology

Worcester Polytechnic Institute

**B.S. Computer Science, Humanities & Arts (Double Major)**

**2004 - 2008**

*Cum Laude*

Computer Science Major Qualifying Project: "uSCRIPT: an AJAX-based Online Manuscript Transcription Service"

Humanities & Arts Major Qualifying Project: Choral Conducting

**FULL-TIME PROFESSIONAL EXPERIENCE**

The Roxbury Latin School

**Director, IDEA Lab (Invention, Design, Engineering, Art Lab) & Technology Department Chair**

**2014 - Present**

Courses taught: Math-Science Investigations (9th grade), Woodworking (10th grade), Our 21st Century World (technology for 7th grade) and Senior Tutorials, including projects in Engineering & Computer Science. Founding Director, primary conceptual designer of the space. Maintain and advance the physical space and STEAM-based curricular objectives. Assist teachers in developing project-based lessons that take advantage of the Lab and guide students that choose to use the Lab for projects, both personal and curricular. Co-designed the MSI course and designed the woodworking course and 7th grade technology course. Guide the faculty to thoughtful integration of technology into the existing curriculum and offer technology-specific courses.

**Director of Technology**

**2014 - 2020**

Led the 5-member Information Services Department which comprised both IT infrastructure and curricular technology. Offered ongoing training to faculty and staff. Oversaw the maintenance and improvement of all computing devices, software, and network infrastructure. Set priorities for the department and managed all purchasing and budgets. Led the faculty and staff technology transition to COVID-19 remote learning. Major projects included: Google Apps (GSuite) for Education implementation; transition to Blackbaud's "On" products for LMS, SIS, and front-end website; implementation of VoIP phone system; expanded network infrastructure and bandwidth; phase-out of unsuccessful iPad initiative and introduction of classroom Chromebook initiative; faculty transition from PCs to Macs; introduction of a 7th grade digital citizenship program.

**Academic Technology Coordinator**

**2009 - 2014**

Courses taught: AP Computer Science, Natural Design: The Art of Construction, and Trivium: Technology. Developed and evolved courses (Natural Design and Trivium) and worked with faculty and staff to integrate technology into the curriculum. Provided audio/visual, classroom technology, and all-purpose technical support to faculty, staff, and students.

**Director of the Smith Theater**

**2009-2014**

Maintained and improved the facility. Coordinated lighting, sound, and set design and execution for all dramatics productions and school events. Overhauled the audio, visual, and lighting systems.

**Summer Programs Curriculum Designer & Teacher** 2011 – 2012  
 Courses: Game Design Clinic, Computer Camp, Robotics  
 Designed and taught week-long technology courses as summer program offerings.

Art Technology Group (ATG)  
**Sustaining Software Engineer** 2008 – 2009  
 Maintained legacy versions of ATG e-commerce software, providing bug fixes and patches.

## RELATED PART-TIME EXPERIENCE

i2 Learning  
**Curriculum Designer** 2013 – 2018  
 Design week-long STEM curriculum units for students entering grades 4-8, including: Robotics I, Robotics II: Manufacturing, Robotics II: Space, Engineering Sound, Coding with Root. Courses have been taught throughout the U.S. and in several international sites.

**Pilot Teacher** 2013 – 2016  
 Lead teacher for pilots of new curriculum units, providing feedback and suggestions for improvement. Courses include: Bytes & Beats: An Introduction to Programming with MatLab, Put a Lid on It: Engineering Safety Helmets, Tracking the 4th Dimension, Robotics I. Collaboration with Bose, MathWorks, and the Boston Museum of Science

## RESEARCH &amp; PRESENTATIONS

**International Boys' School Coalition Action Research Team** 2014 - 2015  
*"How might a series of increasingly broad and open-ended maker-style projects develop a boy's creative confidence and creative problem-solving skills?"*  
 Presentation of results at IBSC International Conference in Cape Town, South Africa

## RELEVANT COURSEWORK &amp; PROFESSIONAL DEVELOPMENT

**Teachers as Scholars**  
 Bringing Green to the Classroom 2019  
 Data Visualization 2018  
 Behind the Scenes at the Huntington 2011

**Apple Teacher Certification** 2017

Harvard Summer School  
**History of the Book: From Gutenberg to e-Readers** 2012

North Bennett Street School  
**Historic Timber Framing** 2011  
**Fundamentals of Fine Woodworking** 2012  
**Fundamentals of Machine Woodworking** 2012

Taft Educational Center  
**AP Computer Science Teaching Workshop** 2010

## VOLUNTEER COMMUNITY INVOLVEMENT

WPI Glee Club Associates (Alumni Association of WPI Men's Glee Club)  
**Chairman** 2011 – 2013, 2017 – 2019  
 Endowment fundraising, organize monthly board meetings, plan and organize annual Alumni Weekend event  
**Vice Chairman** 2009 – 2011, 2015 – 2017