Building Better Digital Citizens

Liz Kolb and team equipping 600 students with tools to promote empathy, kindness, and respect online

Beyond Facts and Events

Professor Bob Bain leads history teachers and students in new ways of understanding the past, present, and future

Doctoral Students’ Educational Technology Projects

Paint a Scenic Landscape of Modern Learning

SOE Online: Convenient, applicable, and affordable (or even free)

As Complex as ABC

Engineering and education experts marry instruction and technology to develop handwriting skills

Writing to Learn

M-Write project supports learning for early STEM majors

Know the Big Picture to Solve the Big Problems

Understanding the problem space and drawing diverse engineers in through comprehensive systems thinking

Learning Experience Design

A new certificate program for graduate students prepares U-M students to be education innovators

Face It: Privacy Matters

Alumna Molly Kleiman manages an investigation into the use of facial recognition technology in K-12 schools

Too Cool for School?

SOE faculty look past the hype to evaluate alternate realities for learning

Educating with Humor and Compassion

SOE Happenings

Champions for Education

Class Notes

The Back Page

Dean Elizabeth Maje welcomes students from The School at Marygrove during a 2019 U-M campus visit
Students and staff planned activities throughout Black Lives Matter Week of Action in Schools. The events were organized by monét cooper, JPEE doctoral student; Brittnee Johnson, ELMAC teaching intern and dije student intern; Vania Agama Ramirez, CSHPE alumna and dije student intern; and Arianna Deng, a junior pursuing an AB in art & design and dije’s Education for Empowerment intern.

Above left: On Monday, February 2, students attended a “meet and greet” with Dr. Yusef Salaam. As an exonerated Black man and a transformational speaker, he has traveled all around the U.S. and the Caribbean to deliver influential lectures and facilitate insightful conversations about race and class, the failings of our criminal justice system, legal protections for vulnerable juveniles, and fundamental human rights.

Above Right: At a family-friendly event on Thursday, February 6, students took part in crafts, food, and read-alouds that demonstrated the power of books. The session focused on intergenerational Black families and Black villages.

Top: On Friday, February 7, the culminating event was called “Black Joy, Periodt!,” and it focused on ideas for creating joy in school spaces. The Accent is Black English” about students who are fluent in English, even when some of their teachers say that they are not.

Above: On Tuesday, February 4, students, staff, and faculty gathered to hear Dr. Debi Khasnabish and Brittnee Johnson present "The Accent is Black English."
Above: The 2020 ASB student cohort stands outside 826CHI, one of the organizations where they volunteered. Top (left to right): Oscar Nollette-Patulski, Abua Moore, Madelynn Mayer, Chelcey Daniels; Bottom (left to right): Eileen Kelly, Nicole Tooley, Ava Miralles, Preeha Sohail

Right: On Friday, February 14, James W. Pellegrino, Liberal Arts and Sciences Distinguished Professor and Co-director of the Learning Sciences Research Institute at the University of Illinois at Chicago, presented the 2020 Frank B. Womer Lecture in Prechter Lab. This annual lecture is made possible by a generous endowment from former Professor Emeritus Frank B. Womer, who served the SOE as a professor of educational measurement for three decades.
Middle school teachers, who they learn from and learn with.”

Engage not only with middle school students but also with master digital identity and learning how to make choices that maintain their become good digital citizens themselves, modeling a positive online

They learn how to have difficult conversations with students, use

The current top safety concern of our teachers is cyberbullying.

States that 59% of American teens have been bullied online, and

Mission is to make the internet safer for families and children,

To promote empathy, kindness, and respect online

Liz Kolb and team equip over 600 students with tools to promote empathy, kindness, and respect online.

Each fall, students at Ann Arbor’s Scarlett Middle School have difficult conversations about their behavior. Their work is guided by professor Liz Kolb and her students, who lead Scarlett students to discuss topics you may not find in a textbook but are crucial for students to learn: empathy, kindness, and respect.

These topics are at the root of best practices in teaching and learning with technology. The topics are also relevant to the respon-

Physical identity and learning how to make choices that maintain their

They learn how to set up a safe and private online profile with strong passwords.

Know how to set up a safe and private online profile, and private online behaviors

Know how to keep personal information private

Know the difference between cyberbullying and peer pressure

Know the difference between cyberbullying and peer pressure and how to stop it

How to keep talk “safe” and positive online

Learn how to STOP BULLYing, and TELL when they are confronted with a stranger or uncomfortable situation online

Learn to use creative commons copyright when searching for media to reuse, modify, or remix online

7th grade: Media Literacy

Seventh graders learn how to critically evaluate websites for bias and reliability.

Understand key concepts: bias, website evaluation, deep web, reliable sources, creative commons, and copyright

Understand what it means to be a media literate in a digital world

Understand how to look for reliable and authoritative sources online

Understand how to evaluate a webpage, blog post, or information technology

Know the difference between the internet and the deep web

Learn how to use the deep web for finding reliable information online

Understand how they can use technology to help shape how others perceive them

Understand that gender, ethnic, and racial stereotypes cannot be reinforced through mass media negative ways

Learn how to STOP BULLYing, and TELL when they are confronted with a stranger or uncomfortable situation online

Learn to use creative commons copyright when searching for media to reuse, modify, or remix online

8th grade: Empathy

Eighth graders learn how to be empathetic to others online

Understand key concepts: cyberbullying, identity, footprints, reputation, upstander, bystander, hate speech, harassment, flaming, catfishing, deceptiveness, empathizing, creative commons, and copyright

Know what it means to be a media literate in a digital world

Understand how to become an upstander when they see others being treated poorly online

Understand how to help create positive and safe environments online

Know the difference between an upstander, a bystander, and a cyberbully

Understand the consequences of cyber bullying or contributing to negative behavior online

How to keep talk “safe” and positive online

To STOP BULLYing, and TELL when they are confronted with a cyberbully or threatening and harassing talk online

Learn to use creative commons copyright when searching for media to reuse, modify, or remix online

Many middle school students look up to college students, so Kolb’s students also value the “real, but difficult” conversations they have, as well as their opportunity to share and ask questions.

From this program, there are very few schools models of digital citizenship that offer entire units and a yearlong experience for every student. There are also very few teacher preparation institutions where preservice teachers design and practice teaching digital citizenship lessons. “Working with the English Language Arts (ELA) teaching and leadership team at the local middle school has really enriched this experience. Rather than just being me coming in with my students and forcing curriculum and lessons onto the middle school students, I worked with the ELA teachers in the school to develop an entire unit, so that when the U-M teaching interns finish our 4 weeks at the middle school, the ELA teachers are continuing the work and building on it all year long. Over time, the project has progressed and adapted to the needs of the SOE and the Scarlett students,” explains Kolb. Each year, she and her team revisit the curriculum and feedback from the students and staff to make the program stronger.

“I am very proud of this project and all educators who have been involved over the years,” says Kolb. “It takes a village to integrate digital citizenship into a school with over 600 students. Every single student at the middle school gets to be part of the project and engage in this curriculum. I only wish we had the capacity to do this in more middle schools!”

What do Digital Citizenship students learn?

6th grade: Digital Safety & Security

Sixth graders learn how to be safe online.

• Understand key concepts: safe vs. risky, privacy, security, identity, footprint, phishing, positive vs. negative, predator, catfishing, creative commons, and copyright

• Know how to keep personal information private

• Know the different online behaviors and how to identify them

• Understand how to set up a safe and private online profile with strong passwords

• How to keep talk “safe” and positive online

• Learn to STOP BULLY, and TELL when they are confronted with a stranger or uncomfortable situation online

• Learn to use creative commons copyright when searching for media to reuse, modify, or remix online

Building Better Digital Citizens

Liz Kolb and team equip over 600 students with tools to promote empathy, kindness, and respect online.

SOE teaching interns engage with students’ family members as well, through the digital citizenship website and resources. Since it is hard for most parents to come to school during the day, interns provide enrichment activities that students can do at home. These often include discussion questions or prompts for their parents or guardians, such as asking students to talk about “screen time” rules or reflecting on periods spent without screens. “The children are also encouraged to share what they are learning in the small group discussions with their families, in particular certain websites or resources that shed some wisdom, such as looking at a simulation of how large a person’s digital footprint is, or the internet archive website to see the permanent record of the internet,” says Kolb. The team also sends families a final letter at the end of the project to let families know what was discussed and about extension activities that they can continue at home.

The Digital Citizenship project is in its seventh year. Kolb had several reasons for initiating this project back in 2013: “First, middle school is a great time to discuss digital citizenship because this is when most children are getting their first cell phone, setting up their first social media accounts, engaging in social gaming online, and setting up profiles and accounts on many websites. Thus, we can be proactive about helping them make good choices. Second, our teaching interns did not have many teaching experiences at the middle school level, yet they were getting certified to teach K–8. I wanted to give them an opportunity to design and teach lessons with middle school students. Third, it was becoming apparent that simply telling middle school students what to do when it came to their digital choices was not effective. We really needed to have conversations with them and provide them with toolkits for how to address digital citizenship issues that came up in their lives—such as what to do when you are being ghosted, or if you are in a group text that is getting nasty, or if a friend of a friend tries to engage with you online.”
Beyond Facts and Events

Professor Bob Bain leads history teachers and students in new ways of understanding the past, present, and future

There is a book published in 1883 by G. Stanley Hall that I am fond of quoting. In it, Hall calls for improvements in the way that history is taught," says professor Bob Bain. "Hall wrote 'No subject so widely taught is, on the whole, taught so poorly.' This was over 100 years ago, but even then, expert educators wanted to discover how to bring history to life—away from the pages of a textbook."

Knowing teachers’ goals and challenges, Bain works to help ease the task of designing history curricula and finding accessible texts in order to enable teachers to focus on their students. “Educators are given professional development (PD) materials and courses that require them to make the transition from PD to the classroom all on their own,” he says. “They don’t often have the chance to test or circulate lessons that are research-based.” Bain works with others to design curricula and PD materials that are usable, valuable, and lasting. He does this by directing the University of Michigan’s World History and Literature Initiative (WHaLI) conference, and by leading a team that created the Big History Project (BHP) and World History Project (WHP). Bain is one of the first educators to design curricula that are micro- to macro-level PD. “With WHaLI, we offer professional development by leading scholars to history and literature teachers. The workshop is face to face, and immediately available to about 40 participants,” Bain says. “But because we can archive the scholars’ presentations and materials online, it is also useful and usable long-term to a wider audience. We make every workshop available to our growing community of teachers. Professional development should not be ephemeral—and with technology, it need not be so!” Since all the topics in WHaLI meet the state standards, teachers can use the archive to see prior sessions, even those they didn’t attend, and use the materials with their current curriculum and students. In this sense, WHaLI provides “just-in-time professional development.”

The WHaLI conference launched a year after Bain chaired the statewide committee for Michigan history and social studies teaching standards. He hoped to receive support from its prestige and national resources, which had recently been awarded funding from the U.S. Department of Education’s Title VI program to the Big History Project (BHP) and World History Project (WHP). These institutes include the East Asia National Resource Center, the Center for Latin American and Caribbean Studies, the Center for Middle Eastern and North African Studies, the Center for South Asian Studies, and the Center for Southeast Asian Studies. Bain joined forces with these centers, asking if they would offer expert presentations for local teachers. Their ongoing collaboration demonstrates how widely this work is supported by both U-M leaders and the government.

“Since I helped write world history and geography standards, I felt responsible to help teachers bring good world history and geography instruction to Michigan students. It is a labor of love, and I can really see the WHaLI content and methodology benefiting our teachers. At this point, we offer curricula that covers all of the eras in global history that appear in the Michigan standards,” says Bain. The group has hosted over 500 teachers during the last 13 years of the WHaLI conference. Evan Murphy is the WHaLI project coordinator at the International Institute. Having taught world history at the college level during graduate school, Murphy enjoys supporting this work because ‘of all the varieties of history, world history is the one that offers the most comprehensive understanding of the world and its development over time.’ By taking the ‘big history’ approach, he says, WHaLI equips educators to reach students regarding the increasingly global nature of issues in their world. “World history is still a relatively new approach in the academy and many teachers were not exposed to it while they were in college. I hope to help equip teachers to educate their students about the increasingly complex global issues that they and their students now face.”

Murphy is working on a new website for the WHaLI project to increase accessibility. The new website will include the WHaLI archives—a collection of presentations and curricular materials from WHaLI symposia going back to 2006—as well as links to other PD opportunities. The site will also allow the WHaLI team to better interact and communicate with the WHaLI community. “The new website will continue to provide teachers with resources to deepen their understanding of world history and how students learn this material while also expanding our ability to interact with them on a more regular basis,” says Murphy.

The work that Murphy and Bain do is timely and important, and it attracts funding from both the government and sources such as Bill Gates’s personal philanthropic endeavors. Gates is especially supportive of efforts to improve the quality of history teaching and learning via the Big History Project (BHP) and the forthcoming World History Project (WHP). Bain is one of the first two scholars who worked on these projects, which bring materials like those available in WHaLI to a worldwide audience.
“Big history” is a term that encompasses the study of significant changes in the Universe, the cosmos, and the Earth—including the human past—traversing over 14 billion years of time and space. The Big History Project (BHP) is a free online social studies course for middle- and high-school students with a curriculum that goes beyond simple facts to encourage students to draw connections between the past, present, and future. BHP delivers a big-picture look at the world, and helps students develop a framework to organize what they are learning in and out of school. So far, the 80,000 students who have used this curriculum in the U.S. have shown clear gains in reading, writing, and content knowledge. Its free teaching materials come in electronic form, eliminating the cost of textbooks, which is a critical benefit for underresourced schools. In addition to the United States, students in more than 30 countries globally are also using the BHP course.

Bain collaborates with both David Christian, Distinguished Professor of Modern History at Macquarie University in Australia and the originator of big history, and Bill Gates on the BHP (and forthcoming WHP) project. Gates discovered Christian’s big history videos and wanted to collaborate with him to bring his style of history instruction to high school students. “Christian said, ‘I know nothing about teaching high school, but my friend Bob does.’” Bain says. “Bill Gates doesn’t micromanage our work in Big or World History; he is just a supporter. He loved Big History, and particularly the use of history students can feel when they are taught about isolated eras or historical events.”

A unique feature of these projects is the way in which the curriculum is organized. Lessons demand that students’ thinking grows more sophisticated over the course. The course not only works on improving student abilities in reading and writing, it also works on developing students’ causal thinking, by asking them to make and evaluate causal claims. Developing student thinking about long-term and short-term causes, about different types of causes, and about how events or structures far away in time and space influence the present are all important features of the Big History and World History Projects.

“Critical thinking is central to all the courses, and we have found ways to make such thinking part of learning about the ‘stuff’ of the past,” explains Bain. “Basically, we are able to use good research to operationalize critical thinking and to provide teachers with sequenced resources to improve kids’ capacities to read, write, and reason while also deepening their understanding of things like colonization and independence movements. We’re trying to not only engage student interest, but also to enhance how they understand the world that they are living in today.”

Another facet of BHP and WHP curricula has to do with teaching students to “scale switch.” This is critical in history education, says Bain, in order for students to be able to locate themselves or an event within a larger context. “We look at the ways in which larger structures are influenced,” he says. “We also look at continuity and change over time. What sustains itself and what changes?” These are critically important. Our curriculum reduces the fragmentation that history students can feel when they are taught about isolated eras or historical events.

Both projects rely heavily on reading and writing. Bain says, “We offer texts in four different reading levels to provide access to complicated ideas for as many students as we can. This takes some of the burden of differentiation off the teacher, since teachers teach BHP and WHP in a wide range of contexts—from private school classrooms with only 12 students to urban classrooms with up to 42 students. Our project teams recognized the importance of providing materials and resources for teachers to adapt to many learning situations.

Bain and the BHP team spent three years piloting, testing, and modifying the resources in different classrooms, collaborating with some brilliant history and science teachers. Such research and development led to well-vetted readings, lesson activities, assessments, and rubrics based on the Common Core and college readiness standards. “Our assessments and rich curricula offer far more than anyone could possibly teach in a school year. It gives teachers the flexibility and support within a coherent curriculum to use, modify, add, or subtract materials according to classroom needs without having to go shopping on Pinterest. Everything we have done is grounded in research and vetted in the classroom,” he says.

Many involved in BHP and WHP interact in an online community on Yammer, a social network app made for organizations. This active online environment helps connect people teaching the same course at the same (or different) times. The online network is moderated by project staff and veteran teachers who are paid stipends to share ideas and answer questions. “The online community is amazing,” Bain says. “We see questions like, ‘Has anyone taught this material in a middle school?’ ‘I am worried how you managed teaching all this writing’ And within minutes, other teachers respond with practical and usable advice. People help each other with sequenced resources and sharing resources, recommending videos, and explaining tweaks they made to lessons.” There is also a help desk that answers teachers’ technological questions within 24 hours. In offering teachers a rich, widely tested, comprehensive curriculum with lessons, readings at multiple levels, assessments, projects, and connected lessons for the School of Education, BHP and WHP have helped teachers reduce—if not eliminate—the burden of being curriculum designers and creators.

“The projects enable teachers to focus on the best ways to enact the curriculum for their students and their context, and it gives them a team of colleagues across the world to help in that task,” says Bain. He mentions one BHP teacher who compared teaching to acting: “She pointed out that ‘all Tom Cruise does is act—and he makes a lot of money—but before BHP I had to be essentially the writer, the actor, and the set designer in all my classes. With BHP I can focus on teaching, making the course work for my students rather than spending hours upon hours finding accessible primary sources for my students. And I can even reach out to others who are doing the same work quickly.’”

——Bob Bain

“BHP is more than simply a course, but rather a broad community that has developed around this course, a community that every day adds great value to the course because it is so committed to its success. Providing a comprehensive course for secondary students across the U.S. and around the world has been and remains an exciting and important challenge. Meeting this challenge could not have happened or continued without the community of teachers, students, administrators, and parents who have participated and continue to participate to make it happen.”

——Bob Bain
E

limentary students learn physics concepts through interactive simulations on screens, middle school students use STEM principles to crack the code that allows them to exit a room, and college professors are learning that their students engage with social media differently than they expected. Our SOE doctoral students are investigating these multiple ways that students of all ages use technology to live and learn, helping to guide the next generation through an ever-evolving landscape of educational technology.

Uncovering online writing habits of college students

With U-M professor David Golob's mentorship, doctoral students in the Joint Program in English and Education Adrienne Raw and Jathan Day studied college students' feelings about writing and reading online, especially on social media platforms. They realized that, despite the popular treatment of students as "digital natives" who are unaware of the effects of technology, college students often recognize its influences and limitations. "This may lead to more thoughtful decisions about what they write online, for whom, and for what purpose," they say.

Raw and Day surveyed 803 undergraduate students about their online writing practices, learning that students worry about their digital footprint more than their mentors may expect. Students are especially concerned about the reactions of people who see their posts, the consequences of their writing being online forever, and their authority to write on various topics. The researchers found that fewer than 30 percent of students reported never worrying about these concerns. The team's full findings will be published this year in the journal College Composition and Communication.

Now that they have a better understanding of college students' digital habits, Raw and Day are looking to leverage what students already know and help them to use this knowledge to become active, thoughtful digital citizens, suggesting that faculty who see their research might also be inspired to engage with their students about the ways they use social media.

"These research questions are about things I really wanted to learn about my own students," says Day. "Our research was definitely informed by our anecdotal experiences teaching digital writing in our classrooms, and our thoughts about what we wanted to know or what would be valuable to us." Day adds that he was looking, in particular, to find ways to engage his students about civil engagement with toxic online discourse.

"The popular narrative in the public eye is that 'digital natives' share everything and don't think about it, but we wondered if that is true and if they do have hesitations about what they write," says Raw. The team's other big questions were about the social platforms students use, what they do there, which audiences and purposes they are interested in, and why they do or don't do specific things online," says Raw.

While these students are not writing, which represents a less beneficial technological aspect to bring into a classroom. It's also led me to have more conversations with my students about what each platform means to them."

The team is interested in several avenues of further research, one of which is fueled by their curiosity about how these results might be deployed in a classroom. "What would it mean for designing assignments that get students to leverage their rhetorical thinking into a digital space critically? And how can we best teach them about online writing engagement now that we know their concerns?"

I'd love to take these big ideas and narrow them down to talk to students in a qualitative way. I wonder what their thoughts are and why they do or don't do specific things online," says Raw.

Both Raw and Day say that "it feels amazing" to be published in a well-known journal while they're still in their doctoral program, noting that jointly published pieces are far less common in humanities fields, as are quantitative studies. In this way, their work could seem both surprising and unusual, much like the wild world of the internet.

We found four kinds of audiences and five purposes that other scholars had identified in the literature, and that is what we investigated.

We looked at student habits when it comes to friends and family, affinity groups, professional groups, and the general public. We also looked at their purposes for engaging with these groups, which included maintaining relationships with friends and family, developing personal and professional identities, sharing information or expertise on a topic, posting creative work, and debating controversial topics.

The team found that most of the students they surveyed had four or more social media accounts, with Facebook, Snapchat, and Instagram being the most popular. "What was unexpected was the relative amount that students did not write on these accounts," says Day. "We found that the most popular activity was actually reading. There was only one platform where students write a lot, which is Snapchat. For most of the platforms, though, only a quarter of the students in the survey wrote in those spaces at all. This definitely complicated our understanding of how modern college students use the internet, but it also made us see that students have honed the ability to be more cautious, which is something we could leverage in the classroom." Raw adds that the intensity and scope of student awareness was surprising to the whole team, but she wasn't surprised to learn that students were using photo-centric platforms with the main goal of maintaining relationships with family members and friends.

“We have many more questions now,” notes Raw. "I wonder why students choose these particular media. I also have pedagogical questions. As a teacher, this research made me more aware of where students are not writing, which represents a less beneficial technological aspect to bring into a classroom. It’s also led me to have more conversations with my students about what each platform means to them."

The team is interested in several avenues of further research, one of which is fueled by their curiosity about how these results might be deployed in a classroom. "What would it mean for designing assignments that get students to leverage their rhetorical thinking into a digital space critically? And how can we best teach them about online writing engagement now that we know their concerns?"

I'd love to take these big ideas and narrow them down to talk to students in a qualitative way. I wonder what their thoughts are and why they do or don't do specific things online," says Raw.

Both Raw and Day say that "it feels amazing" to be published in a well-known journal while they're still in their doctoral program, noting that jointly published pieces are far less common in humanities fields, as are quantitative studies. In this way, their work could seem both surprising and unusual, much like the wild world of the internet.

With U-M professor David Golob’s mentorship, doctoral students in the Joint Program in English and Education Adrienne Raw and Jathan Day studied college students’ feelings about writing and reading online, especially on social media platforms. They realized that, despite the popular treatment of students as “digital natives” who are unaware of the effects of technology, college students often recognize its influences and limitations. “This may lead to more thoughtful decisions about what they write online, for whom, and for what purpose,” they say.

Raw and Day surveyed 803 undergraduate students about their online writing practices, learning that students worry about their digital footprint more than their mentors may expect. Students are especially concerned about the reactions of people who see their posts, the consequences of their writing being online forever, and their authority to write on various topics. The researchers found that fewer than 30 percent of students reported never worrying about these concerns. The team’s full findings will be published this year in the journal College Composition and Communication.

Now that they have a better understanding of college students’ digital habits, Raw and Day are looking to leverage what students already know and help them to use this knowledge to become active, thoughtful digital citizens, suggesting that faculty who see their research might also be inspired to engage with their students about the ways they use social media.

“These research questions are about things I really wanted to learn about my own students,” says Day. “Our research was definitely informed by our anecdotal experiences teaching digital writing in our classrooms, and our thoughts about what we wanted to know or what would be valuable to us.” Day adds that he was looking, in particular, to find ways to engage his students about civil engagement with toxic online discourse.

“The popular narrative in the public eye is that ‘digital natives’ share everything and don’t think about it, but we wondered if that is true and if they do have hesitations about what they write,” says Raw. The team’s other big questions were about the social platforms students use, what they do there, which audiences and purposes they are interested in, and why they do or don’t do specific things online,” says Raw.

While these students are not writing, which represents a less beneficial technological aspect to bring into a classroom. It’s also led me to have more conversations with my students about what each platform means to them.”

The team is interested in several avenues of further research, one of which is fueled by their curiosity about how these results might be deployed in a classroom. “What would it mean for designing assignments that get students to leverage their rhetorical thinking into a digital space critically? And how can we best teach them about online writing engagement now that we know their concerns?”

I’d love to take these big ideas and narrow them down to talk to students in a qualitative way. I wonder what their thoughts are and why they do or don’t do specific things online,” says Raw.

Both Raw and Day say that “it feels amazing” to be published in a well-known journal while they’re still in their doctoral program, noting that jointly published pieces are far less common in humanities fields, as are quantitative studies. In this way, their work could seem both surprising and unusual, much like the wild world of the internet.
New guidelines from the U.S. Department of Education and Michigan state teaching standards ask for students to be engaged in deeper sense-making while working with technology in schools.

Sense-making is the process that one goes through as they come to understand something, especially new phenomena or experiences. Katy Easley (PhD 2020) in recent graduate in Educational Studies, studying Literacy, Language, and Culture—conducted research on sense-making in a third-grade classroom.

“While there’s much to learn about sense-making in elementary science as students are enacting simulation-based lessons in the classroom, this is what I studied. I wondered how teachers support student sense-making while working with simulations in a third-grade project-based science classroom, and also what the teachers’ perspectives were in regard to using simulations as sense-making tools,” explains Easley, who taught at a Montessori school in Illinois before beginning her doctoral studies.

Easley is working on this project as a research assistant for a larger research project, Multiple Literacies in Project-Based Learning, which develops project-based curricula integrating science, literacy, and mathematics. Her work on the simulations is a slice of this project and also the focus of her dissertation research. Specifically, she looked at how scientific simulations were taught in two different classrooms, with a focus on teachers’ discourse and strategies as they were supporting student sense-making. The research is supported by a generous grant awarded by the George Lucas Educational Foundation to Annemarie Palincsar, Joseph Krajcik, and Emily Miller.

“Looking at how the teachers supported students’ sense-making, I saw some big buckets for how they were doing this work, focusing on strategies they used before, during, and after teaching,” Easley says.

For example, before teaching, teachers articulated learning goals for the simulation-based lessons and potential challenges that might occur during those lessons. While teaching, teachers used specific types of talk moves to elicit and extend student sense-making. Teachers also had multiple strategies for recording student learning. For example, as students completed a digital simulation focusing on inherited traits, they explored the ways populations of plants can change generation by generation.

Easley’s research has brought up additional questions that she would like to investigate. “Now, what I am most curious about is scaling,” she says. “I was aware that I was looking at two instances of two exemplary teachers who were friends and colleagues and who shared ideas often. These teachers were very experienced, had taught these lessons before, and had support from us. I wonder what it might look like when novice teachers take up this work, what it would look like if it were happening at a wider scale, and what kind of supports would be helpful. What kind of technology infrastructures would help? What kind of results would they get? And what kind of professional development would they need?”

“I’d also love to look at their teaching of these lessons over time,” she adds, “since their teaching of this simulation would be iterative, and it would be adjusted and honed over time. I wonder what, if I checked back after they had taught it 15 times? What would I see then? There is always more to know!”

Easley’s research has brought up additional questions that she would like to make next time you teach the lesson

Before Teaching
- Run through the simulation; try it yourself
- If possible, discuss simulation with colleagues

While Teaching
- Support students to interpret the features of the simulation and what its graphics/images represent
- Assist students as they make predictions and explain their reasoning processes
- Support students as they test their predictions
- Assist students as they determine a generalizable claim; lead them to think about how the simulation might be the same and different in real-world applications
- Continue to implement current discussion mindsets: taking turns, summarizing lessons, and supporting a positive classroom climate

After Teaching
- Wrap up the lesson with students: have them reflect on their claims, what they learned, what was challenging, and what went smoothly
- Reflect on the lesson after it is complete, asking yourself what worked well and what changes you would like to make next time you teach the lesson

Using STEM principles to break free

Micholle Washington was the ninth black woman in the 131-year history of the Georgia Institute of Technology (Georgia Tech) to graduate with a degree in mathematics. She is now an Educational Studies doctoral student, working to earn a PhD in mathematics education as well as a master’s degree in applied mathematics.

“My love for math did not reach a real love until I did this education degree, because it made me aware of all of the forces that were happening to me while I was growing up and learning math,” Washington says.

She took her newfound passion for making math accessible to a new level when she started STEMulation, which offers students an escape-room simulation that can take place within their classrooms. She has been building simulations like these since 2018. They rely on students applying knowledge from science, technology, engineering, and math to be able to crack a code that allows them to “escape” their room.

The technology aspect, she says, is an interesting facet of the challenge in her escape-room scenarios. “In the escape room experiences, students are exposed to coding principles because they have to do a translation between the thought process that happens in coding to make something take place in the actual scenario that they are working through in real life. We also include technological tools in the escape rooms, and hope to add in tactile devices like buttons or touch screens that can impact other things in the room.”

Washington sets up the room for students so they enter directly into a setting. “One scenario has them entering Doctor Oxygen’s lab,” she explains. “In the lab, students will notice that there is a briefcase with disheveled notes in it; they can see that the doctor has been writing down dates alongside the foods that people are eating in Detroit. Students may ask why the food in the room matches with the diary, and then go from there. In the whole scenario, there are little things going on that are relying on students to use their STEM knowledge. Whether or not they know the formal way to do something, they can apply concepts with the exciting challenge of facing a time crunch. This offers them a lot of experiential learning, taking their classroom knowledge into practice, and there is some team building there too. For teachers, this experience assesses what students can do with the knowledge they have gained in class.”

Each escape room is related to a social justice issue, exposing students to a societal problem they can form an opinion about and discuss during a post-STEMulation conversation. Examples of topics that could be covered in a simulation include climate change and the sociology and history of space travel. Washington is always eager to ask students why they made one decision over another in the room, or how the situation could have taken place differently.

This work extends beyond Washington’s own educational background. “This project has inspired me to reach out to experts, to make sure I can learn about the real-life factors that make the room rigorous,” she says. “This is not like some physics classes where they tell you to ignore things, as if some things take place in a vacuum. That’s not really fair, I think, and I want to bring science back down to earth, so I am always looking for more collaborators and volunteers to help. I want to make math and all STEM learning less formal, gatekeeping, or high pedestal. We are all capable of learning, but some things are in the ways of that. I don’t think enough people are aware of these challenges. I wasn’t either, but I am now in a position to try to help change the conversation.”

Due to COVID-19, STEMulation is adding a new subscription box service for families to explore a fictional experience that relies on real STEM knowledge. Details can be found at stemulationsescape.com.
Convenient, applicable, and affordable
(or even free)

The SOE has been expanding online educational offerings.

Along with several regular SOE courses that are offered to learners outside the university community, faculty have developed (and continue to build upon) programs that enable participants from around the world to benefit from the expertise of SOE scholars and networks of peers engaging in similar work. Leveraging a variety of platforms, SOE online programs adhere to the high standards of the University of Michigan and create new pathways to information and collaboration.

Leading Educational Innovation and Improvement

Launched in 2017, the MicroMasters in Leading Educational Innovation and Improvement allows learners to take five courses focused on the theory and practice of continuous improvement in network contexts. These courses can be used by practicing teachers, leaders, and reformers to advance their current knowledge and earn a certificate. The MicroMasters is also part of the first “blended master’s degree” at the SOE, in which students first complete the online program and then complete in-person coursework to obtain a Master of Arts in Educational Studies degree.

Professor Don Peurach leads the design of the MicroMasters. He collaborates with the Ross School of Business and the Carnegie Foundation for the Advancement of Teaching, with contributions from over 40 leading educational professionals, researchers, and reformers across the U.S. to develop a platform for a new type of trans-institutional, trans-national educational reform community.

With over 50,000 course enrollments from learners in more than 180 countries, the program has already connected a diverse population of learners around the world. As one of the MicroMasters learners, a leader of a private school in Africa, posted on an online discussion board, “It’s an interesting role in an interesting space, against a seemingly consistent backdrop of war and instability. Nonetheless, even against the backdrop of lowered expectations, our mission is to offer a benchmark educational program for our students. Our vision is to compete on an equal footing against some of the best schools in the world. The pandemic has provided new opportunities for schools everywhere to effectively implement and adapt the key lessons learned from this course, regardless of location and even regardless of circumstance.”

In addition to improving access to information and building international networks, Peurach—in collaboration with U-M students, online students, and colleagues in the U-M Center for Educational Innovation—continues to contribute to the scholarship around educational innovation. Beginning in 2020, Peurach introduced curated versions of two of the program’s courses as a laboratory in which to try new approaches to developing foundational understandings of cutting-edge educational theory and practice; new ways of using open-access instructional resources to support place-based professional development; and new ways of collaborating to accelerate the redesign of graduate programs in response to dynamic policy environments.

soe.umich.edu/micromasters

Accelerating Early Literacy Development

Certificate

Making this debut this fall, a new certificate program geared toward teachers and literacy coaches reveals specific instructional practices that are key to accelerating young children’s literacy development and to SOE professor Nell Duke, was inspired in part by the program herself.

- 12 ninety-minute sessions held live during the fall (with recordings available);
- virtual break out rooms in which educators around the country connect to discuss the presentations and their own practices;
- access to curated resources related to the presentations (e.g., video clips, documents, URL’s);
- recommended activities to complete between sessions;
- access to a course online discussion board(s) moderated by Duke’s team.

With schools disrupted due to COVID-19, there is greater urgency than ever before to identify and implement research-based practices. Duke will also share some key findings related to social and emotional support for young children in these difficult times.

Educators may participate in the professional learning opportunity individually or with their existing school-based professional learning community.

soe.umich.edu/early-literacy

Problem solving using computational thinking

Course

Computational thinking is a versatile skill that is foundational when preparing for computer programming by thinking through potential ways of defining and solving a problem. The developers of a new Massive Open Online Course (MOOC), were eager to highlight how these ways of thinking are seen and applied in different fields, all of which serve as examples to help us think about how we can use and program computers to solve problems.

The MOOC leads participants through computational thinking components including abstraction, problem identification, decomposition, pattern recognition, algorithms, and evaluating solutions. The course puts computational thinking concepts into practice through real-world cases that illustrate how it is used to solve complex problems. For example, the MOOC’s epidemiology case study walks learners through the process of building a communicable disease transmission model.

The course also includes student projects that ask participants to apply what they are learning to real-world situations. Learners from around the world have applied computational thinking strategies to a web of problems in hopes of finding cogent solutions. Not surprisingly, several recent learners in the course chose to explore COVID-19 responses and strategies through their final projects.

Taught by Chris Quintana, associate professor in the SOE, the team of course developers are drawn from the School of Public Health, the College of Engineering, the School of Education, and the Michigan Institute for Computational Discovery & Engineering.

online.umich.edu/courses/problem-solving-using-computational-thinking

Problem solving using computational thinking CERTIFICATE

The MOOC leads participants through computational thinking, components including abstraction, problem identification, decomposition, pattern recognition, algorithms, and evaluating solutions. The course puts computational thinking concepts into practice through real-world cases that illustrate how it is used to solve complex problems. For example, the MOOC’s epidemiology case study walks learners through the process of building a communicable disease transmission model.

The course also includes student projects that ask participants to apply what they are learning to real-world situations. Learners from around the world have applied computational thinking strategies to a web of problems in hopes of finding cogent solutions. Not surprisingly, several recent learners in the course chose to explore COVID-19 responses and strategies through their final projects.

Taught by Chris Quintana, associate professor in the SOE, the team of course developers are drawn from the School of Public Health, the College of Engineering, the School of Education, and the Michigan Institute for Computational Discovery & Engineering.

online.umich.edu/courses/problem-solving-using-computational-thinking

Advanced Education Technology Certificate Program

CERITIFICATE

The Advanced Education Technology Certificate is a competency-based certification that aligns with the ISTE Standards for Educators (nationally recognized standards in K–12 teaching with technology). The program develops educators who will use educational technologies for learning, teaching, and transforming ways.

Designed for educators who are currently teaching or working as administrators in P–12 schools, the program supports individual educators or whole schools and districts interested in systematic professional development around education technology. The certificate is not focused on learning new digital tools, rather it is about learning pedagogical and curriculum informed strategies for using and evaluating education technologies. It provides a common framework for teachers and administrators to assess and discuss digital learning tools.

The format, which includes 175 hours of synchronous course meetings and 245 hours of asynchronous coursework over the course of a semester, encourages rich discussions and builds a network of educators. In addition, part participants connect the ISTE competencies to their own classroom and schools, thus creating lessons and professional development projects around their school’s particular needs and demographics. Successful participants complete a portfolio meeting all seven of the ISTE Standards for Educators.

Liz Kolb, clinical associate professor of education technologies, is the lead developer and instructor for the program. In addition to serving as a Michigan Association for Computer Users in Learning (MACUL) board member and a member of the Consortium for School Networking (COSN) advisory board for mobile learning and emerging technologies, Kolb is also the creator and director of the Triple E Framework, which is an open-source framework for K–12 teachers and administrators to use to assess the effectiveness of technology in lesson plans. Co-instructors Kevin Upton and Peter Pasque bring extensive experience in curriculum design, instruction, and school leadership.

soe.umich.edu/aetp-certification

Disciplinary Literacy

Certificate

The Advanced Education Technology Certificate is a competency-based certification that aligns with the ISTE Standards for Educators (nationally recognized standards in K–12 teaching with technology). The program develops educators who will use educational technologies for learning, teaching, and transforming ways.

Designed for educators who are currently teaching or working as administrators in P–12 schools, the program supports individual educators or whole schools and districts interested in systematic professional development around education technology. The certificate is not focused on learning new digital tools, rather it is about learning pedagogical and curriculum informed strategies for using and evaluating education technologies. It provides a common framework for teachers and administrators to assess and discuss digital learning tools.

The format, which includes 175 hours of synchronous course meetings and 245 hours of asynchronous coursework over the course of a semester, encourages rich discussions and builds a network of educators. In addition, part participants connect the ISTE competencies to their own classroom and schools, thus creating lessons and professional development projects around their school’s particular needs and demographics. Successful participants complete a portfolio meeting all seven of the ISTE Standards for Educators.

Liz Kolb, clinical associate professor of education technologies, is the lead developer and instructor for the program. In addition to serving as a Michigan Association for Computer Users in Learning (MACUL) board member and a member of the Consortium for School Networking (COSN) advisory board for mobile learning and emerging technologies, Kolb is also the creator and director of the Triple E Framework, which is an open-source framework for K–12 teachers and administrators to use to assess the effectiveness of technology in lesson plans. Co-instructors Kevin Upton and Peter Pasque bring extensive experience in curriculum design, instruction, and school leadership.

soe.umich.edu/aetp-certification

Disciplinary Literacy CERTIFICATE

The Advanced Education Technology Certificate is a competency-based certification that aligns with the ISTE Standards for Educators (nationally recognized standards in K–12 teaching with technology). The program develops educators who will use educational technologies for learning, teaching, and transforming ways.

Designed for educators who are currently teaching or working as administrators in P–12 schools, the program supports individual educators or whole schools and districts interested in systematic professional development around education technology. The certificate is not focused on learning new digital tools, rather it is about learning pedagogical and curriculum informed strategies for using and evaluating education technologies. It provides a common framework for teachers and administrators to assess and discuss digital learning tools.

The format, which includes 175 hours of synchronous course meetings and 245 hours of asynchronous coursework over the course of a semester, encourages rich discussions and builds a network of educators. In addition, part participants connect the ISTE competencies to their own classroom and schools, thus creating lessons and professional development projects around their school’s particular needs and demographics. Successful participants complete a portfolio meeting all seven of the ISTE Standards for Educators.

Liz Kolb, clinical associate professor of education technologies, is the lead developer and instructor for the program. In addition to serving as a Michigan Association for Computer Users in Learning (MACUL) board member and a member of the Consortium for School Networking (COSN) advisory board for mobile learning and emerging technologies, Kolb is also the creator and director of the Triple E Framework, which is an open-source framework for K–12 teachers and administrators to use to assess the effectiveness of technology in lesson plans. Co-instructors Kevin Upton and Peter Pasque bring extensive experience in curriculum design, instruction, and school leadership.

soe.umich.edu/aetp-certification

Disciplinary Literacy CERTIFICATE

The Advanced Education Technology Certificate is a competency-based certification that aligns with the ISTE Standards for Educators (nationally recognized standards in K–12 teaching with technology). The program develops educators who will use educational technologies for learning, teaching, and transforming ways.

Designed for educators who are currently teaching or working as administrators in P–12 schools, the program supports individual educators or whole schools and districts interested in systematic professional development around education technology. The certificate is not focused on learning new digital tools, rather it is about learning pedagogical and curriculum informed strategies for using and evaluating education technologies. It provides a common framework for teachers and administrators to assess and discuss digital learning tools.

The format, which includes 175 hours of synchronous course meetings and 245 hours of asynchronous coursework over the course of a semester, encourages rich discussions and builds a network of educators. In addition, part participants connect the ISTE competencies to their own classroom and schools, thus creating lessons and professional development projects around their school’s particular needs and demographics. Successful participants complete a portfolio meeting all seven of the ISTE Standards for Educators.

Liz Kolb, clinical associate professor of education technologies, is the lead developer and instructor for the program. In addition to serving as a Michigan Association for Computer Users in Learning (MACUL) board member and a member of the Consortium for School Networking (COSN) advisory board for mobile learning and emerging technologies, Kolb is also the creator and director of the Triple E Framework, which is an open-source framework for K–12 teachers and administrators to use to assess the effectiveness of technology in lesson plans. Co-instructors Kevin Upton and Peter Pasque bring extensive experience in curriculum design, instruction, and school leadership.

soe.umich.edu/aetp-certification
The technology has created new avenues for learning, exploring, and connecting with the world. Still, parents and educators alike sometimes bemoan the shift away from traditional learning opportunities.

One topic that has garnered particular interest—and sometimes disagreement—among educators is the role of handwriting in the digital age. With the prevalence of technology in homes and schools, is the 5,000-year-old tradition of writing by hand obsolete?

Most educators say “no.” Handwriting and typing simply are not the same to the human brain. For example, research suggests that taking notes by hand leads to greater memory for material than taking notes digitally. Similarly, functional magnetic resonance imaging of five-year-old children has revealed that writing by hand activates the same areas of the brain activated during reading—areas not activated when a child types letters on a keyboard. Learning letters by writing them also involves fine-motor skills and coordination that children need to develop.

What if technology supported handwriting instead of replacing it?

Education professor Nell K. Duke and engineering professor Elliot Soloway, along with SOE postdoctoral fellow Crystal Wise, occupational therapist Tracy Mistry, and a team of three U-M engineering students are working on “MakeMyLetters,” an app that will support children learning how to form letters and free up teachers to better focus their efforts, particularly with large classes.

Writing researchers recommend regular handwriting instruction and practice, but many classrooms simply can’t meet that goal. As teachers will tell you, there are just not enough hours in the school day for every-thing that needs to be taught those days. That’s where a handwriting app comes in.

A well-designed handwriting app can provide a lot of the instruction and practice children need, allowing teachers to focus their instructional time on things that are harder to teach, such as how to decode words, engage in higher-order discussion of text, or compose compelling arguments. While the teacher is working with small groups on these challenging instructional targets, children can spend their time independently working on the app.

The handwriting app will also support alphabet knowledge. While children are working on letter formation, the app will play audio that repeats the sound or sounds commonly associated with the letter as well as words that begin with the sound or sounds (for example, A apple acorn). Upon completion of each letter, some feedback is provided to the student directly by the app. For example, the program stops showing the mark if the student makes an incorrect stroke and presents a short, voice-annotated video on how to correctly form the letter they are attempting. Upon completion of each letter, there is a visual and auditory “reward.”

The team is using agile development principles. The idea is to build an early version of the app, test it with students and teachers, and iterate based on the findings. This cycle occurs continuously to improve the product. “Software is a living thing. It is an ongoing process of maintenance and improvement,” says Soloway.

Undergraduate engineering students Joan Liu, Anushe Dikawak, and Connor Beard recently observed children using the first version of the app that they had built. Beard says, “We noticed how the students were using the tool and it changed the way we thought about how much direction we should give the child while they are learning.” Soloway adds, “That is why you have to go and test it.” With larger sample sizes, the team is eager to test different variations of the product.

One determination the team must make is how and when the app can best support the child’s development. When a child makes an error, what is the most effective way for the app to interrupt and help the child get “back on track?” Both pedagogically and technologically, this is a fascinating question because it involves perceiving when a child is struggling, identifying what they are struggling with, and providing feedback in a productive format.

It is crucial that the app is accessible on a wide variety of devices with touchscreens so the team has designed an in-browser app to work on any of the common web browsers. The technology must also be highly reliable and easy to use. It will be of no use to teachers if they can’t feel confident that the technology will work when they need it and without distracting them from their classes. And, finally, it must be free or available at a very low price.

In addition to those usability requirements, the team plans to work with teachers to discover how they integrate the app into their teaching, which data they find helpful, and what support they need to successfully use the app. The team is fortunate to have a partnership with the Wayne-Westland Community School District, including three kindergarten teachers in the district, Christie Brewer, Lindsay Dugan, and Alexis Finge, who will be pioneering the use of the app.

The team plans to have the next version of the product ready for additional testing this summer. The team began work on MakeMyLetters before the advent of COVID-19, but the work has become much more pressing in the wake of the pandemic.

Teachers will have a lot of instructional catching up to do when children return to school, so it will be helpful to have a tool children can use independently to support their development. The team is hopeful that children will soon have access to the tool from home should distance learning continue in the coming academic year.
Writing to Learn
M-Write project supports learning for early STEM majors

Dr. Anne Ruggles Gere, Arthur F. Thurnau Professor of English and Gertrude Buck Collegiate Professor at the School of Education, identified the challenges in 2008 through her role as director of the Sweetland Center for Writing. “I looked at the upper-level course writing requirements,” she says, “and I found that there weren’t enough seats for science majors to fulfill their writing requirements within STEM, so they were likely to be filling this requirement outside of STEM... but the whole idea of the requirement is to have students doing writing that allows them to understand their subject matter.”

Leveraging the potential of technology and peer feedback, Gere and her collaborator, Ginger Shultz, an assistant professor of chemistry, designed M-Write to remove common barriers to using writing in large survey courses. M-Write is a project that enables students to respond to writing prompts and peer review other classmates’ work for the sake of learning more about a topic covered in class. Student peer review—a process in which each essay response is sent to three classmates for anonymous feedback—is overseen by “writing fellows” former students who excelled in the target course. Gere explains that this stage of the work is significant: “A faculty member does real work deciding on 1–5 big ideas that he wants students to take away from his course and then embeds them in a series of prompts.”

Gere’s collaborator Shultz was also an early adopter of M-Write. As Shultz began to use M-Write in her organic chemistry class and saw improvements in student work, she encouraged more and more STEM faculty to join her in this process. Now, about 20,000 students have used M-Write in subjects such as physics, biology, mechanical engineering, public health, mathematics, and kinesiology.

When a course utilizes M-Write, the writing fellows serve as “the first line of defense that go between students and faculty,” she adds. “Many STEM students can pass introductory STEM courses into the next levels, and they can do the equations, but they find that they can’t apply the how to a given scenario. The goal here is not to have the writing in M-Write graded, nor to produce polished papers, but rather to have students do writing that truly allows them to understand the subject matter.”

The M-Write team has been testing whether automated text analysis (ATA) will also help professors integrate even more writing into their courses without adding to their grading load. ATA systems can “learn” to review essays “by looking closely at a large body of representative student work and the strengths and weaknesses of those papers,” says Joshua Wilson, University of Delaware education professor, who has researched automated scoring systems. Essentially, with ATA, student work is evaluated by people who can provide data to a computer that develops a model to evaluate future papers. “Obviously, a computer can’t understand language the same way we can,” he says, “but it can identify lexical proxies that, combined with machine learning, can produce a score that’s very consistent with a score given by humans, even though humans are reading it in a different way.” At U-M, this process can help faculty provide STEM-content-specific evaluation while also freeing up their time.

ATA also enhances the aims of “writing-to-learn” pedagogy, which is why M-Write was created in the first place. This pedagogy, explains Gere, is about helping students learn in a way that keeps them engaged and interacting with concepts and with one another.

“It’s about the people and the technology. Neither is sufficient without the other.”
In primarily ‘drill’ STEM classes, where concepts and methodologies are taught through the repetition of problems and problem sets, the introduction of writing assignments offers students an additional avenue for learning the required material. [They] offered a safety net to identify if students understood the material. If a student missed a point on a 'low-stakes' writing assignment, they could clarify their understanding of the concept before a much higher-stakes test.

– M-Write Writing Fellow

“The M-Write system makes writing-to-learn pedagogy salient and usable in real-life situations. It requires students to translate key concepts into real-life situations in writing, and it does it through their automated peer review system that works directly in Canvas. On top of that, undergraduates are trained to offer formative feedback about the content the students write,” Gere says. “It’s the combination of this current process, with ATA and technical resources with human intervention, that will make it possible for faculty to monitor learning and ensure students are receiving personalized feedback.”

The M-Write team plans to use ECoach, a digital support platform originally developed by a research team led by Timothy McKay, Arthur F. Thurnau Professor of Physics, Astronomy, and Education. After using ATA to analyze their writing in M-Write, this coaching platform can be used to send students personalized messages that it determines will be helpful. For example, if the automated text analysis tool determines (and writing fellows agree) that students haven’t grasped how to incorporate peer feedback into a revised paper, the system will send them pointers on how to do so. Right now, Gere and Shultz are working with ATA specialists to create an algorithm that can generate a list of students who are having trouble with a given concept. They hope that the synergy among ECoach, ATA, and M-Write’s system will provide an extra layer of student assistance when combined with feedback from the writing fellow. It’s important to note, however, that neither M-Write nor an ATA function would automate grading decisions. The success of this interconnected system hinges on its human qualities, that is, on the communication between the fellows and the faculty member of a STEM course throughout a given semester. For example, there are about 20 writing fellows in Dr. Brenda Gunderson’s statistics class, and they each produce about half a dozen pieces of writing, which she then needs to review to ensure that everyone is on the same page about the rubric and prompts. This is an ongoing norming process that gives oversight to M-Write, which is a perfect example of the ways in which the interplay between human oversight and automation can be a success.

“This is a fundamental point,” says Gere. “It’s about the people and the technology. Neither is sufficient without the other. We couldn’t respond to this many students’ work without technology, and we couldn’t reach them effectively without human intervention; in this case it’s the writing fellows. Computers can count, and count very well, but that is not the same as understanding when someone is confused about a concept.”

M-Write has garnered the support of university leaders, campus community members, and the writing fellows who have chosen to work with students in individual courses. The university has funded M-Write with a $1.8 million grant, and the program’s goal of reaching 10,000 students by 2021 has been exceeded.

The M-Write team has much to celebrate, says Gere. She is “proud of the quality of the work that writing fellows do and the ways in which they become intellectual leaders, proud of the faculty who participate in M-Write because they care about how well students really learn, and proud of the university for caring as much as it does about student learning.”

I liked that the process of writing out the reaction helped me to better understand how the reaction occurred.

– STEM student

In my first three years of teaching at U-M, I was completely burned out at the end of April each year. I started running M-Write in my class in my fourth year. At the end of that year, I wasn’t burned out. Quite the opposite: I was happy and had the energy I used to get from teaching. I fervently believe mentoring these writing fellows has been a major component to this experience. These writing fellows made me like teaching again.

– M-Write faculty member
Know the Big Picture to Solve the Big Problems
Understanding the problem space and drawing diverse engineers in through comprehensive systems thinking

Do you ever look up into the night sky and see a satellite slicing through the darkness of space, reflecting glints of sun back to Earth, and pause for a moment to think about what it took to put that piece of technology in orbit? Whether it’s a satellite orbiting hundreds of miles above you or the car you drive to work every day, the water treatment plant that delivers clean water to your home or the smartphone you can’t be without, you are surrounded by feats of engineering every minute of every day. While in many ways these marvels become invisible because of their ubiquity, they are each brilliant accomplishments that are—and exist within—highly complex systems.

When engineers approach a complex problem, they must account for hundreds of aspects of that problem to design a solution. Engineering programs prepare students to consider factors such as timelines, available materials, budgets, and project personnel, but increasingly, engineers are being asked to use “systems thinking” in which they pay particular attention to how each component of a complex system interacts with all other components. Consider a car, which has over 30,000 parts! Teams of engineers have to think meticulously about how each part interacts within the system. Systems thinking in engineering tends to emphasize the ability to recognize constituent elements (such as how each mechanical part of a car works together in a system), rather than how all those constituent elements are embedded in broader economic, sociocultural, and temporal contexts. Yet all of these must inform decision-making. In the example of the car, an engineer must also consider what roads that vehicle will travel on, how its emissions will affect the environment, the economic impact on the community in which the car is assembled, the needs of its passengers, and what the driver who will buy the car already knows about driving. Also important are temporal considerations, such as how the car will be repaired when certain components break and how the car and its parts will be disposed of when it is no longer usable.

When engineers fail to consider the context they are designing for, there is a high likelihood that the project will result in the creation of a nonviable product or process. For example, when a group of engineering students from an American college visited an African community, they perceived the smoke produced by firewood stoves to be a major health concern. They engineered an efficient ethanol-fueled smokeless stove. They did not consider the fact that the ethanol was more expensive than wood, or that the community considered the smoke to be a normal part of cooking and didn’t see any health issues. The stoves were never installed. This example underscores the importance of listening to stakeholders, understanding cultural norms, and grasping the sustainability of the resources being used given the geography and economy.

The more complex the problem, the more likely it is that engineers will be working on different parts of a system, and the more likely the need to attend not only to the constituent elements of the systems but related contexts. Currently, there is a dearth of research, resources, and assessments to support instructional interventions aimed at preparing engineers to consider the contexts for which they are designing solutions. This unmet need led three researchers at U-M to ask how they can help engineers to account for the complexities of today’s grand challenges. With a grant from the National Science Foundation, higher education professor Lisa Lattuca, engineering professor Shanna Daly, and higher education doctoral student—now alumna—Erika Mosyjowski (AM ’11, PhD ’20) launched a study of systems thinking among engineering students and practitioners.

Their overarching goal is to prepare engineers to develop socially responsible and high-quality solutions that best meet the needs of the people, communities, and environments that are impacted by their solutions. By leveraging the concept of systems thinking—an accepted paradigm in the field—the team aims to expand the definition traditionally used in engineering by emphasizing comprehensive systems thinking that accounts for a range of technical, interpersonal, contextual, and temporal dimensions of a problem. “National leaders and employers have called for engineers who are able to think like this; however, we often only see these skills built through co-curricular activities and not part of the explicit curriculum. Training in comprehensive systems thinking should be accessible to everyone,” says Mosyjowski.

In addition to giving engineers the tools to meet the challenges they face, the U-M team believes that a focus on comprehensive systems thinking has the potential to attract a more diverse engineering workforce. By expanding the set of skills considered critical engineering competencies, many more people may see engineering as a field that matches their strengths and passions. For example, students who are committed to advancing social change but don’t see it as part of the scope of engineering work don’t consider the profession. Studies show that women and students of color—who are underrepresented within engineering—are drawn to the field in part for its potential to address important social issues.

“Emphasizing the importance of contextual understanding of problem spaces and developing a more comprehensive definition of systems thinking that includes both constituent parts and contextual elements of a system will not only help students recognize the relevance and value of these other elements of engineering work, but will also support full participation in engineering by a diverse group of students.”
Learning Experience Design

A new certificate program for graduate students prepares U-M students to be education innovators

In this issue of Michigan Education, you’ve read stories about new educational opportunities that take the form of online courses, virtual reality, and augmented reality simulations. New forms of media and technologies enable these innovative and exciting learning experiences, but a critical component of their success is how they account for the ways people learn.

The new Learning Experience Design (LXD) Graduate Certificate—offered through a collaboration between the SOE and the U-M Center for Academic Innovation—prepares the next generation of learning experience designers to design, develop, and implement learner-centered design approaches using new educational technologies.

Chris Quintana, associate professor, and Robert Alkire, graduate program lead at the Center for Academic Innovation and a lecturer for the SOE, co-developed the curriculum and structure of the certificate program. Chris’s work involves not only exploring the ways that technology can support learning, but also in researching different design methods that can be used to develop effective learning technologies. This background allows me to support our LXD certificate students with both design and research ideas to guide them as they learn to create and evaluate online and technology-supported learning.

With more than 20 years of teaching experience within a variety of K–16 contexts and a PhD in Curriculum, Teaching, and Learning, Rebecca uses a learner-centered approach to design and develop online learning experiences for students around the world.

You often ask the role that engineers are called on to play in addressing complex problems such as climate change and global health care, it is time to prepare these professionals to understand the systems in which they work is contextualized. When the environment, the people, and the context are unclear, and diverse minds come together, the solutions they engineer will succeed.

Maybe next time you see a satellite riding through the night sky, you will think about whether it supports telecommunications, environmental research, or surveillance. Perhaps you will question what will happen when it is no longer operational. Perhaps you will also question whether the materials it came from conflict-affected areas and who it benefits. If so, you’re thinking comprehensively about the many different aspects that engineers should consider when solving complex problems.

The 12-credit certificate is open to all Rackham graduate students and includes a 180-hour residency at the Center for Academic Innovation. Combining School of Education courses on learning theory, curriculum design, multimodal literacies, evaluation, and research design with authentic opportunities to engage in hands-on design and development work involves not only exploring the ways that technology can support learning, but also in researching different design methods that can be used to develop effective learning technologies. This background allows me to support our LXD certificate students with both design and research ideas to guide them as they learn to create and evaluate online and technology-supported learning.

Another student tweeted, “As one of the students in the first cohort of this program, I wholeheartedly recommend it to anyone interested in design, digital learning environments, or simply in working with the great gUMichAI team! Seriously, this was the best decision I made at @UMichEducation.” One student’s reaction estimates more than 13,000 instructional designers are currently working in the U.S. with nearly 80,000 open positions globally. Long before the COVID-19 pandemic forced K–12 and higher education classes around the world to shift to suddenly online formats, a July 2018 report by the Online Learning Consortium pointed to the increased demand for instructional and learning experience designers. According to the report, these designers play a pivotal role in helping faculty envision their courses as many universities have increased their online offerings.

“Now, more than ever, we are seeing the importance of developing effective and engaging online learning experiences. We are excited to develop this certificate program at this pivotal time when we can help shape tomorrow’s learning experience designers. And we are eager to continue to grow this program and give students from throughout the university the opportunity to embark on this important path,” says Chris. Rebecca adds, “In our program, we seek to center the needs of diverse students who join us from a range of backgrounds and interests. Many of our students bring experiences and expertise from a variety of contexts and we endeavor to bring these to bear on the curricular and practical experience of the whole cohort. Furthermore, using a framework for designing with equity and inclusion, students in the certificate program are encouraged to think about how they can bring the voice of the learner into their designs for learning.”
Face It: Privacy Matters
Alumna Molly Kleinman manages an investigation into the use of facial recognition technology in K-12 schools

Many people use facial recognition technology regularly, without even knowing it. When Facebook tags your family and friends in your photos, that’s facial recognition. When you unlock your phone or computer using the camera, that’s also facial recognition. Maybe it isn’t a surprise to learn that the FBI and ICE have used several state driver’s license databases to do facial recognition searches, without any need for consent.

In other words, facial recognition technology is prevalent, if not ubiquitous. It is fun; it is handy; it is useful. But it is also raising alarm bells in some sectors, where its use is causing concerns about privacy and security. All technology has risks, even seemingly passive ones, and more and more frequently, some people are actively questioning whether or not the general public is truly aware and informed when it comes to their own privacy, their children’s privacy, and the policies of the technologies they engage with.

Among those exploring the issues around technological privacy and policy is alumna Molly Kleinman (MS ’07; PhD ’18), who studied Higher Education Policy at the SOE and earned a graduate certificate in Science, Technology, and Public Policy (STPP) from the Gerald R. Ford School of Public Policy. She is the current program manager of the STPP program; students earning the STPP Graduate Certificate look at the use of science, technology, and evidence to influence public policy. Kleinman says students in the program investigate issues such as whose lives are made better by technology, which “public” benefits, and which experts are making the decisions.

Kleinman also serves as an intermittent lecturer for the SOE, and in fall 2019 taught a class titled Educational Technology and Policy. Her class examined the policy implications of technology in education. What does technology mean for student privacy? How does technology influence access and equity? Course topics included social media surveillance meant to “keep an eye on students,” and plagiarism detection software meant to identify and prevent cheating. She and her students also explored the impact and implications of educational policy on privacy and equity. “Policy issues that impact underrepresented populations don’t often get discussed,” says Kleinman.

She notes that the field of educational technology “is largely dominated by white men” and that “privacy issues play differently for marginalized populations.” In her course syllabus, Kleinman made sure to include diverse perspectives and varied contexts in the class readings, leading to discussion of important issues such as the school-to-prison pipeline and how the desire to prevent school shootings leads to the use of surveillance technology to monitor and police schoolchildren.

In her course syllabus, Kleinman made sure to include diverse perspectives and varied contexts in the class readings, leading to discussion of important issues such as the school-to-prison pipeline and how the desire to prevent school shootings leads to the use of surveillance technology to monitor and police schoolchildren.

In fall of 2019, STPP launched the Technology Assessment Clinic (TAC) with the goal of expanding research on emerging technology. The approach of TAC is to focus on an emerging issue in technology each year that doesn’t yet have much in the way of recommended policy and best practices. “There’s almost always something similar that came before,” says Kleinman, so the TAC uses an analogical study method and asks, “what are some similar technologies where we know ‘X’?” This year’s topic of facial recognition was influenced not only by Kleinman’s interest in educational technology and policy, but also by the fall 2019 STPP lecture, “Show Your Face? The Pros and Cons of Facial Technology for Our Civil Liberties” given by Chris Calabrese, Vice President for Policy at the Center for Democracy and Technology.

Kleinman and her team began questioning and investigating facial recognition technology and the associated security issues broadly, then narrowed their focus to facial recognition in K-12 schools and the myriad educational technology policies that will inevitably need to be addressed.

The analogical case study method provides TAC with a rich repository of data and discussion. “We do know about metal detectors in schools. We do know about police in schools,” Kleinman says. “Students in schools with metal detectors are more likely to have a lack of trust in their school, and students in schools with police officers are less likely to feel like their teachers care about them.” The analogical case study approach is unique to TAC. “No one else is using this approach to study the impact and effects of emerging technologies,” says Kleinman.

“We’ll be using existing discourse and the lack of regulation as a guide for the ‘what if’s’ in the use of facial recognition in K-12 schools.” Kleinman voices additional concerns, such as the privacy issues that will inevitably arise from having scores of students’ faces in various databases. She worries that a likely outcome of using facial recognition in K-12 settings is “data commodification”—the creation of a market for data and information that can be gleaned and extrapolated from all of those scanned images of children.

Known issues that may impact facial recognition use in K-12 settings are leading the TAC team to make confident, educated guesses based on existing technology in schools and other institutions. Those will be fully addressed in their first white paper, due for release in fall of 2020, in which Kleinman and her team will identify potential implications of facial recognition in schools, and make recommendations for K-12 policy makers and administrators. “Our goal,” says Kleinman, “is to help educational leaders ask the right questions when considering facial recognition for their schools or districts, and to give policy makers evidence-based guidance about the risks of facial recognition.”
Too Cool for School?

SOE faculty look past the hype to evaluate virtual reality for learning

Two years ago, a group of U-M scholars was mulling over an interesting question at the request of the provost: how can we use “extended reality” technologies to replace classroom learning with technology? The Provost’s Office was focusing on extended reality (XR), an umbrella term also known as Augmented, Virtual, and Mixed reality (AVMR). Virtual reality refers to replacing a user’s vision completely as they are engaged in an immersive experience separate from the space they occupy. Augmented reality refers to the addition of digital elements to the viewer’s field of vision. The popular game Pokémon GO! is an example of augmented reality, wherein users can see a virtual layer atop their lived experience, typically using a smartphone. Mixed reality combines elements of both virtual and augmented reality, and features the interaction of real-world and digital objects.

The first step was to bring together humanities faculty who were interested in exploring the use of AVMR in their courses and SOE researchers who could consult on adapting teaching techniques and measuring student learning. The faculty who collaborated on the pilot used many different AVMR technologies to analyze how students engaged with the tools, what new aspects of a subject were accessible through the tools, and what the faculty needs were for effectively employing the tools. AVMR is already used successfully in STEM fields. For example, in disciplines such as engineering, dentistry, and nursing, faculty have used the technology to make topics more accessible through greater visualization. But what would it look like to use AVMR effectively in humanities classrooms?

“Initially, when the group started, the early work was bringing together different faculty members interested in extended reality, and Elizabeth Moje and I were trying to ensure that professors could assess the technology for learning, and assess student learning as well. In this way, we were consulting for learning as education experts,” says Quintana. The SOE provides the voice that helps offset the hype, says Quintana. “We are finding that there is more nuance to the one-size-fits-all picture. Not all students are going to see these technologies in the same way. On the SOE side, we support our collaborators and also try to prevent a repeat of the same story we see with each new piece of education technology when it comes to their claims about learning. We see it with a lot of technology and we are trying to get ahead of it.”

The group’s pilots took place across many subject area classes on campus. SOE alumnus Dr. Carolyn Giroux (PhD ’19), who is now a research investigator at the SOE, joined the work because of her expertise in engineering literacy.

“We attended these classes so that we could help professors design for learning and assess how students were learning,” says Giroux. For example, Dr. Arthur Verhongen, Professor of Psychology and Greek and Associate Dean for Academic Programs and Initiatives at Bachkam, was teaching a class on ancient Rome. He leveraged AVMR to give his students a virtual tour of the ancient Roman buildings they were reading about in class. Students found the material helped bring their reading to life. However, some students also pointed out elements of the VR that were distracting or that they wanted to customize to better fit the course material.

This year, Dr. Sarah Blair, Vice Provost for Academic and Faculty Affairs and Patricia S. Yaeger, Collegiate Professor of English, taught a course on the novel. She used AVMR technology to engage students in a scene from Uncle Tom’s Cabin in which Eliza Harris desperately crosses a freezing river holding onto her child while attempting to escape slave traders. Blair was able to recreate the well-known scene in VR so that students could experience the passage from different angles and as different characters in the scene. “The potential of AVMR is to see something different that we couldn’t see otherwise,” says Quintana. The team’s work on these projects, and their analysis of them, was accepted into the American Educational Research Association (AERA) conference: In the Department of Film, Television, and Media, associate professor Matthew Solomon used VR to show students a scene from the acclaimed film Citizen Kane. Similar to the English students viewing the passage from Uncle Tom’s Cabin, the film students looked at a scene from the movie in VR from multiple angles and to discover the ways that they could film the scene in a different way and discuss the decisions that Orson Welles made while crafting his acclaimed work. “You couldn’t normally do that, so in helping students think about movie direction and cinematography, you can jump into the scene in a new way. It’s very interesting when you look at something in a way you couldn’t do otherwise,” says Quintana.

In another class, students experienced 6x9, which offers users a simulation of going into a prison cell and feeling constricted by its small size through the use of VR. “There are instances like this—where AVMR helps students experience things in a way that they couldn’t physically. Some AVMR aids learning, and some are just a distraction, so our question really is about which ones aid learning, since not all of them have been designed for learning,” says Quintana. “It’s cool, but what can you take away and learn?” Giroux says that the team has been engaging with students in all these courses and others to assess technologies and collaborate on determining effective tools.

Not all students in the courses they studied were convinced that AVMR wasn’t just a distraction altogether. “Their perspectives reveal both pros and cons,” says Quintana.

At times, the students didn’t always know what the tools were really there for, but they did like some of the technology because it helped them look at the things they couldn’t see in real life,” says Quintana. Some students also noted that some of the AVMR experiences requiring a student to assume a different identity were problematic. In one called A Man, students were asked to step into the experience of a Black man during the Civil Rights era. Some students did not feel that the simulation was realistic and did not feel that the simulation was realistic and did not feel that the simulation was realistic. “They can’t always make that leap,” explains Quintana, adding that there is a lot of interest in AVMR to help students build empathy, but so far, the team has learned that it takes much longer than a few minutes in VR to help gain empathy for—or an understanding of—others people’s experiences and perspectives. “Students may seem more empathetic at first, but it can wear off quickly according to studies. Student reactions reflected that on both ends,” he adds.

“We find many products being marketed as educational, but more research needs to be done to understand how educators and students are using them and then determine whether they are educationally effective,” says Quintana. The team also looked at the instructors’ perspectives to outline any pressure points, like finding good apps that teach students what the educators want them to learn. There are also complications when it comes to equipment, a lab technical support, and the logistics of having students work together. For example, when students are walking around with headsets on, safety becomes a concern. Professors had to chat with their students about working in pairs to alert each other if they were going to bump into something dangerous. “These are small things that you wouldn’t have to think about in a regular course,” notes Quintana.

“We are trying to help professors think about what they need, and also help the university understand the tech support side of it.”

One of the working group’s goals is to inform the university what will be needed to integrate AVMR in the classroom at scale— and sustainably. This includes pedagogical support for faculty, the cost of equipment, and the necessary technical support resources.

Now that the initial phase of data gathering is complete, the team is going to present a report to the Provost’s Office with its evaluation and recommendations. In the next phase, the team plans to look at ways they could redesign courses or grow them. “Ultimately, we would like to create a learning community among people who want to use VR, which has a diverse set of interests and some successful programs doing great work already,” says Quintana.

“We plan to engage more educators from the SOE to discuss bringing AVMR into K–12 learning, since we are currently focusing on higher education,” says Giroux. “Especially now, K–12 teachers want to have quality and engaged teaching.” The team has already gained interest across several subject areas in the SOE.

In keeping with design thinking principles, the team’s goals remains to simply grow and garner interest. “As we were working on the report, we noticed that we’ve done quite a bit very quickly. We had an expo and several courses engaged with AVMR,” says Quintana. “I’m pleased with how it has gone, and for being pilot work, we have gotten a lot done. In winter 2021, Dr. Rebecca Quintana—with the U-M Center for Academic Innovation and the SOE—plans to teach a course around learning technologies that uses AVMR, and Sarah Blair will teach another course with AVMR, too. Apart from that, our next task is simply to ask ‘what’s next?’”
F or 33 years, Lida Lim (AB ’61, TeachCert ’61) was a popular teacher among her seventh and eighth grade students and a respected educator in her Northern California community. Lim taught English Language Arts and English as a Second Language at Burlingame Intermediate School (BIS) near San Francisco. Her family, friends, colleagues, and students still mourn her 2019 passing and celebrate her contributions to the field of education and to the lives of those she taught.

The Lim family history

A few years before Lim was born, her father, a Chinese immigrant, worked in the U.S. while her mother cared for Lim’s older siblings. They moved the family to the U.S. and settled in Detroit in 1919—the year Lida was born. Her family opened a restaurant shortly thereafter, where she later worked with her younger sister Jeanette (BS ’63, TeachCert ’62). Only one year apart in age, the girls were raised almost like twins. “We had a typical midwestern upbringing, and our parents arranged for our American grandparents to teach us our adopted country’s ways,” Jeanette says. “As we grew up, we were very active in high school: Lida was the yearbook editor, and I was student council president. We were just happy kids who loved Detroit’s Reifeld High School and the University of Michigan.” Both women attended the university and became avid Michigan sports fans. “We have lots of Michigan grads in our family,” says Jeanette Lim Eshnook.

Lim forged lifelong relationships during her time at U-M. A close friend and fellow SOE student, Jamie Owen Linn (BSEd ’61, TeachCert ’61) remembers the first time they met, in the Alice Lloyd residence hall: “We were both sorority sisters in our sophomore year at the University of Michigan and working toward our bachelor’s degrees at the School of Education. We became friends and roommates. In December of 1960, Lida wanted to have a Christmas party, so I decided to stay and help her instead of going back home to Battle Creek for the holidays. This party became a life-changing event for me, as it was there that I met my future husband, Roger Linn.”

After graduation, they began their teaching careers—Linn’s in California and Lim’s in Detroit—but they stayed close friends for the rest of Lim’s life.

A successful educator

As a popular teacher at BIS in the Bay Area of Northern California, Lim received her school’s first-ever “Teacher of the Year Award.” “Throughout her career,” her friend and colleague Richard A. Coste says, “Lida was equally appreciated by the students, the teachers, and the parents.”

She co-wrote several textbooks on a variety of topics, including reading, responding to literature, and organizing writing. Among them were Spelling: Words and Skills—for Scott Foresman publishing company—and Language, which were both used in schools around the country. In her books, she expressed her love for her many nieces and nephews, interspersing their names and anecdotes of their activities throughout the pages. Lim stood out as an instructor, says her sister, Jeanette, because she understood middle school-aged youth. She took pride in helping them navigate their developing years as they grew into independence. “She also knew how to use humor with them, because she always had a middle-school style of humor,” says her sister. “I can’t think of a simple way to describe it better than that. She was also able to draw the best out in her students by teaching them to reflect on their growth in writing.”

After retiring from Burlingame School District, Lim continued to share her expertise and years of experience by acting as a consultant on instructional strategies to school districts in Texas, Pennsylvania, and New Jersey.

A traveler, friend, and sports fan

On summer breaks and during her retirement, Lim traveled around the globe to Hawaii, Alaska, Spain, Morocco, Portugal, Scandinavia, Russia, and China. She especially enjoyed taking cruises with her family and friends.

Her vibrant social life involved book clubs, knitting groups, plays, and concerts. She loved to cook and host dinner parties as well, and she was known as the unofficial social chairperson at her school. An avid fan of many sports, she was passionate about the 49ers, Golden State Warriors, Giants, and University of Michigan football and basketball. She organized March Madness bracket games for her family. She enjoyed professional tennis as well, and organized brackets for all four Grand Slam tennis tournaments.

Throughout her career, Lida was equally appreciated by the students, the teachers, and the parents.”

– Richard A. Coste, friend and colleague

Coste, Lim’s friend and colleague, traveled around the world with her. “On a trip to Gibraltar,” he remembers, “Lida’s canvas bag received lots of attention from the infamous monkeys there, and they went off with it! Fortunately, all the attention bothered them and they dropped the bag. Funny things always seemed to happen to Lida.”

Her legacy

Lida Lim is survived by her adoring sister Jeanette Lim Eshnook and Jeanette’s husband Tom, along with numerous nieces, nephews, and godchildren, who often sought her advice on writing college applications and essays. She also leaves the legacy of shaping the lives of the over 1,000 students she taught, many of whom remained in touch through social media. Lim’s friend Linn says, “She will always be remembered in our hearts and minds as a very special person who left this world a better place.”

Lida Lim wished for a private family memorial, and, true to her unique sensibilities, she wished for her ashes to be buried in a California redwood forest.
Endowed Chair in Psychometrics
Honors Dunn Family and their Legacy in Educational Assessment

As a teenager, before the days of internet image searches, Dr. Douglas Dunn (PhD ’70) would comb through images in publications to help his parents develop the first Peabody Picture Vocabulary Test (PPVT). This test is often used in educational settings to evaluate a person’s vocabulary by asking them to listen to a word and choose its corresponding picture. “I was the only child of two special education specialists, so I was definitely involved in the creation of the PPVT,” says Dunn. “My parents would ask me to look through magazines or catalogs when they wanted a specific image to serve as a wrong answer, or decoy, for the test. I would spend a lot of time searching for a photo of a cow or a horse, which was eventually used to create PPVT test pages manually. Each sheet had four photos, and only one image matched with the right answer, so my parents had to do a lot of testing to make sure the decoy answers weren’t too leading before sending a whole page to an artist to create the actual test.”

Douglas Dunn’s late parents, Lloyd and Leota Dunn, developed the first PPVT in the late 1950s. The structure of the PPVT-5 (the test is now in its 5th edition) is uncomplicated: examiners read a single vocabulary term to a test subject, who selects which image—out of four—matches the term. It is easy to train an examiner, and the test is quick to administer. It does not require an examinee to speak, read, or write, and the whole process takes 15 minutes or less. The PPVT evaluates receptive vocabulary, which means that it assesses a person’s understanding of the words they hear, as opposed to their expressive vocabulary, which are the words they use to express their needs. While this test was developed for ages 2.5 to 90, it is most frequently used with school-age children to estimate overall oral language skills and verbal ability. The PPVT is also used for people of all ages who have certain disabilities. It can be scored quickly, and the total raw score can be converted to a standard score, percentile rank, normal curve equivalent, test-age equivalent, or stanine score. “Dad clearly thought that a test like this should be available. As director of the Dunn Family Foundation, Douglas Dunn is committed to carrying on the legacy of his parents’ pioneering work. As a Michigan Ross graduate, he relies on his scholarly background to ensure the foundation’s success, leveraging his economics background to manage the foundation’s finances and his background in statistics to help maintain the test’s accuracy.”

The PPVT-5 was designed with three decoys and one stimulus word, but it also looked at the logistics of having two images versus three or four. Naturally, two is not enough, because you don’t want to diminish the test down to a 50/50 guess, and you also want to have words and images that can accurately measure one’s level of vocabulary in accordance with the age you learn something. This becomes a truly interesting problem.”

Douglas and Karen Dunn apply numerous techniques to develop the words that are used in the test, but their most valuable resources are the people who actually administer it. Teachers often reach out to tell them which questions are too easy or too hard for their students. As demographics change, the test also changes. For example, Spanish speakers may be able to guess vocabulary words with Latin roots more easily than people without that background knowledge, so the Dunns keep this in mind to ensure test reliability. They also recognize the importance of drawing images for the test. If a vocabulary word can’t be drawn easily—take the word “sympathetic,” for example—it’s not a good fit for the PPVT.

With all the factors that go into developing, assessing, and modernizing a test, it’s remarkable that the PPVT has remained valid and reliable for over five decades. The Dunns keep abreast of changes in testing requirements, user needs, technological advancements, data protection issues, and testing research. They recognize the prominent role that schools of education have in this work. “We asked ourselves how we can best use our family foundation funds to advance education,” Dunn says, “because we both believe that education is the keystone to the development of society, and testing is critical to the development of a school of education.”

Together with his wife Karen (BSED ’69, Teach Cert ’69), Dunn honored his parents’ contributions to the field of education by establishing a new professorship at the SOE in psychometrics and test development. Dunn’s interest in the field of psychometrics—the science of measuring mental attributes—comes naturally. Dunn hopes to expand the testing functions and capabilities at the University of Michigan: “By endowing a chair and hiring somebody who has the characteristics of a chaired professor—like a professional and scholarly track record, a high research capability, and great skill as a teaching assistant—I aim to help build a strong School of Education that focuses on test development. We know that education is critical, and we know that taking the right measurements to understand a problem will allow a solution to be developed.” This design thinking process applies to schools of education just as it does the PPVT-5, Dunn says, and it can lead to addressing problems successfully. “Simply put,” he says, “I want to use modern skills to make education better.”
Study abroad travel funds create opportunities for SOE Students

International study engages students in a social, personal, and intellectual journey of growth. It provides an opportunity to exchange ideas, broaden horizons, and develop empathy. Study abroad experiences give students at all levels new perspectives with which to strengthen their own communities.

However, education students often don’t take advantage of study abroad programs because of their rigorous coursework and clinical placements. But with the assistance of donors and faculty who support them, these students have more access to study abroad opportunities than ever before.

Heid Educators Abroad Endowed Fund

“For me,” says donor and U-M alumnus Ralph Heid (AB ’70), “it was a transformative experience when I studied abroad, and I think that others should be able to benefit, and I think others will benefit. And who can benefit from studying abroad more than educators?

Having the experience living in a different environment, gaining unique perspectives, and seeing that the world does move in different ways than here in the States is valuable. It puts people—to a certain extent—outside their comfort zones, particularly if they learn in a different language or culture. It teaches you a lot about empathy if you experience if they learn in a different language or culture. It’s always been about changing the way you think about things, and gaining a little more understanding of what it’s like to thrive in a foreign environment, and gaining experiences that you never thought you would have. You run into things you didn’t know. You can see so much, and experience so many special moments.”

Janet H. Lawrence Endowed Fund for Global Engagement

In 2018, former students honored CSHPE professor emeritus Dr. Janet Lawrence by establishing a fund to support international travel for higher education students. During her career, Lawrence contributed her expertise to countries in central Asia where higher education was transforming. Her work created opportunities for CHSPE students, including study trips to China, Norway, Chile, England, and South Africa. “Students who participated in these trips said they stand out as one of the most important experiences they had at the university,” says Lawrence.

Through the Janet H. Lawrence Endowed Fund for Global Engagement, students are able to take part in study trips, conduct international research, and host international educators at U-M. Leading this effort was Greg Barrett (PhD ’92), who explains that he spearheaded the creation of the fund because Lawrence’s regard for the transformative nature of experiential learning abroad and her efforts to make these experiences a reality for CHSPE students.

David L. and Anna W. Angus International Travel Fund

Established in 2009 by Anna Angus, the David L. and Anna W. Angus International Travel Fund supports PhD candidates doing research in the areas of international or comparative education. Awards are used to pay for travel outside North America related to dissertation research on an international or comparative topic, or for the presentation of dissertation-based research on these topics at international conferences. Dr. David Angus served as a professor in the SOE from 1966 until his death in 1999. A distinguished historian of American education, Angus was deeply involved in research and teaching in the areas of comparative and international education.

Professor and Mrs. Cho-Yee To Fund

Professor emeritus Dr. Cho-Yee To is another former faculty member supporting education students who study abroad. To was an SOE professor who also served as a chair of the SOE’s Program in Social Foundations from 1977–79 and again in 1992. To is an internationally recognized educator and scholar who has held appointments as dean, chair, or examiner at the Chinese University of Hong Kong’s Faculty of Medicine and School of Education, National Institute of Education of Singapore, Peking University, Tsinghua University, Shanghai Second Medical University, Korea University of Art, and others.

Throughout his career, he has supported international exchange and continues to do so through his gift. To and his wife, Patricia, responded to a 2012 call from university president Mary Sue Coleman, who advocated for more global experiences for students. The couple established an endowment called the Professor and Mrs. Cho-Yee To Fund. This fund supports graduate and undergraduate students in education to develop their global experience and perspectives through study in Hong Kong or China.

“Great scholarship is related to global experience, and great universities are multicultural and international,” says To.

As the world begins a difficult healing process, borders will reopen and our commitment to each other across the globe will be more important than ever before. With the help of SOE donors, education students will continue to develop into global citizens.

Students who have taken advantage of these generous travel funds and other sources of travel support are appreciative, and report having excellent study abroad experiences. Ralph Heid says, “The university always does a good job offering feedback from students. It’s always been about changing or broadening perspectives, gaining a little more understanding of what it’s like to thrive in a foreign environment, and gaining experiences that you never thought you would have. You run into things you didn’t know. You can see so much, and experience so many special moments.”

Ralph and his wife Mary Lynn established the Heid Educators Abroad Endowed Fund in 2009 to provide support for undergraduate students in the SOE who may not otherwise be able to pursue study abroad opportunities.
Over the past five years, Dr. Elizabeth Davis and Dr. Annmarie Palincsar have been working together to understand and characterize the learning opportunities afforded preservice and novice elementary school teachers, and to document how teachers have used those opportunities.

Davis and Palincsar’s study was one of a handful of projects funded by Chicago’s Spencer Foundation that are intellectually ambitious research projects that aspire to transform education. Field-initiated and committed to lasting improvement, the award is designed to support big ideas that eschew prevailing assumptions while being “self-critical about the work and its limitations.”

Davis, Professor of Learning Sciences and Science Education, is a teacher educator with an interest in how teachers learn to engage in rigorous and consequential science teaching and the roles of curriculum materials and teacher education in promoting teacher learning. She helped to lead the redesign of the SOE’s Elementary Teacher Education program to have a more deliberate and detailed focus on practice, as well as on content knowledge for teaching and the ethical obligations of the profession.

Palincsar is the Chair of SOE’s Educational Studies department and is the Jean and Charles Walgreen Jr. Chair of Reading and Literacy and an Arthur E. Thurnau Professor. As an instructional researcher, her work focuses on teaching and learning in K–8 classrooms, typically collaborating closely with classroom teachers. Palincsar’s research is designed to support students as they learn how to engage in knowledge building with informational text, especially in the context of project-based scientific inquiry. Davis and Palincsar and their research group—a dynamic team of science education and teacher education doctoral students—worked together to design a project that investigates how preservice and novice elementary school teachers develop content knowledge and use high-level practice teaching techniques (HLPTs). HLPTs are classroom skills—such as eliciting students’ ideas, leading whole-class discussions, and using curriculum materials to plan instruction—that are crucial for beginning teachers to master. The team chose to focus on science teaching because, despite its prominence in the debate about excellence and equity in U.S. education, science teaching is often pushed to the back burner in elementary schools. Davis and Palincsar were looking specifically at science teaching that privileges and promotes the integration of science concepts and practices through supporting students’ investigation and sensemaking.

“With a field, knew little about how elementary teachers learn to do this work,” says Davis. “Science is an Important context because it gives us a rich opportunity to work on how teachers support students in sensemaking.” Palincsar adds: “When learning science, students have numerous, authentic opportunities to use multiple literacies; this is an important consideration given the expectation that elementary teachers support their students in the development of reading, writing, oral language, and mathematical skills.”

The study followed 10 beginning teachers teaching in kindergarten through sixth grade classrooms over the course of the project. Data were collected using video to record teachers’ enacted practice and interviews to understand how teachers were thinking about the work they were doing in the classroom. Additional sources of project data included classroom artifacts (such as lesson plans), periodic surveys, and interviews with mentor teachers as well as school administrators.

The teachers who participated in the study were followed throughout their time as preservice teachers (“teaching interns”) in the SOE’s teacher education program and then into their first year—and, in some cases, second year—of teaching. All told, each teacher experienced four to five classroom placements over the course of the study.

“This diversity of placement sites resulted in an interesting range of classrooms and a real range of students,” Palincsar notes. “More than half of whom were particularly high needs.” In each new placement, teachers were typically placed in different contexts and were teaching half of whom were particularly high needs. In each new placement, teachers were typically placed in different contexts and were teaching half of whom were particularly high needs. In each new placement, teachers were typically placed in different contexts and were teaching half of whom were particularly high needs. In each new placement, teachers were typically placed in different contexts and were teaching half of whom were particularly high needs. In each new placement, teachers were typically placed in different contexts and were teaching half of whom were particularly high needs. In each new placement, teachers were typically placed in different contexts and were teaching half of whom were particularly high needs. In each new placement, teachers were typically placed in different contexts and were teaching half of whom were particularly high needs. In each new placement, teachers were typically placed in different contexts and were teaching half of whom were particularly high needs. In each new placement, teachers were typically placed in different contexts and were teaching half of whom were particularly high needs. In each new placement, teachers were typically placed in different contexts and were teaching half of whom were particularly high needs.

“It was fascinating to see how that played out,” Palincsar says. “Most had some form of science curriculum, although in one context, no science was taught at the first grade level. We looked to see how teachers adapted those materials, and sometimes struggled with how to adapt them to local contexts. Some local contexts also played a role, since access to science materials—even something as simple as running water—varied dramatically from school to school!”

“What struck us most,” Davis says, “was how many strengths those teachers had, particularly since elementary teachers aren’t as focused on science teaching as teachers in later grades. In addition to all the other content areas they have to teach, teaching elementary school science can be very complex, because they are teaching multiple science disciplines—biology, physics, chemistry, astronomy, geology. While obviously they had room to grow, regardless of the lens, we were impressed at the level and sophistication of the work they were doing.”

“What became clear was the importance of studying this phenomenon over time,” Palincsar says. “One might expect a clear trajectory of improvement, but that’s not the case. We saw a lot of ups and downs. As teachers become more experienced, the whole act of teaching becomes increasingly complex, because teachers are dealing with a broader range of demands—they are attending to a bigger picture. So, if a teacher was at point A, we weren’t able to say they were going to get to point B in a certain time frame.”

“The piece we’re still frustrated by,” Davis says, “is being able to trace that trajectory of development. The work of teaching is so complex, we don’t expect uniform improvement over time. We’re beginning to think about what a research design would look like to show the development of these practices over time.”

Through this work, Davis and Palincsar were also trying to “trace apart” how teachers were engaging in high leverage practices, as well as teasing high leverage practices apart from one another. “As research,” Davis explains, “the tendency is to characterize teaching as a whole. But we were aiming for a more nuanced understanding. Can we see different strengths?” Yes, we can. For example, one teacher may be great at eliciting student ideas, but not so good at supporting students’ sensemaking. She emphasized that despite these differences, every teacher had important capabilities.

“The fact that these practices can be pulled apart is important for the field,” Palincsar says. “Teaching isn’t some monolithic thing. It is critical to be able to see what they can accomplish even when they are not uniformly great at every dimension of classroom teaching. Not only does this allow for more tailored instruction, it allows us to see what a particular teacher education program may be doing really well, and where it may need to add more focus.”

This work has already had an impact on what Davis and Palincsar are currently teaching. “We learned a lot about what graduates have taken from our program and have identified the areas of struggle where we could have done a better job of supporting them,” Davis says.

“What we teach, and what we expect that interns are bringing, is an asset orientation to the classroom,” Palincsar adds. “Children have very rich ways of thinking about the world, and our job as teachers is to understand their thinking and help them come to more canonical understandings.”

Champions for Education

Spencer Grant

Understanding the Science of Teaching Science
New Gifts, Endowments, and Bequests

Champions for Education

Anonymous gift to support the Detroit P–20 Partnership

An anonymous gift of $6 million was pledged but spring in support of the Detroit P–20 Partnership. It supports the hiring of an chief–20 coordinator: the enhancement of health-basedWrapped services and anti-biasWrapped programs; and the development of evidence-based curricula and programming.

The Detroit P–20 Partnership has four central commitments: to provide empowering experiences for children and youth through the development of evidence-based curricula and pedagogical practices; to develop empowering educators through residency training beyond our typical preservice education; to build empowering environments in which both children and teachers can do their work best; and to conduct empowering evaluation that clarifies outcomes for teachers, students, and the community.

The SOE is proud to provide leadership on each of these goals.

Carla H. Bergolin Estate

Carla H. Bergolin (TeachCert ’64) provided support through a bequest to the SOE, the College of Literature, Science, and the Arts, the School of Information, and Rackham Graduate School.

Mary M. H. Douglas Estate

Mary Douglas (AB ’52) provided additional support through a bequest for the Mary M. H. Douglas Endowed Scholarship Fund. Douglas first established the Mary M. H. Douglas Endowed Scholarship in 2005 to support students pursuing certification in early childhood education, and in 2018 expanded the scholarship, making undergraduate and graduate students studying elementary or secondary education eligible.

After Douglas graduated from the SOE, she moved to Los Angeles, where she taught elementary students for 27 years. In addition to working with children, she also taught immigrants in adult education programs. In Los Angeles and educated future teachers at the University of Southern California and in multiple CA State campus teacher training programs. Because of her strong devotion to U-M, Douglas became affectionately known as “Michigan Mary.” She retired to Arizona in 1990, but often returned to Ann Arbor for football games.

Dunn Family Professorship of Psychometrics and Test Development

The Dunn Family Foundation, managed by president Douglas M. Dunn (PhD ’70) and treasurer Karen M. Dunn (BSBA ’19), made a gift to establish a fund for an endowed professor in the field of psychometrics and test development. Douglas Dunn is the son of special education specialists Loyd M. Dunn and Leota M. Dunn, the creators of the Peabody Picture Vocabulary Test (PPVT-5).

GRIP Support Fund

Professors Pat Herbst and Vilma Mesa, both faculty members in the SOE, gave a gift to create the Geometry, Reasoning, and Instructional Practices (GRIP) Support Fund. The fund will support activity associated with the GRIP lab in the SOE.

Alpert and Gertrude Peterson Elementary Education Fund

Sylva Kojima (AB ’55, AM ’61, TeachCert ’60) was an educator in the Pontiac School District for several years. Upon her passing in May 2019, the School of Education received a bequest from Mrs. Kojima’s estate to establish a scholarship in honor of her late parents, Albert and Gertrude Peterson. The scholarship will support elementary education students.

Marilyn Tucker SOE Scholarship

Marilyn Tucker (AB ’62, TeachCert ’62) created an expendable scholarship to support students entering their first year at the SOE.

In creating her gift to the SOE, Tucker said that it is a “celebration of Elizabeth Major for being honored as a Notable Woman in Education Leadership by Cran’s Detroit Business, for her success with the Teaching School partnership in Detroit, and for the ongoing improvements being made in undergraduate teacher education.” She adds: “I’m so impressed with how far the School has come from my time there. I hope that my gift serves to recognize the excellent reputation of the SOE and, particularly, Dean Moje’s role in that.”

After earning her undergraduate degree at the SOE, Tucker taught sixth grade in Wayne, MI, and in suburban Washington DC. Later, after earning a master’s degree in counseling, she worked part time for the George Washington University Continuing Education for Women Center before moving on to Northern Virginia Community College’s Alexandria campus to work as a career counselor. Currently, Marilyn counsels Georgetown University Law Center alumni regarding their ongoing career issues. She uses the skills she learned in the SOE every day: “A lot of my counseling is actually teaching the students in one way or another,” she says.

Kathryn and Bob Vizas gift to the Detroit P–20 partnership

Kathryn and Bob (AB ’58) Vizas have given a gift in support of the Teaching School Partnership Fund, also known as the “Angel Fund.” Kathryn explains that she and Bob support this fund because they believe that the City of Detroit can seem “worlds apart” from U-M’s campus. “The university, with its resources and knowledge, should be a major player in the life of the city—and vice versa,” she says. “We believe that the university can, and should, be contributing to the enrichment of Detroit neighborhoods; so we applaud and support the SOE’s participation in the public–private collaboration that created the Marygrove ‘Cradle to career’ education and community center near the Fitzgerald neighborhood and Livexius commercial corridor in Detroit.”

The Angel Fund was created to help support the emerging needs of the school in its startup phase. These include developing innovative and evidence-based curricula; recruiting; supporting and retaining teaching interns, residents, and teachers; conducting research and evaluation on outcomes in order to replicate best practices in other urban centers; providing support services and extracurricular experiences for children and youth; and aiding interns with transportation between Ann Arbor and Detroit.

Charles Goody (BSBA ’62, TeachCert ’62, AM ’64, PhD ’70) retired after serving 40 years as a faculty member and spending 30 years as the Assistant Vice President for Human Resources at Michigan State University. He also served as a labor arbitrator, primarily in public sector employment, focusing mainly on education.

Angela Esquivel Hawkins (AM ’07) was recently hired as the new Associate Director of Educational Programs in the Office of the Vice Provost for Graduate Education at Stanford University.

Marisa (Lisa) Johnson (AM ’17, TeachCert ’17) was selected to the Board of Directors of the Out of Hand Theater, a nonprofit organization in Atlanta. Out of Hand Theater builds community and promotes social justice through arts-driven programs. Its signature “living room shows” bring theater directly to people. Its “Creative Kids” program brings free theater training to children at low-income public schools in Atlanta.

To submit class notes, update your contact information, communicate with the editor, or connect with the School of Education, please visit soe.umich.edu/magazine.
In Memory, continued

Allen (Al) Menlo (PhD ’58), age 97, grew up in Detroit. A believer in lifelong learning, Menlo earned his bachelor’s and master’s degrees from Wayne State University while also serving in the Navy. He came to U-M as a research assistant in community adult education in 1950, and served as a teaching fellow in educational psychology in 1951 while pursuing his doctorate. He became an instructor in 1955, and was promoted to professor in 1969. He retired in 1991, but continued teaching until the age of 90 as Professor Emeritus. Menlo’s teaching was student-centered and resulted in an enduring legacy lives on in four family members who are teachers.

His tireless efforts led to the creation of the Elementary Master of Arts with Certification (ELMAC) program to certify postbaccalaureate students who wanted to teach in elementary schools. Many of the first ELMACers were returning Peace Corps members. Their experience in the Peace Corps made them good candidates, since Rankin’s intention was to train quality teachers for inner-city schools. His legacy lives on in four family members who are teachers.

Stuart (Shu) Rankin (AB ’49) passed away in Traverse City at the age of 92. Rankin served the SOE as a faculty member for 22 years, retiring at the age of 85, after working in the Detroit Public Schools Community District for 37 years in teaching and administrative roles and serving in the U.S. Army. He was highly respected at the local, state, and national level for his significant contributions and dedication to improving teaching and learning for students. He founded the Elementary Master of Arts with Certification (ELMAC) program to certify postbaccalaureate students who wanted to teach in elementary schools. Many of the first ELMACers were returning Peace Corps members. Their experience in the Peace Corps made them good candidates, since Rankin’s intention was to train quality teachers for inner-city schools. His legacy lives on in four family members who are teachers.

Rankin had a passion for poetry, golf, sailing, and music. He continued to enjoy playing all his old favorites on the piano. In his early fifties, he ran in three Detroit Free Press marathons. He loved spending time at the family cabin on Little Traverse Lake with the people he loved. On January 17, 2013, Stuart married Grace Marie Harper. They were married for 59 years until Marie’s death in 2012. Rankin is survived by his wife, Stuart, seven grandchildren, and six great-grandchildren.

In Memory

Donald Andrew McMechan, age 87, was the beloved husband of Lila Ann McMechan (ABEd ‘52, TeachCert ’53, AM ’66) for 47 years and 10 and one-half months, and devoted father of Susan Pace and son-in-law Tim Pace. McMechan was born in Detroit, but graduated from Dundee High School in 1949, also attaining the rank of Eagle Scout. He then attended Wayne University, where he was a member of the baseball team, graduating from the WSU College of Education in 1954. In 1975, he earned a master’s degree in the teaching of mathematics from the University of Detroit.

McMechan began his teaching career in Detroit Public Schools, but it was cut short when he was drafted into the Army where he served from 1954 to 1956. Upon his discharge, he returned to Detroit Public Schools, where he served in several positions including math demonstration teacher, assistant principal, and manager of many federal and state programs. He retired in 1989 after years of meritorious service. Don and Lila enjoyed many happy years traveling the globe, attending athletic events at WSU and U-M, and socializing with family and friends. He loved gardening and attending movies and cultural events. He will be missed.

His wife describes him as “true blue,” going back to when he was a Boy Scout and would usher at the stadium on football Saturdays. She said that they were both great supporters of the alumni association travel program, having traveled to six continents with them on more than 25 trips. In 2014, the couple endowed the Lila Ann Ferrance McMechan scholarship to benefit students in the SOE Educator Preparation Program.

Alumnus John DiBiaggio (AM ’67) was a first-generation college student who grew up in Detroit and went on to become president of Michigan State University, president of Tufts University, president of the University of Connecticut, and president of the American Council of Education. Many leaders depicted DiBiaggio as a champion for excellence, ethical decision-making, and high professional standards.

DiBiaggio was the son of Italian immigrants. He graduated from Eastern Michigan University in 1954 and the University of Detroit School of Dentistry in 1958. He earned a master’s degree from the SOE’s Center for the Study of Higher and Postsecondary Education. Following his career as a higher education president, DiBiaggio consulted with other college presidents and executive directors of higher education associations. He also served for two terms on the University of Massachusetts Board of Trustees.

Lawrence S. Bacow, the 29th president of Harvard University and 12th president of Tufts, said “American higher education is stronger today for his many efforts, and I am proud to have known him and to have called him not only a mentor and a colleague but also a friend.”

“As President of Michigan State University, John DiBiaggio was a passionate advocate for land-grant universities and the important role they play in research and service to others,” said U.S. Senator Debbie Stabenow.
Rudolf (Rudy) Schmerl (PhD ’60) earned his BA in 1951 and his MA in 1952, both from the University of Toledo, and his PhD from U-M in English language and literature in 1960. He began his career at the university’s Office of Research Administration as an editorial assistant in 1957, and by 1963 had become ORA’s director of Program Development. He served as assistant dean of research in the School of Education from 1970 to 1979, and in 1976 was promoted to associate professor of education. He retired on April 30, 1988, after 33 years of service to The University of Michigan.

Schmerl’s publications, which include books, monographs, journal articles, essays, and literary criticism, covered such topics as utopian novels, social criticism, the teaching of English, problems in higher education, problems of race and ethnicity in American life, problems of research administration, technical writing, and communication and planning. For over 20 years, he was also actively engaged in assisting historically Black colleges and universities. He served as a visiting professor of English and consultant in program development at The Tuskegee Institute from 1966 to 1967 and as the planning director (vice president) for the newly established Wayne County Community College from 1969 to 1970. He continued in both formal and informal ways to assist institutions that serve a range of constituencies, including Tennessee State University, Prairie View A&M, Navajo Community College, Lincoln University, and Rust College.

As one of a number of immigrants who escaped the tyranny of European totalitarianism in the 1930s and found their way into academic settings in the U.S., he contributed greatly to the quality of the university’s intellectual life and provided distinguished leadership and service to the entire community. Schmerl will be remembered as a thoughtful scholar who dedicated his life to advancing diversity, inclusion, justice, and equity in education.

Frank Kjeld Schmidt (AB ’56, TeachOut ’56) passed away at the age of 87 in Somerset, Pennsylvania. Born September 23, 1930 in Copenhagen, Denmark, he was the son of the late Aage and Gertrude (Kjeld) Schmidt. Schmidt is survived by his wife Elizabeth, two sons, a stepdaughter, and two grandchildren. Frank was a U.S. Air Force veteran, where he held the rank of captain, and later worked for the U.S. Department of Defense. Schmidt also had a private practice as a psychologist.

In addition to being an alumnus, Schmidt was a long-time donor to the SOE, who kept in close touch with SOE staff through frequent letters, phone calls, and gifts of art created by his close friend Bro Rasmussen.

In honor of our upcoming Centennial Anniversary Celebration, we invite you to submit your stories & photos! Share your SOE memories or images online at: myumi.ch/soe-centennial or by mail: SOE Centennial Stories 610 East University Ave. Ann Arbor, MI 48109-1259
The University of Michigan, as an equal opportunity/affirmative action employer, complies with all applicable federal and state laws regarding nondiscrimination and affirmative action. The University of Michigan is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, national origin, age, sex, marital status, disability, religion, height, weight, or veteran status.