

The Context of SHAPE

The Schools and Higher Education Advancing Public Education (SHAPE) program began in 2012 with the goal of creating a collaborative model between public schools and universities to improve learning and teaching across the preschool to doctorate spectrum. The second round of SHAPE extends this goal with an emphasis on 21st century learning and teaching through the following initiatives: International Baccalaureate, Dual Language Immersion, Global Competence, Early Interventions, STEM, Arts Integration, Universal Design for Learning, Professional Learning Communities, and Digital Learning. Innovation through each of these initiatives is helping to shape the picture of what twenty-first century learning and teaching look like from preschool through doctoral level education.

Education Reform and Twenty-First Century Learning

Though the national rhetoric calling for twenty-first century education has persisted for the last twenty years, the national and state policy changes that came with No Child Left Behind (NCLB) in 2002 have entrenched existing state curricular models through its emphasis on yearly testing. With NCLB, a reauthorization of the Elementary and Secondary Education Act of 1965, annual student testing became the means through which to challenge “low performing” schools. In order to avoid such a designation, schools were to meet NCLB’s “annual yearly progress” measures or face restructuring after several years of low student test scores. Not long into the NCLB process, it became clear that student test scores were a strong indicator of students’ socioeconomic status than of learning that took place in the classroom or of curricular innovation. In 2011, the US Department of Education began issuing NCLB waivers to states, allowing them to develop and use alternate metrics of student learning and school effectiveness. With the 2015 passage of the Every Student Succeeds Act (ESSA) as the latest reauthorization of the Elementary and Secondary Education Act, many of the sanctions tied to students’ test performance under NCLB have been removed. This has been that national face of education reform over the last fourteen years, and it has very little to do with what twenty-first century learning should look like in schools.

Education reform in Montana has taken a different tack. Though Montana, like all states, was subject to the testing measures under NCLB, it has not used students’ yearly standardized test scores as the primary means of evaluating teacher effectiveness. Instead of reforming through policy shifts that assume that fundamental disruption is needed to improve teaching and learning in schools, Montana has approached reform as an ongoing process of curricular and pedagogical reformulation through school district leadership. This means that districts like Missoula County Public Schools have been able to experiment with curricular programs within and across schools through the professional development of teachers. In fact, they have been able to recast what twenty-first century learning and teaching look like.

As SHAPE evolves, four hallmarks of twenty-first century learning in MCPS and at UM are beginning to surface. Each of those 21st century learning hallmarks and the SHAPE initiatives that support them are listed in the table below.

21 Century Learning Hallmarks	SHAPE Initiatives
Inquiry based learning that helps solve problems in novel, creative ways	International Baccalaureate STEM Arts Integration Professional Learning Communities Blended Learning
Blended learning	Blended Learning

	STEM Universal Design for Learning Early Interventions
Expanded cognitive flexibility through dual language learning and global awareness	Dual Language Immersion Global Competence International Baccalaureate
Equity	Early Interventions Universal Design for Learning Professional Learning Communities Blended Learning International Baccalaureate

Initiative Updates

International Baccalaureate

Since 2012, MCPS has added three additional schools to the International Baccalaureate (IB) roster: Hellgate High School, Big Sky High School, and Lewis and Clark Elementary School. Currently, Franklin Elementary is preparing to become a Primary Years Program, beginning in the fall of 2016. Franklin is one of the smaller elementary schools in MCPS with 245 students, 71% of whom qualify for a free and/or reduced meal subsidy. Providing enriched curricular offerings—like IB—to students whose families might not have the opportunity to provide similar offerings privately, opens up inquiry-oriented ways of learning to students, who, nationally, have been most acutely experienced the limited pedagogies induced by the emphasis on testing under NCLB.¹ Continued expansion of the IB curriculum in MCPS is planned for the duration of SHAPE.

In addition to recognizing a broader spectrum of high school level IB coursework at UM, the Phyllis J. Washington College of Education and Human Sciences has developed and will be offering a graduate level IB certificate program for preservice and inservice teachers beginning in the summer of 2016. Dr. Lucila Rudge has spearheaded the design and implementation of the program at UM in consultation with MCPS IB coordinators at Big Sky High School (Cameron Johnson), Hellgate High School (Ryder Delaloye), Lewis and Clark Elementary School (Brad Chumrau), and the Missoula International School (Jeff Kessler). Recognition of the program has involved obtaining university approval for the certificate in addition to applying to the International Baccalaureate Organization (IBO) for recognition. IBO will conduct a site visit to approve the certificate program in early June. UM faculty in the Department of Curriculum and Instruction unanimously support the IB certificate, and five faculty will participate in the IB training conference that Cameron Johnson, the Big Sky High School IB coordinator, has organized for MCPS faculty.

The articulated IB program in Missoula County Public Schools and the University of Montana is uncommon—only a handful exist nationally. In fact, when attending Association of International Education Administrators (AIEA) conference in February, Dr. Paulo Zagalo-Melo, the Associate Provost for Global Century Education at UM and the principal investigator for SHAPE's global competence initiative, received laudatory feedback from Dr. John Bader, IBO's chief executive external relations officer:

¹ While education policy has limited the pedagogical repertoire in classroom settings, the economic limitations of families face are likewise a factor in students' access to inquiry-rich learning opportunities ranging from extracurricular activities to travel. See Robert D. Putnam, *Our Kids: The American Dream in Crisis*. First Simon & Schuster hardcover edition. New York: Simon & Schuster, 2015.

[UM's] work with IB schools has become a story I am telling repeatedly as a model for the ways universities and schools should collaborate. It's quite inspiring, so thank you. . . . If universities encourage local and state school systems to consider the IB, everyone benefits (email communication, 14 March 2016).

UM's work with MCPS and regional school districts interested in or already implementing IB programs is clearly unusual in the United States. The partnership model that UM and MCPS are forging through SHAPE has the potential to be a national model.

Dual Language Immersion

Dr. Kate Brayko from UM and Principal Kelly Chumrau of Paxson Elementary have continued to work together to study, sustain, and refine first public dual immersion (Spanish-English) program in the state of Montana, which was made possible through SHAPE P-20. Ongoing policy development, curriculum development, assessment, and outreach have been at the forefront of activity this quarter. MCPS Regional Director Roberta Stengel has engaged parents and staff in a collaborative effort to establish clear and transparent lottery policies—an important contribution as the immersion program continues to grow in demand among interested families. Collaborating with the Center for Applied Linguistics (www.cal.org), the team made notable strides in developing and utilizing curriculum and assessment guidelines and materials, including a newly-created writing scope and sequence document, Spanish proficiency report cards, and a comprehensive assessment scheme—all of which will serve as models for future immersion programs in MCPS and beyond. Satisfaction among parents of immersion students remained very high and a recent comparative analysis of DIBELS data suggests that Spanish immersion may make a significant difference in key indicators of *English* literacy proficiency as early as mid-year kindergarten. Instructional innovation continues to flourish, as exemplified by a recent bilingual Missoula Community Theatre performance and several dynamic units of inquiry. Efforts to network and grow dual language immersion included collaborations within MCPS (i.e., Washington Middle School) and with fledgling American Indian language immersion programs in Montana. Using social media tools, an immersion teacher community exchange, which will include teachers and administrators in Browning, Crow Agency, Missoula, and OPI, has been designed, and future collaborations are planned.

Global Competence

The Global Competence initiative, headed by Dr. Paulo Zagalo-Melo, UM's Associate Provost for Global Century Education, and MCPS's Trevor Laboski, continues its work with the Northern Rockies International Baccalaureate Schools consortium by articulating IB coursework high school students take with UM's Global Leadership Initiative through the recently created Global Learning Pathways-Missoula (GLP-M). This program offers IB students the opportunity to engage with the University through a series of extracurricular activities while still in high school, the opportunity to study abroad for a year between high school and college, and the opportunity to gain automatic entrance into UM's signature Global Leadership Certificate program. This year 8 students from Hellgate High School and 2 students from Big Sky High Schools have participated in the program. Throughout the year, Zagalo-Melo's team has coordinated with MCPS to participate in outreach events for students and staff. Such outreach will extend into the Flathead Valley to broaden the partnership between UM, MCPS, and additional IB schools.

STEM

Science, Technology, Engineering, and Mathematics (STEM) training for teachers and programming for K-12 students continues to expand rapidly through the collaboration of Dr. Lisa Blank of UM and Karen Allen of MCPS. Girls STEM, Project Lead the Way (PLTW), and Robotics continue to expand through MCPS and the region. A new focus area in design-thinking will be introduced and developed in SHAPE 2.0. Girls STEM continues to attract a large number of middle school students. 139 girls from 17 middle schools around the state are registered for the Girls STEM (www.missoulagirlsstem.net) conference that will be held

at the Phyllis J. Washington College of Education and Human Sciences on April 23, 2016. At the conference, 18 local STEM professionals will be sponsoring STEM career workshops on topics ranging from bioacoustics to neuroscience to chemistry, to computer programming. The conference will also feature two high school lightning talks, keynote address from a Boeing engineer, and interactive exhibits by spectrUM and Big Sky High School Health Science Academy Students. Similarly, Project Lead the Way continues to expand throughout the region (www.pltwmontana.net). Dr. Blank is currently planning for the a statewide PLTW conference on May 20, 2016 and a regional training for the elementary PLTW launch in early August. At these conferences, MCPS teachers and administrators will present alongside 50 Big Sky High School Health Science Academy students whose work will be showcased. National and state leaders from PLTW and the Office of Public Instruction will present as well.

Arts Integration

During the first quarter of SHAPE 2.0, Karen Kaufmann, UM's Director of the Creative Pulse program for teachers, Trevor Laboski of MCPS, and Chris Neely of SPARK!, have been creating professional development workshops for MCPS teachers which will be offered in April and September, fine-tuning week-long summer courses for teachers in the Creative Pulse program, and developing an arts integration teacher training workshop that will be held in the fall. The development of these workshops has involved site visits to arts-based schools with MCPS staff. In addition to the April professional development workshop for teachers, UM's College of Visual and Performing Arts will hold a think tank in arts integration.

Early Interventions

The current activities of the Early Intervention initiative of SHAPE 2.0, led by Dr. Trent Atkins at UM and Karen Allen and Carol Ewen at MCPS, are focused in two areas: scholarship and the wider dissemination of early intervention modules and the pre-K screener for school staff. Training for school personnel to use the modules and screener will likely occur during the next two quarters. More immediately, Dr. Atkins will share his research findings from SHAPE P-20 and plans for SHAPE 2.0 at the OPI-sponsored Montana Data Use Conference in Bozeman on May 10th. He will show how predictive models can be built to help determine what appropriate student growth should look like.

Dr. Atkins is currently engaged in two research efforts. First, he is currently preparing two manuscripts for publication. One details the development of experimental digital research design, and the other, which will be submitted for publication with an MCPS teacher, focuses on early numeracy assessment. The latter manuscript lays out the framework for developing math materials for parents of pre-K children. Second, Dr. Atkins is designing a quasi-experimental study using the pre-K screener and parent email modules developed in SHAPE P-20. This study will help take Early Interventions to scale as it will invite the participation of administrators from across Montana. He anticipates this study will inform the further expansion of Early Interventions.

Universal Design for Learning

Dr. Morgen Alwell of UM has worked with MCPS Executive Regional Directors Trevor Laboski, Roberta Stengel, and Karen Allen as well as MCPS principals and Professional Learning Community coaches to deepen and extend teacher training in Universal Design for Learning (UDL) in classroom settings. One of the central goals of the UDL initiative is to create a group of teacher trainers who can work with colleagues at their schools and in the region to improve teaching and learning strategies regionally. To this end, Dr. Alwell has established two forums for in-service teachers to bolster their UDL repertoire. The first is a gifted/UDL cadre with 33 teachers from 8 schools in Missoula. Collaboratively organized and run with Dr. Tracy Missett of UM and Shirley Lundberg and Karen Allen of MCPS, Cadre teachers have met monthly since November 2015, designing projects that help them teach students of mixed abilities and

backgrounds. Cadre teachers will present their projects at their last meeting in April 2016. The second forum is the online UDL book club, which has run during the spring 2016 semester. This graduate seminar includes 10 teachers who teach a variety of grade levels across MCPS schools and 2 doctoral students from UM. Members of the group have varying degrees of knowledge and experience with UDL, and each member discusses their practice in relation to *UDL Theory and Practice*. The UDL will be expanded in the fall of 2016 to include teachers from around the region.

Recently, Dr. Alwell and 2 MCPS teachers gave a three-hour workshop together at the Montana Council for Exceptional Children conference in Bozeman in February to positive reviews and requests for more information and networking opportunities across the state. Dr. Alwell is currently planning a summer workshop for teachers throughout western Montana. The 2-day workshop will highlight local teachers applying UDL and will provide participants with lessons grounded in UDL principles.

Professional Learning Communities

Since SHAPE P-20 began in 2012, MCPS has embraced the Professional Learning Community (PLC) concept as a means for professional development in schools and across the district. These PLCs have evolved under the diligent oversight of the Executive Regional Directors (ERD). As the PLCs have focused around target areas, such as standards-based grading, which have had clear benefits for schools in providing the means for teachers to align their practice, the work that PLCs have done highlight areas that merit attention. For example, as new teachers and administrators join MCPS, they need training in the MCPS PLC model and background in the work that current PLCs have already done. Over the next year, MCPS and UM will develop and launch a self-guided, web-based training program that will orient new school district teachers and administrators to the PLC process and incorporate nuances specific to MCPS.

Blended Learning

Under the direction of Dr. Ryan Schrenk and Bob Currie of the Montana Digital Academy and Hatton Littman of MCPS, SHAPE's blended learning initiative continues to expand and serve as a national model for the integrated use of digital and analog pedagogies. Currently, 4 administrators and 2 teachers from MCPS and 3 administrators and 13 teachers from different schools in western Montana are participating in an online course in blended learning this semester. One team from Big Sky High School will replicate the work developed by the team at Corvallis High School last year. To do this, the Big Sky team visited Corvallis to observe and interview teachers and students about their blended use of EdReady and face-to-face learning. Like the Corvallis team, the Big Sky team is using EdReady Montana in their "Back on Track" program, which moves the lowest achieving students through pre-algebra and algebra 1 in one year to prepare them for the geometry course they will take next year. The collaborative work of the Corvallis team and the Montana Digital Academy has attracted national attention for their innovative work. In March, the team traveled to the Network, Resources, Open, College & Career (NROC) conference in Monterey, California in mid-March to present their blended learning model. At this conference, the Montana Digital Academy received the "Contributing Member of the Year" award for their work on EdReady Montana with schools throughout the state.

Notably, the Bill and Melinda Gates Foundation invited Dr. Schrenk to present at one of the most exciting education conferences nationally: South by Southwest edu (www.sxswedu.com) in Austin, Texas in early March. Participants at this invitation-only conference are recognized as global innovators in the field. The education conference coincides with the SXSW conference on technology and the SXSW music festival.