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MICHIGAN VIRTUAL UNIVERSITY
ANNUAL REPORT: 2017-18

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About Michigan Virtual

Michigan Virtual™, formally *Michigan Virtual University*®, is a nonprofit 501(c)(3) organization that supports the growth and development of digital learning in Michigan's K-12 schools. We initially served to demonstrate and document the benefits of online learning. More recently, we have invested significant time and resources to build awareness of and access to effective online learning opportunities for Michigan's K-12 schools and students.

Michigan Virtual provides a three-pronged approach to virtual learning. Since 2000, *Michigan Virtual* has been serving Michigan's K-12 community with online courses for high school and middle school students. As an accredited state virtual school, *Michigan Virtual* has recorded over 265,000 online course enrollments and celebrated its 250,000th student enrollment during the 2017-18 school year. Unlike full-time virtual programs or cyber schools where students take 100% of their courses online, *Michigan Virtual* offers a supplemental program where students average less than two online courses per year, most often enrolling because the course was not available in their traditional school.

Michigan Virtual also has a long history of providing professional learning services to Michigan districts through both innovative online courses and face-to-face offerings. In this capacity-building role, *Michigan Virtual* partners with schools to provide educator training, develop and implement blended learning models, and identify and enact best practices in technology integration. Through this role, *Michigan Virtual* is one of the statewide leaders in providing educators with the required professional development hours necessary for renewal of their teaching certificates.

The final prong is *Michigan Virtual's* long history of working with Michigan's K-12 community and policy leaders to help make Michigan a leader in innovative education and forward-thinking policies. Early on, *Michigan Virtual* served primarily as a change agent when most school leaders and parents were not familiar with online learning. This work continues today with leadership from the *Michigan Virtual Learning Research Institute*® (MVLRI®), which was formed by *Michigan Virtual* in 2012 to expand Michigan's capacity to support new learning models, engage in active research to inform new policies in online and blended learning, and strengthen the state's infrastructures for sharing best practices.

The organization's mission is to advance K-12 digital learning and teaching through research, practice, and partnerships. Its vision is that every person can use digital learning to reach his or her full potential.

This Annual Report provides highlights of *Michigan Virtual's* student learning, professional learning, and research activities for the 2017-18 fiscal year.

Student Learning

Student Online Learning in Michigan

Before detailing the impact of the *Michigan Virtual's* student learning efforts, it may be valuable to provide a comprehensive statewide snapshot of virtual learning for K-12 students. Based on data published in *Michigan's K-12 Virtual Learning Effectiveness Report 2016-17*¹, we know that:

- 593 Michigan public school districts reported at least one virtual enrollment.

- Of the 1,102 schools with virtual enrollments, over half had 100 or more virtual enrollments.
- Over 101,000 Michigan K-12 students took at least one virtual course in 2016-17, totaling over 517,000 virtual enrollments.
- Schools are disproportionately enrolling students in poverty into online courses. On average, schools tend also to be enrolling students who are struggling academically in their face-to-face courses or for a subject in which a student has failed rather than for advanced coursework or for a subject in which the student is proficient.
- The overall pass rate for virtual courses was 55%; however, almost half of the virtual learners – more than 49,000 students – passed every virtual course they took. The pass rate is low because of cases where students are being provided with large numbers of virtual courses without passing any of them. Restricting the number of virtual courses a student can take to one or two at a time until the student demonstrates successful completion might dramatically improve the statewide pass rate.
- Some districts are clearly more effective in using virtual learning than others. Twenty-seven percent of districts with virtual learning had virtual pass rates of 90% to 100%.

From a policy perspective, there are two main drivers of virtual learning in Michigan schools. The first is that Michigan students are required to have an online learning experience² in order to graduate from high school. This requirement was adopted in 2006 as part of the Michigan Merit Curriculum (MMC) and was intended to prepare K-12 students for the digital world they will encounter in higher education, their future workplaces, and their personal lives. Schools were provided with flexibility in how they could fulfill the online learning requirement – in part due to the vast difference in technology access and readiness of schools in 2006. The options included:

- Take an online course.
- Complete a meaningful online experience of at least 20 hours.
- Complete the meaningful online experience of at least 20 hours incorporated into the required courses of the MMC.

While Michigan was the first state in the country with such a requirement, several other states have since followed suit. Some of these states have adopted more stringent requirements than Michigan, requiring students take an online course rather than have a 20-hour minimum experience.

The second policy driver has been Section 21f of the State School Aid Act³. Since 2013, Michigan public schools have been required to honor parent or student requests for enrollment in up to two online courses per academic term or more if parents, students, and school leadership agree that more than two are in the best interest of the child. Eligible courses for enrollment include those published in the student's school district's catalog of board-approved courses or from those in a statewide catalog of virtual courses⁴.

Research suggests that despite these two policies existing for some time, Michigan adults are not very informed about them. A survey with 800 Michigan adults⁵ in the September of 2017 found that only 26% of those surveyed were aware of Michigan's online learning graduation requirement and only 30% were aware that middle school and high school students were allowed to take up to two online courses per academic term. Despite the lack of awareness, these same adults tended to hold a favorable view of online learning including over 80% indicating that it was either very important

(38%) or somewhat important (45%) for students in middle school and high school to have the option of enrolling in an online class at their local district.

One of the mindsets that led to the adoption of the online learning requirement was a belief that online learning would better prepare students for careers and college. Those assumptions seem to have been correct. That same survey of 800 Michigan adults found that for those currently employed or in school, 28% were required to take classes for continuing education or certifications online and an additional 45% said it was possible for them to do so. At the same time as the survey of Michigan adults, another survey of Michigan college students was also conducted. Based on data from 400 students, 90% replied having taken a college/university class that used a learning management system (LMS), 81% had taken an online course at college/university, and 86% thought students who used an LMS in high school would be better prepared for college/university.

Michigan Virtual Student Learning Fast Facts for 2017-18

- Over 16,000 students benefited from taking an online course through *Michigan Virtual*.
- Over 28,400 student enrollments were delivered to students.
- On average, students take less than two virtual courses with *Michigan Virtual* during a school year.
- Over 63% of Michigan LEA Districts used *Michigan Virtual* for student courses.
- Students enrolled in 225 different online courses.
- Students were most likely to take a *Michigan Virtual* course because it was not available locally.
- The pass rate for *Michigan Virtual* courses was 83% – well above the statewide virtual learning pass rate of about 55%⁶.

Students

A total of 16,725 students⁷ took online courses with *Michigan Virtual* in 2017-18. About 57% of the students were females, about 38% were male and another 5% did not identify gender. Together, these students accounted for 27,905 course enrollments. Thus, students averaged 1.7 enrollments, a statistic that aligns well with *Michigan Virtual's* supplementary mission. Fifty-four percent of students using *Michigan Virtual* took only one course.

Districts

Student enrollments came from 417 Michigan districts including 346 local education agency districts (LEA districts), 29 public school academy districts (PSA districts), four intermediate school districts (ISDs), and 38 nonpublic schools. As a point of comparison, based on data available through the Center for Educational Performance and Information's (CEPI) Educational Entity Master website⁸, in November 2018, there were 546 open-active LEA districts, 296 PSA districts, 56 ISDs, and 666 nonpublic schools. Using these counts as estimates for the 2017-18 school year, *Michigan Virtual* served approximately 63% of the LEA districts, 10% of the PSA districts, 7% of the ISDs, and 6% of the nonpublic schools. A complete list of Michigan districts served in 2017-18 is included in Appendix A, Figure 1.

Michigan schools accounted for 25,930 enrollments with the number of enrollments from a school ranging from a single enrollment to 1,031 enrollments. The average number of enrollments per

school was 61. In addition to serving Michigan schools, *Michigan Virtual* generated 126 enrollments from 10 non-Michigan schools. *Michigan Virtual* also had 1,849 enrollments from parents or guardians directly enrolling their children in online courses. Students in 77 of Michigan's 83 counties were supported with online learning opportunities through *Michigan Virtual*. For a map of locations where students and schools were served, see Figure 2 of Appendix A.

Courses

Students enrolled in 225 different online courses with *Michigan Virtual*. These online courses included titles offered during the fall, spring, and summer. The list included core academic courses specifically aligned with the MMC, Advanced Placement® (AP®) courses, credit recovery courses, and summer enrichment experiences for students. These online courses included those developed by *Michigan Virtual* as well as courses and content licensed from nationally-recognized providers. The majority of courses (80%) were offered at the high school level, though 52 online courses were specifically available for middle school students. The full listing of the online courses used by Michigan districts and students during 2017-18 is available in Appendix A, Figure 3.

Pass Rates

Michigan Virtual had an 83% pass rate for the year. In calculating the pass rate, enrollments were removed for courses taken outside of the *Michigan Virtual* system (497) or where credit or a grade were not attempted or available (enrichment) (61). Of the 27,844 attempted enrollments, 27,453 were from students who finished or remained enrolled in the course through the last day for a 99% completion rate. In terms of course success, 23,026 of the 27,844 enrollments earned 60% or more of the total course points for an overall pass rate of 83%. To put that pass rate into perspective, the statewide pass rate for virtual courses since the 2010-2011 school year has hovered around 60%.

From a subject area perspective, *Michigan Virtual* maintains above a 78% pass rate for each of the four core subject areas:

- English Language and Literature = 78%
- Life and Physical Sciences = 81%
- Mathematics = 81%
- Social Sciences and History = 86%

For comparison purposes, the statewide pass rates for online courses from all providers for each of the four core subjects ranged from 49% to 56%. Appendix A, Figure 4, shows the *Michigan Virtual* pass rate for each subject area. A full list of the 2017-18 *Michigan Virtual* student pass rates by course title is also provided in Figure 3 of Appendix A.

Pass rate also varied by district. Using Michigan LEA districts as an example, 122 of the 346 (35%) districts had a districtwide pass rate of 90% to 100% with *Michigan Virtual* student online courses. An additional 91 districts had pass rates of 80% to 90%. Thus, about six in 10 LEA districts had a pass rate of 80% or greater when using *Michigan Virtual*. There were 44 districts that had pass rates of less than 60%. Of those, only 15 had double digit enrollments. Eleven of those 44 districts had

pass rates of less than 10% with 9 of the 11 having three or fewer enrollments. Figure 5 of Appendix A includes a chart displaying the distribution of district pass rates.

Current Initiatives

Michigan Virtual is continuing to expand its catalog of student learning opportunities for 2018-19 to better meet the needs of schools and students across the state. A prominent example of this expansion effort can be seen in the collaborative effort⁹ between *Michigan Virtual*, St. Clair County RESA, Port Huron HS, Lake Shore HS, and Gull Lake Community Schools. These collaboratives are coordinated countywide or through individual districts. Online learning options powered by *Michigan Virtual* increase student engagement and achievement through the implementation of personalized and blended learning strategies. This is achieved by offering *Michigan Virtual* courses to students that are taught by local teachers in the Intermediate school district and individual districts. These teachers are provided with professional learning and coaching throughout the year focused on how to engage, motivate, develop relationships, and provide effective feedback to online students while implementing research-based best practices. *Michigan Virtual* is continually working to identify new partner districts to grow collaborative models for the 2019-20 school year.

Michigan Virtual is also engaged in three primary initiatives related to improving and expanding offerings in the *Michigan Virtual* catalog of courses for high school students.

- Evaluate information technology-related courses from a variety of content providers with the aim of acquiring one or more additional titles aligned to fulfilling an ongoing organizational aim to provide for multi-course progressions of study that prepare students for industry-recognized certification examinations in specific career pathway areas of specialization, such as digital document management, IT support fundamentals, web design and development, computer programming, network administration, and cybersecurity;
- Revise at least one *Michigan Virtual* Plus course to meet the design standards of a credit recovery course and to pilot it with one or more schools in order to gather user performance and feedback data as a means of informing future decisions about whether to devote subsequent organizational resources to the development of additional *Michigan Virtual*-owned credit recovery courses as alternatives to current vendor-provided Essentials product offerings with the aim of improving completion rates among at-risk students; and
- Explore potential partnership opportunities with postsecondary institutions for the purpose of providing for eligible high school students in Michigan to earn transferable postsecondary credit through online dual enrollment courses prior to graduating from high school.

Professional Learning

Online Professional Learning in Michigan

Michigan K-12 students are not the only ones benefiting from online learning. Districts throughout Michigan find themselves challenged with crafting professional learning opportunities specific to the needs of their individual teachers and their student populations while simultaneously dealing with little release time for teachers, a shortage of substitutes, shrinking budgets to pay such professional learning expenses, and increasing expectations for student achievement. These continued realities have leaders looking for opportunities that accelerate and increase the effectiveness of professional learning throughout their building, district, or ISD/RESA. Online and blended solutions are one of the opportunities leaders are leveraging to accomplish their goals.

The state is also leveraging online learning to tackle significant training needs. An example of this is the state's Early Literacy work. To address Michigan's third grade reading proficiency rates, a collaborative taskforce has committed to creating resources aimed at improving the literacy skills of Michigan students. Through literacy coaches, web-based resources, and online professional learning modules, Michigan Pre-K-3 educators are gaining knowledge and skills in 10 research-based literacy essential practices. Through online resources and face-to-face coaching, *Michigan Virtual*, working with MDE, is moving quickly to train the over 30,000 Michigan educators serving Pre-K-3 students in these practices and turnaround the literacy rates for students.

Barriers and Opportunities for Professional Development

As reflected in last year's report, the continued trend of decreased use of State Continuing Education Clock Hours (SCECH) as the primary record of professional development has continued through the 2017-2018 school year. Educators are receiving the majority of their formal professional learning through district or ISD/RESA supported learning opportunities rather than seeking out their own supplemental learning opportunities.

There are advantages to this model, as school districts are able to guide professional learning that is intentionally aligned to the goal-driven needs outlined in their school improvement plans. As a direct result, educational leaders are finding themselves looking for professional learning experiences for their teams that clearly align with their goals. As mentioned earlier in this report, districts have begun to explore the use of digital and blended professional learning to make learning more meaningful and to have a greater impact on the learning of all adults within their system. The Michigan Department of Education has also been issuing new guidelines recently for SCECH providers which will help align SCECHs to be easier to issue and have more rigor and value for educators.

While alignment with district needs is essential, individual educators and school leaders are also driven by their own personal learning goals and by the needs of the students they are directly working with. Balancing the needs of an entire district while also providing personalized learning options for every teacher is an exciting challenge for the current system. Many educators are seeking ways they can learn in a more individualized and personalized manner and digital learning options can provide this to teachers within a district. Using digital systems, like a learning management system for professional learning, teachers are able to make their own learning reach beyond the staff meeting, professional development day, or conference experience. While teacher evaluation systems are a highly sensitive topic, the attention to specific and individual goals have driven educators to press for individual learning experiences as well.

The attention to goal-driven professional learning has many districts turning their attention to reducing the amount of "sit and get" professional learning within their district. School leaders are also realizing that the power of personalized learning for students can and should be applied to professional learning. There is increasing recognition that the adult learning within a district should also be personalized to fit the need of each educator. This realization is driving conversations with *Michigan Virtual* about how the Professional Learning Portal (PLP)¹⁰ can serve as a 24/7 learning tool that allows flexible access to multiple learning experiences throughout the district. Some educators are finding ways to be involved in online professional learning communities, which also are options for districts within the PLP. Programs like these are providing districts with ways to

provide professional learning at scale throughout a district in an effective way that greatly increases the transfer of learning to classroom practice.

In addition to the challenge of providing personalized and individual learning experiences to the educators within their districts, there are additional challenges to releasing teachers from their classrooms during the school day. The significant shortage of substitutes in Michigan leaves schools reaching out for alternative learning opportunities in order to keep teachers in their classrooms. This has been a key driver for the district-wide use of online systems for formal learning experiences, but also for informal learning, such as professional learning communities (PLCs). Continuing to support community of learners, and the affordances of social learning, PLCs and online learning communities provide opportunities for educators who share similar expertise, but are separated by geography and time, to learn from each other.

Digital delivery of professional learning can and does reduce barriers for educators to receive quality professional learning. The ability to and the benefit of leveraging technology to allow expertise to flow across the state, without the constraints of time or geography, are well known. As educators become more adept at using technology, their ability to leverage technology like smartphones and mobile devices for professional learning will grow. *Michigan Virtual* has spent the last one and half years building out a mobile application focused on professional learning. This application, named NuTeacher¹¹, offers up another tool to allow districts and schools to provide just-in-time support to their staff for on the job learning. It is one way that *Michigan Virtual* is continuing to address challenges around the lack of job-embedded support for teachers through technological innovation.

Michigan Virtual Professional Learning Fast Facts for 2017-18

- *Michigan Virtual* delivered enrollments in over 320 online courses through its Professional Learning Portal between October 1, 2017 and September 30, 2018.
- During that same time frame, *Michigan Virtual* had over 52,000 enrollments in online, blended, and face-to-face trainings.
- Through *Michigan Virtual's* professional learning opportunities, close to 82,000 SCECH were completed.
- Over 10,000 enrollments were provided in Essential Instructional Practices in Early Literacy K-3, Prekindergarten, and School and Centerwide courses.
- Use of *Michigan Virtual's* online professional learning offerings was widespread. Educators enrolled from 100% of the state's ISDs, 93% of the LEA districts, 77% of the PSA districts, and 40% of the nonpublic schools.
- Nine ISD/Regional trainings on effective online and blended learning practices reached 103 educators.
- 91 educators gathered in Lansing, in July 2017, for a day to learn about best practices in blended learning and tech integration from local experts and national leaders.
- Six Mentor Site Institutes and three Foundations trainings were held across Michigan to deepen the professional role of mentors of online learners, reaching 76 participants, and 243 mentors participating in a supporting online community.
- Two partner school districts continued to collaborate with *Michigan Virtual* on successful district-wide implementation of blended learning for all students.

Professional Learning Activities

This past fiscal year, *Michigan Virtual* offered Michigan educators over 320 courses through its Professional Learning Portal. From major initiatives like the *Essential Instructional Practices in Early Literacy* training¹² for Prekindergarten to third grade teachers in Michigan, to smaller initiatives focused on hyper-personalization like MyPD¹³ (a partnership with MDE to allow educators to individually choose a topic for self-development, work with *Michigan Virtual* professional learning specialists to gain feedback on classroom implementation and receive formal recognition through state continuing clock hours - a first in Michigan), *Michigan Virtual* continues to expand opportunities for educators to meet the changing needs of their students. A full list of course offerings with enrollment counts is presented in Figure 6 of Appendix B.

These online professional learning enrollments came from people who reported being affiliated with 56 ISDs, 506 LEA districts, 229 PSA districts, and 266 nonpublic schools. These data points suggest *Michigan Virtual* served approximately 100% of ISDs, 93% of the LEA districts, 77% of the PSA districts, and 40% of the nonpublic schools. A complete list of Michigan districts served in 2017-18 is included in Figure 7 of Appendix B. A map showing the locations of these districts is provided in Figure 8 of Appendix B.

MDE Collaboration

Michigan Virtual entered into a partnership with the Michigan Department of Education in December 2016 for the purpose of leveraging technology to innovate and scale professional learning for those that the department serves. Stakeholders from both organizations collaboratively identified a number of areas where new professional learning experiences, in the form of online courses, would be beneficial.

An example of this collaboration can be seen in the Assessment Security Administration course¹⁴. To address statewide issues experienced at large scale, MDE turned to *Michigan Virtual* to create and deliver this online course to reduce the 60,000+ incidents reported each year in the delivery of the M-STEP. This self-paced course elaborated on concepts found in the test administration manual published each year by MDE, and attracted over 4,200 enrollments during February through April 2018.

Additionally, courses on social and emotional learning, seclusion and restraint¹⁵, formative assessment¹⁶, and teacher evaluation¹⁷ were all launched and are being iterated upon and marketed in fiscal year 2019. The partnership will continue to grow and be refined in order to streamline development processes and launch additional courses, including on the topics assessment coordinator training, gifted education programs, and training for the MiLearn statewide data reporting network.

Michigan Virtual also concluded seven years of support for the MI Excel program at MDE, debuting two courses on “Differentiated Instruction: Maximizing Learning for All¹⁸” and “Changing Minds to Address Poverty in the Classroom¹⁹”. This brings the total suite of school improvement courses to 18 in the professional learning catalog.

Michigan Virtual was, and is, also deeply involved in providing support for several additional statewide initiatives, including:

- The Michigan Early Literacy Professional Learning Grant, which provided funding for the development and implementation of a series of training supports for Michigan’s pre-K through 3rd grade teachers and administrators. *Michigan Virtual* staff worked in collaboration with leading literacy researchers from Michigan State University and the University of Michigan and literacy leaders from the ISD and LEA levels to develop and publish 21 online professional learning modules around essential literacy instructional practices. The modules have been released for enrollment as they have been completed, with all final modules released publicly by the end of October 2018. During this past fiscal year, over 10,000 educators enrolled in the modules, with this number increasing to over 13,000 by early November 2018. In addition, *Michigan Virtual* developed the statewide website for hosting all literacy essentials material (www.literacyessentials.org²⁰) and will continue to maintain and improve both the modules and the website for fiscal year 2019.
- The redesign of Michigan Educational Technology Standards for students (METS-S)²¹, which outline best practice for integrating technology across all content areas. New standards that align with Michigan’s Top Ten in Ten initiative were released in December 2017, and *Michigan Virtual* has dedicated staff and resources to support this initiative.
- The Michigan #GoOpen initiative²², to which *Michigan Virtual* has dedicated funds and staffing resources to support the creation of a statewide platform to provide equitable, open access to quality learning materials.
- The creation and maintenance of a Digital Makerspace²³, which allows for educators to build online resources for students. Along with the platform, the *Michigan Virtual* team has created online courses to support educators in building their own digital resources.

Additional Statewide Efforts

As school districts, public school academies and non-public schools increasingly focus on the ability to deliver personalized professional development to their staff and leadership, *Michigan Virtual*, together with a consortium of stakeholders from higher education, state education associations, and school personnel, have been working to implement competency-based professional learning opportunities, often referred to as micro-credentials, for K-12 educators in Michigan. *Michigan Virtual* has been partnering with statewide organizations, such as MASA and MEMSPA, to build and deliver micro-credentials on a variety of topics. In 2018, *Michigan Virtual* debuted the MASA micro-credential on superintendent communications and MEMSPA micro-credential on Leadership and Literacy, Personal and School Mission & Vision. Work on scripting out micro-credentials for MEMSPA on comprehensive needs analysis and title funding, social emotional learning, and student and family engagement also occurred.

The Michigan Assessment Consortium, who debuted their Assessment Learning Modules in 2018 on the *Michigan Virtual* Professional Learning Portal, has also developed, in coordination with *Michigan Virtual*, four micro-credentials for delivery in 2019.

Executive Director Tamara Bashore-Berg and Director Ken Dirkin, from the professional learning team, also participated in a series of MDE Office of Educator Excellence hosted micro-credential workgroup meetings to help build awareness across K-12, Higher Education, and department stakeholders around the potential of micro-credentials in Michigan.

Michigan Virtual continues to provide strong support for educational associations looking to make the transition to the online space for professional learning. Groups that *Michigan Virtual* provided professional learning assistance to over the last year are listed in alphabetical order:

- Michigan ASCD
- Michigan Assessment Consortium
- Michigan Association of College Admissions Counselors
- Michigan Association of Intermediate School Administrators
- Michigan Association of Secondary School Principals
- Michigan Association of Superintendents and Administrators
- Michigan Elementary and Middle School Principals
- Michigan's Integrated Behavior and Learning Support Initiative
- General Education Leadership Network

Michigan Virtual has also hosted and facilitated a number of professional learning communities, or PLCs, for multiple distinct audiences. The STEM Teacher Network has a focus on supporting the work of integrated STEM teachers in grades K-12 through livestreams, resource sharing, and networking in a SCECH-bearing learning experience in the Professional Learning Portal. An online community for mentors of K-12 online learners allows participants to share resources and discuss issues of practice with one another in an online setting. One of the largest communities that *Michigan Virtual* hosts, with over 1,100 participants, is the Early Literacy Online Coaches Community, exclusively for literacy coaches in the early grades in districts across Michigan who have gone through the online learning modules on early literacy essentials. Members can share and access resources developed by the Early Literacy Task Force and discuss the implementation of the early literacy essentials in their own settings. Lastly, a report that examined the engagement of discussion patterns in these three communities²⁴ was published by *MVLRI*.

Michigan Virtual plays a significant role in ongoing advocacy for strong mentors in online learning, a key leverage point that research has shown is a critical factor in the success of online students. During the 2018 fiscal year, both face-to-face and online opportunities for those serving in this professional role were provided to connect mentors across the state and to refine their skills. The statewide professional learning community hosted by *Michigan Virtual* grew to 248 members this past year, and a 12-SCECH course on online mentoring was also available through the Professional Learning Portal. Nine face-to-face trainings were held across the state, bringing mentors together to identify problems of practice and focus on building relationships with online learners that are conducive to success. Additionally, four Michigan mentors were invited to write about their online learning programs for a mentoring blog series²⁵ hosted by *MVLRI*.

Personalization

With the growing awareness for the individual needs of educators to improve practice, *Michigan Virtual* has focused on how to deliver personalized professional learning experiences to educators through a variety of delivery channels. Efforts this past fiscal year focused on:

- *NuTeacher* - The *Michigan Virtual* designed mobile application for professional learning provided a test bed for creating short 5-7 minute micro-learning lessons for classroom teachers. These lessons, which focus on social emotional learning and classroom climate

and culture, are readily accessed directly from a teacher's smartphone. The application, which debuted on the Google Play and iOS App Store in July, contain over 60 hours of content for teachers to interact with. Two district pilots were prepared for launch in late summer of 2018.

- *Day Camp 2018*²⁶ - *Michigan Virtual* hosted its fourth annual Day Camp in July, with a focus on how teachers can utilize technology to personalize learning through blended learning. Speakers included exemplary blended teachers as well as outstanding educator Michael Bonner. Educators who attended this event were able to experience blended learning first-hand. Those in attendance included superintendents, curriculum directors and other educational leaders with 91 participants at this event.
- *Blended Suite*²⁷ - *Michigan Virtual* has built a comprehensive package of services and products that include professional development for educators and administrators. These research-based services are organized in a package of multi-modal services that support the implementation and adoption of effective blended learning. Because every district has different needs, these packages can be personalized to meet the goals set forth by the district.
- *Coaching*²⁸ - This year *Michigan Virtual* made a commitment to coaching school leaders and educators on how to use technology to personalize and differentiate instruction to improve educational outcomes of all students. By identifying areas of need within a district and establishing relationships with staff, *Michigan Virtual* has provided opportunities for educators to not only create change within their own classrooms but across the districts where they work. This district-based coaching creates scalable change through the creation of building leadership in the area of blended learning.
- *Learn.BLEND.Lead*²⁹ - learn.BLEND.lead, an ongoing, personalized blended learning model approach to professional learning, will continue to focus on helping educators personalize their professional learning experience and personalize instruction for students. Developed by *Michigan Virtual*, this learning experience is designed to explore best practices in the blended classroom. Through a collaborative and interactive process, learners are supported in blending their own classroom instruction and provided training on best practices in instructional coaching. Participants then go on to serve as a blended learning advocate or coach in their own system, creating sustainable change within a building or a district.
- *Blended Learning Live!*³⁰ - Related to districtwide blended learning implementation efforts, *Michigan Virtual* is continuing the partnership with Heather Staker, a nationally-recognized expert, to offer Blended Learning Live!. Blended Learning Live! addresses a district's desire to push forward with blended, online, and personalized learning in their district without knowing all of the details on how to start. Often a school leader wants a formula for the correct implementation and rollout of 1:1, blended learning, and more tech integration in their district. Through this program, a team of district or school leaders receive scaffolded support to develop a blended learning implementation plan. In true blended fashion, the two-day, face-to-face event is enhanced by online opportunities before and after the face-to-face learning experience.
- *MyPD*³¹ - *Michigan Virtual* continued to offer its innovative, learner-centered online professional development experience called MyPD. The MyPD course allows learners to be formally recognized for the informal learning in which they engage; participants put together a learning plan, centered on a specific goal that is relevant to their practice, in which they

learn through informal resources such as Twitter chats, TED talks, and YouTube videos. Participants submit evidence of their learning, which is weighed against a scoring rubric, and are provided feedback by *Michigan Virtual* staff and awarded SCECHs if the evidence is proficient. This learning experience is a unique way for educators to develop skills in an individualized way.

- *Personalized Book Studies-Visible Learning for Mathematics* - *Michigan Virtual* has also worked to personalize learning for Michigan teachers and administrators through online and blended book studies. Collaboration with Williamston Public Schools and *Michigan Virtual* resulted in the creation and implementation of an online and face-to-face book study around John Hattie's *Visible Learning for Mathematics*. Through this partnership, curriculum directors from Williamston worked with instructional design staff to provide a blended learning experience for district leaders, allowing leadership to experience blended learning first hand.
- *Podcast PD* - *Michigan Virtual* offered two professional learning courses built around the *Michigan Virtual* podcast *Campfire: Igniting Education with Blended Learning*. The podcast, hosted by professional learning specialists Jeff Gerlach and Erin Luckhardt, features interviews with guest educators around the state who are implementing blended learning in their classrooms. The first course, titled *Screencasting, the Future of Education*³², requires learners to create a prediction for the future of what learning might look like, construct an educational model, demonstrate the instructional affordances of different technology tools and possible classroom application, and distinguish personalized professional learning and its benefits from traditional professional development. The second Podcast PD course, titled *Google Forms, Failure-Free Failing & CBE*³³, allows learners to explore Google Forms, work toward a classroom that embraces personalized learning and the growth mindset, and experiment with competency-based education.

Research Institute

Section 98 of the State School Aid Act also directs *Michigan Virtual* through its research institute, *MVLRI*, to address the following tasks to strengthen teaching and learning for K-12 education. Toward that end, *MVLRI* has responsibilities as summarized in the items below.

(A) Support and accelerate innovation in education through the following activities:

2(a)(i) Test, evaluate, and recommend as appropriate new technology-based instructional tools and resources.

Michigan Virtual maintained the Technology Resource Toolkit³⁴ in the Learning Object Repository (LOR) under the tag of "educational tools." The LOR toolkit was originally created as a way to test, evaluate, and recommend technology tools to educators, providing them with a practical resource to find digital technology tools to meet their needs. Twenty new resources were tested and added throughout the year bringing the total number of tools in the Technology Resource Toolkit to 99.

Michigan Virtual's Professional Learning Portal (PLP) also continued to maintain three virtual professional learning communities (PLCs). The three PLCs of Early Literacy Coaches Community (1,147 members), Online Mentor Community³⁵ (242 members), and Michigan STEM Community (69 members) have all grown since the last update and continue to be places where educators can

interact and provide support for one another in a virtual space around a common theme. As an attempt to unpack participants' engagement, a report on the discourse in those social constructive spaces³⁶ was published by *MVLRI*. The findings highlight the strong potential of online PLCs and, in particular, discussion forums as hubs for meeting isolated educators' professional needs.

Throughout the 2016-2017 academic year, *Michigan Virtual* recorded in-depth analytics data to monitor how students engaged with instructional content within two *Michigan Virtual School* courses. The result of that work has been previously summarized in two blog posts. We continued this work into the 2017-18 year through the creation of a year-long action research professional learning community (PLC), including instructional designers, professional learning staff, *MVLRI* researchers, and the lead instructors from each academic department across the *Michigan Virtual School*. The primary goal of this PLC was to increase student engagement and performance on specific individual assessments through action research and targeted interventions. Another two-part blog series^{37,38} was published as a result of this work.

Throughout the 2017-18 year *Michigan Virtual* staff met to discuss a plan for identifying practical, meaningful web accessibility resources to support teachers in making digital learning accessible to all. Based on this initial work *Michigan Virtual* created a Web Accessibility Resource page³⁹ containing 26 resources and including a brief description for each, what staff liked about the resource, limitations, and classroom applications. *Michigan Virtual* also produced three webinars on accessibility issues⁴⁰ which are available online.

In the 2017-18 year *Michigan Virtual* launched the Student Learning Portal (SLP)⁴¹, a web-based, student information system that supports the registration of K-12 students in online courses. The new application provides schools, students, parents and mentors with more up-to-date, real-time access to student progress information. In addition to providing more transparent, easy-to-access information about student progress, the SLP empowers schools to create student accounts, enroll students in courses, associate mentors with students, and manage their students' progress, saving resources and time. The new system also features single-sign on between the SLP and *Michigan Virtual's* Blackboard LMS. When students and others with cross-system access enter the SLP, they get important information, announcements, course related materials, and a quick direct link to their class.

2(a)(ii) Research, design, and recommend digital education delivery models for use by pupils and teachers that include age-appropriate multimedia instructional content.

During the 2017-18 school year, *Michigan Virtual* implemented various new initiatives, including collaborative partnerships with Michigan districts, credit recovery courses, and middle school elective course bundles. Each product or service met a need directly expressed by a partner or filled a known gap in either *Michigan Virtual's* offerings or the supplemental K-12 online field overall. Collaborative partnerships allow districts to maintain control over their online learning programs while still maintaining access to the high quality courses and robust and on-going professional development offered by *Michigan Virtual*. The credit recovery initiative filled a need by offering high quality, teacher-led courses with open-entry and open-exit as needed for students attempting to recover credit from failed or missed courses. Finally, the middle school bundles allow schools to create custom combinations of short-duration courses designed to serve as an introduction to

online learning and provide students access to high quality elective content. The three initiatives are presented in a report⁴² and is available on the *MVLRI.org* website. Each initiative section starts with an overview and description of each program, followed by some early outcomes based on the limited roll-out during the 2017-18 year.

Michigan Virtual developed and piloted its first mobile application during the 2017-18 school year. The original intent of the application was to serve teachers who are new to the profession and allow them opportunities to get to know their peers and grow professionally. The scope of the design grew to include all teachers as feedback from stakeholders indicated that such a learning platform would be applicable to anyone in the profession regardless of their experience level. The current design of the application serves three basic functions: serves as a platform for teachers and education professionals to network and connect to other professionals within their school buildings and to the larger whole-group user base; provides a space for users to ask and answer questions about their profession in an effort to improve practice; and offers professional learning content on a variety of topics relevant to the teaching profession. *MVLRI* published a report on mobile application for K-12 professional learning⁴³. The report includes a brief literature review on the use of mobile applications in learning, an outline of the design of a pilot application, and an overview of planned research efforts as the application is implemented in K-12 school pilot settings.

During the 2017-18 year, *Michigan Virtual* partnered with researchers Dr. Kerry Rice and Dr. Andy Hung from Boise State University to explore student behavioral, textual, and limited demographic data retrieved from the *Michigan Virtual School* for the 2014-15 and 2015-16 academic years. One overarching goal was to determine the type of data the researchers could collect as well as how accurate and comprehensive that data were. They also wanted to explore a variety of data mining analysis techniques, including deep learning (DL) for text analysis and improved prediction accuracy. Specifically, the researchers were interested in comparing DL to other machine learning (ML) models, as well as exploring the potential of DL combined with textual data in improving prediction accuracy. Finally, they were interested in looking for predictors that could act as early warning indicators for detecting learners that might be at risk of failure early in the semester. A full report on this early detection work⁴⁴ is available on the *MVLRI* website.

As an ongoing and cost effective professional development solution, *Michigan Virtual* developed and tested the online book study model with the partnership with a school district. In the entire process of idea generation, model design, and program implementation, three books were involved: Eric Jensen's *Teaching with Poverty in Mind* (2009), Liz Kolb's *Learning First, Technology Second* (2017), and John Hattie's *Visible Learning in Mathematics* (2008). This joint collaboration between *Michigan Virtual* and the district partner subject matter experts is presented in a book study report⁴⁵ detailing the characteristics of the three online book studies, the evolution from early pilot phases to full district rollouts, and the successes and challenges from both *Michigan Virtual* and the district partner's perspective.

Michigan Virtual has carried out the plan to explore a wide array of tracking variables gathered in learning management system repositories. This year a focus centered on better serving students who take K-12 online mathematics courses. The result of this work was a learning trajectories report⁴⁶. In the report, mixture growth modeling was used to examine month-by-month scores students earned by completing assignments. The best-fitting model suggested four distinct

subgroups and follow-up analyses demonstrated that two different types of successful trajectories (e.g., nearly linear growth) were more likely associated with advanced level courses, such as AP or Calculus courses, and foundation courses, such as Algebra and Geometry, were with the unpromising trajectory (e.g., hardly any growth). Implications for practitioners and researchers were discussed and focused on such topics as established pacing-guide, self-paced learning, and struggling learner groups in online mathematics courses.

2(a)(iii) Research, develop, and recommend annually to the department criteria by which cyber schools and virtual course providers should be monitored and evaluated to ensure a quality education for their pupils.

Michigan Virtual partnered with Dr. Charles Graham of Brigham Young University who developed an Online Teacher Readiness Tool. This year, Dr. Graham worked on validating the Blended Teacher Readiness survey, a survey that can aid in identifying the best teachers in schools to implement pilot programs for blended and online learning. The instrument development report⁴⁷ details the process to validate and make available an instrument for use by individuals, schools, districts, and universities. A webinar⁴⁸ also shares the results of a two-year long project, including but not limited to core competencies for blended teaching and resources can be used in professional development for in-service or pre-service teachers.

Michigan Virtual partnered with Dr. Bryan Mann at the University of Alabama to publish a report on national and state level enrollment trends in full-time cyber charters⁴⁹. Specifically, Dr. Mann investigated the extent to which cyber charters are similar to brick and mortar charter schools in terms of race and economic status variables and how enrollments in cyber charters and their measures on these variables differ across state contexts. The findings reiterated that, in general, more white students attend VCSs, and the virtual charter sector has proportionally more economically advantaged students compared to other types of schools. However, despite enrollment distributions typically showing that VCSs are not diverse, patterns vary across states.

During the previous fiscal year, *Michigan Virtual* partnered with the Education Development Center (EDC) to create a research-based survey protocol for assessing supplemental online learning programs in six focus areas including content procurement and monitoring practices, instructor training and communication, mentor training and student support techniques, student selection processes, parent communication, and overall program evaluation. This year, *Michigan Virtual* worked EDC to create a corresponding rubric to accompany the survey allowing for assessing quality practices and processes with respect to program effectiveness on those six dimensions.

Also during the year, *Michigan Virtual* worked with two school districts to conduct supplemental online program reviews using that survey protocol. Representatives from each school district engaged *Michigan Virtual*, completed a survey and participated in a one-to two-hour interview to provide context around their survey responses and explore more deeply the areas of interest to them. Each district received a report that summarized key findings within six focus areas and included over 60 targeted resources that program staff may use in areas identified for improvement. A report synthesizing the findings from all the program reviews was developed and shared with the MDE. For the purpose of growing awareness in Michigan schools about this free service, information was included in the letter distributing the Effectiveness Report.

We plan to further increase awareness and engagement through relationships with partners, presentations at conferences and in schools, and through individual invitations to schools, all taking place at regular intervals throughout the next year.

2(a)(iv) Based on pupil completion and performance data reported to the department or the center for educational performance and information from cyber schools and other virtual course providers operating in this state, analyze the effectiveness of virtual learning delivery models in preparing pupils to be college-and career-ready and publish a report that highlights enrollment totals, completion rates, and the overall impact on pupils. The report shall be submitted to the house and senate appropriations subcommittees on state school aid, the state budget director, the house and senate fiscal agencies, the department, districts, and intermediate districts not later than March 31, 2018.

The fifth annual *Michigan's K-12 Virtual Learning Effectiveness Report*⁵⁰ was published and mailed to required stakeholders, including superintendents and high school and middle school principals. The report is based on pupil completion and performance data reported by schools to MDE or CEPI, and highlights 2016-17 enrollment totals completion rates, and the overall impact of virtual courses on K-12 pupils. The report found that over 101,000 K-12 students took virtual courses in 2016-17, accounting for over 517,000 virtual course enrollments. Local Education Agency (LEAs) provided about 58% of all virtual enrollments with Public School Academy (PSA) schools adding another 41% of the virtual enrollments. Enrollments were heaviest in the high school grades. The pass rate for virtual courses was 55%; however, almost half of the virtual learners passed every virtual course they took. One in four virtual learners, on the other hand, did not pass any of the virtual courses they took. Two-thirds of Michigan school districts reported having virtual enrollments. About 7% of all K-12 students in the state took a virtual course.

In addition to mailing the report, posting it online, and offering to hold face-to-face executive briefings, *Michigan Virtual* used a variety of communication channels to spread the findings. An Effectiveness Report webinar⁵¹ featuring the report was held in May, and a free, self-paced Effectiveness Report course⁵² highlighting key findings was added to *Michigan Virtual's* Professional Learning Portal.

2(a)(v) Before August 31, 2018, provide an extensive professional development program to at least 30,000 educational personnel, including teachers, school administrators, and school board members, that focuses on the effective integration of virtual learning into curricula and instruction. The Michigan Virtual Learning Research Institute is encouraged to work with the MiSTEM advisory council created under section 99s to coordinate professional development of teachers in applicable fields. In addition, the department shall coordinate with the Michigan Virtual Learning Research Institute and external stakeholders for professional development in this state. Not later than December 1, 2018, the Michigan Virtual Learning Research Institute shall submit a report to the house and senate appropriations subcommittees on state school aid, the state budget director, the house and senate fiscal agencies, and the department on the number and percentage of teachers, school administrators, and school board members who have received professional development services from the Michigan Virtual University. The report shall also identify barriers and other opportunities to encourage the adoption of virtual learning in the public education system.

Details of *Michigan Virtual's* professional learning activities are documented earlier in this report under the professional learning section.

2(a)(vi) Identify and share best practices for planning, implementing, and evaluating virtual and blended education delivery models with intermediate districts, districts, and public school academies to accelerate the adoption of innovative education delivery models statewide.

Every year, *Michigan Virtual* maintains, and updates where needed, versions of each resource in its family of guides: *Parent Guide to Online Learning*, *Mentor Fundamentals: A Guide to Mentoring Online Learners*, *Student Guide to Online Learning*, *Teacher Guide to Online Learning*, and *Implementation Guidelines: Section 21f of the State School Aid Act*⁵³. These guides are free, vendor-agnostic resources created to inform the public about the nature of online learning and what should be considered and understood by specific stakeholders. The guides are always available as free downloads on the *MVLRI* and *Michigan Virtual* websites.

Michigan Virtual also collaborated with MASB to produce a *School Board Guide to Online Learning*⁵⁴, covering basic information on policy and practice of online learning pertinent to an audience of K-12 school board members. The guide was published in November 2017 and copies were mailed to MASB members in the spring. Information about the series of guides was sent to districts at the start of the 2018-19 school year.

Michigan Virtual is in the process of publishing the sixth in this series of resources, the *Administrator Guide to Online Learning*, a collaborative project with MASA, Michigan Elementary and Secondary Principals Association (MEMSPA), and Michigan Association of Secondary School Principals (MASSP), in early 2019. The guide covers basic information on policy and the practice of online learning pertinent to K-12 administrators and is intended to inform building administrators about best practices, and, ultimately, reduce the large number of students taking online courses who fail. Currently, the guide is being reviewed by MASA, MEMSPA, MASSP, and MAISA members.

Michigan Virtual had initially planned to update its *Planning Guide to Online and Blended Learning*; however, the decision was made to postpone that revision work and instead work with the VLLA and

Quality Matters to revise and expand the National Standards for Quality Online Courses, Online Teaching, and Online Programs, originally created by The International Association for K-12 Online Learning (iNACOL). Those revised standards will form the foundation of/provide a framework for revising the Planning Guide at a later date.

Michigan Virtual put on its 4th annual Day Camp on July 24, 2018 at Oakland ISD, reaching approximately 250 educators. The keynote highlighted the ways that Michigan teachers can work to transform their classroom into an engaging learning environment. *Michigan Virtual* also put on a two-day SCECH eligible Blended Learning Live! program with districts and ISDs to support school-based or district-wide teams as they develop an implementation plan for virtual and personalized learning models at the systems level. Blended Learning Live! solves a district's needs to push forward with blended, online and personalized learning in their district without knowing where to start. The training provided district leaders with research-based knowledge and supported participants with tools to develop a highly-effective blended learning implementation model in their districts. *Michigan Virtual* offered four Blended Learning Live events this past year in partnership with Heather Staker.

This year *Michigan Virtual* was able to offer nine blended learning events throughout the state. One challenge encountered was securing enough substitute teachers to cover those teachers interested in attending such events. The initial thought for regional events was to introduce educators to blended learning and other services *Michigan Virtual* could provide through face-to-face professional development. The regional events have evolved over the years to the point where these events are now a blended learning experience for educators and instead of a two day face-to-face, has online elements and one day face-to-face.

In an effort to meet the needs of customers, *Michigan Virtual* is moving towards creating a regional event course that is completely online with face-to-face elements through virtual meetings. The thought is that this could be facilitated by current PLS coaches but also could be facilitated by those at an ISD/RESA. Not only would this alleviate the need to teachers to leave their classrooms, it could also reach a wider audience by having others facilitate this course. *Michigan Virtual* can also offer this course in the PLP for districts interested in offering this for District-Provided PD purposes.

Michigan Virtual instructors developed and delivered a series of 36 webinars based on the iNACOL standards for quality online teaching. The Quality Online Teaching Weekly Live Webinar Series took place from September 2017 through June 2018 and was designed to further provide professional development for instructors new to online teaching with *Michigan Virtual*. Webinar topics fell under the categories of Continual Effective Online Instruction, Educational Technologies, Engaging the Online Learner, Instructor Techniques & Engagement, Academic Integrity, Student Accommodations, Assessment & Evaluation, Functionality & Data-Driven Instructional Techniques, Continued Professionalism & Communication, and Instructional Design, and the topics aligned with Strands A - K of the iNACOL National Standards for Quality Online Teaching.

Michigan Virtual also hosted over 20 additional webinars and podcasts focused on research into practice. The promotion for the webinars was done through social media, blogs, and the *MVLR* mailing list. Some of the guests and topics featured include enrollment and achievement in charter schools, student learning pathways in algebra courses, and teacher presence as support in online learning, ISTE (International Society for Technology in Education) standards refresh, MiTECS

(Michigan Integrated Technology Competencies for Students) standards, and the Michigan Effectiveness report.

Michigan Virtual delivered seven conference presentations at the annual MACUL (Michigan Association of Computer Users in Learning) conference in March 2018. Session titles included: Engaging Online Students, Tech Tools for Upping Your Learning Game, Where PLCs Meet PLNs, No More Dead Air: Using Podcasting in the Classroom, Success in the Online Classroom for Students with Special Academic Needs, Awesome Online Teaching, and The Force Awakens: Student-Centered and Personalized Learning Comes to Your Classroom. The MACUL conference has approximately 5,000 attendees and is the state's premier educational technology professional learning conference.

Michigan Virtual also made over 15 presentations covering a broad range of topics at Michigan conferences. Presentations have been made at a variety of annual conferences, for example at the Michigan World Language Association, MASA, and the Michigan School Counselors Association (MSCA). Conference presentations have also been given at ISD professional development days (St. Clair RESA and Traverse Bay Area ISD), as well as at district-level professional development conferences (Godfrey-Lee Public Schools).

(B) Provide leadership for this state's system of virtual learning education by doing the following activities:

2(b)(i) Develop and report policy recommendations to the governor and the legislature that accelerate the expansion of effective virtual learning in this state's schools.

Michigan Virtual's Executive Director of Professional Learning Services served on a workgroup that was charged with preparing recommendations for the State Superintendent regarding the use of Title IIA funds, including priorities for the use of Title IIA Statewide Activities funds and criteria to be considered for prioritizing distribution of Title IIA funds to schools/districts. A total of 26 people participated in the workgroup, representing 23 organizations or employers. The group drafted an initial summary of recommendations in February 2018.

Michigan Virtual also made three policy recommendations to the state budget office, MDE, and the chairs of the house and senate appropriation subcommittees on school aid during the 2018-19 budget planning cycle. These three recommendations pertained to possible language additions to Section 21f of the State School Aid Act. The three recommendations included possible changes that would:

- Add similar notification language used for the annual notice of the personal curriculum in Section 380.1278b of the Revised School Code to raise awareness of virtual learning options.
- Add language that allowed the Department to specify the form and manner in which parental consent is obtained.

- Add a requirement that school personnel serving as a mentor of record would be required to complete a Department-approved training of one hour or less that covers responsibilities and recommended practices for mentors.

Michigan Virtual also published a report on evaluating online teacher effectiveness⁵⁵. The report shares a modified Danielson framework for evaluating online teachers as well as identifies some challenges of the current state system of reporting teacher effectiveness.

2(b)(ii) Provide a clearinghouse for research reports, academic studies, evaluations, and other information related to virtual learning.

Michigan Virtual continued to provide a clearinghouse of research resources. As of September 2018, the Clearinghouse website⁵⁶ has been up and running 99.95% of the time. The quarterly newsletters were shared out, highlighting five new resources per quarter. *Michigan Virtual* added 100 new resources during the year. The clearinghouse now houses citations for over 900 resources.

2(b)(iii) Promote and distribute the most current instructional design standards and guidelines for virtual teaching.

Research on instructional design guidelines and standards is key to the meaningful design of online and blended learning environments for K-12 students. Because of this, *Michigan Virtual* added relevant articles and reports in the Clearinghouse and continued to tag with keywords including “instructional design” and “standards” to highlight continued work being done in the field regarding these two topics. Approximately 25 of the 100 articles and reports added to the Clearinghouse this year help to inform instructional design in online courses. Included in these resources are the following:

- Nguyen, G. N., & Bower, M. (2018). Novice teacher technology-enhanced learning design practices: The case of the silent pedagogy. *British Journal of Educational Technology*, 49(6), 1027-1043.
- Laurillard, D., Kennedy, E., Charlton, P., Wild, J., & Dimakopoulos, D. (2018). Using technology to develop teachers as designers of TEL: Evaluating the learning designer. *British Journal of Educational Technology*, 49(6), 1044-1058.
- Kwon, J. B. (2018). Learning trajectories in online mathematics courses. Lansing, MI: Michigan Virtual University.⁵⁷

Michigan Virtual continued to partner with Quality Matters (QM) to offer employees of Michigan ISDs the opportunity to receive professional development around K-12 online course quality assurance processes. This opportunity provided participating ISDs with tools to implement a quality assurance process, including access to K-12 online course review rubrics and workshops designed for teachers, curriculum directors, instructional designers, and virtual program administrators that focus on how to interpret and apply K-12 online course standards. ISD members could request more information about this opportunity through the *Michigan Virtual* website. *Michigan Virtual* also worked with Quality Matters and the Virtual Learning Leadership Alliance to update online course, teaching, and program standards, which will be released in 2019.

Michigan Virtual requested the expertise of Dr. Mary Rice, an assistant professor at the University of New Mexico, to report on instructional design efforts focused on accommodating students with disabilities⁵⁸. In this report, published in February 2018, Dr. Rice emphasizes that understanding about course design for diverse learners, including those with disabilities, is lacking. The research summary includes barriers to accessible course design, and strategies for addressing the barriers were identified.

2(b)(iv) In collaboration with the department and interested colleges and universities in this state, support implementation and improvements related to effective virtual learning instruction.

Michigan Virtual continued a multi-year project with Michigan colleges and universities to support virtual learning instruction through a study of the role of online teaching training in teacher preparation programs in the state. The work included implementing surveys and gathering syllabus information from college and university teacher preparation programs to understand how much, if at all, pre-service teachers are being exposed to and instructed on online teaching best practices. The full research report⁵⁹ was published to the *MVLRI* website on September 15, 2018. The report details how online K-12 teaching is represented in college level teacher preparation programs in Michigan through a case study methodology grounded in the TPACK framework. Teacher preparation program websites and syllabi were the primary data sources; overall online teaching specifically was not prevalent among required course topics.

This year, for the first time, *Michigan Virtual* distributed information to Michigan teacher preparation programs on how they can use *Michigan Virtual* modules in their college courses to help teachers learn how to teach in online and blended environments. Talks have been underway with several teacher preparation colleges to distribute these modules. *Michigan Virtual* has created a plan to manage dissemination and release updates for modules loaned out to teacher education institutions.

During the 2016-17 year, Dr. Charles Graham from Brigham Young University began work with *Michigan Virtual* to create a scientifically-validated, openly-available blended teaching readiness instrument, the Online Teacher Readiness Tool. The partnership with Dr. Graham continued in 2017-18 as he worked to validate the survey. This research completed a two-year research process to create and empirically validate an instrument to measure K-12 Blended Teaching Readiness and produce a research report for *MVLRI*. The research report⁶⁰ details the process as well as the successful efforts to validate and make available an instrument for use by individuals, schools, districts, and universities. Additionally, the report documents the process of creating a second, shorter instrument focusing on four of the most essential pedagogical competencies for blended teaching.

2(b)(v) Pursue public/private partnerships that include districts to study and implement competency based technology-rich virtual learning models

Michigan Virtual was part of the integrated learning systems work being conducted in Rhode Island, and as part of this work, Michigan published a collection of blog posts and podcasts documenting the learnings from the project. There were a total of eight podcasts and 21 blog posts. These can be found on the *MVLRI* blog⁶¹ and podcasts page⁶².

Michigan Virtual continued to partner with LEAs as well as ISD and RESAs, providing consulting, professional development and coaching to aid the district in the implementation of online and blended learning and personalized learning models for students. Some of this was customized to meet the needs of the individual schools, while other implementation plans were based on Heather Staker's professional learning program, Blended Learning Live! Haslett is implementing their Blended Learning Live! blended learning plan for the district, and Williamston is in the process of implementing their Blended Learning Live plan across multiple buildings within the district. They have also implemented blended learning coaches within every building. While Hamilton has not yet signed up for Blended Learning Live!, they currently have a number of former cohort participants taking part in a yearlong blended learning program offered through *Michigan Virtual*.

Michigan Virtual also reached out to districts to create collaborative partnerships that stress new virtual learning models. Referred to as our collaborative model, this new delivery model involves *Michigan Virtual* teaching district teachers to teach the *Michigan Virtual* course content. The first pilot occurred with St. Clair RESA and Port Huron Area School District last year. New districts, including Lake Shore Public Schools and Gull Lake Community Schools, have been added for the current year.

Michigan Virtual facilitated the creation and hosting of four professional development opportunities for Michigan educators utilizing competency-based learning to deliver microcredentials in the PLP. These included three courses developed with the Michigan Elementary and Middle School Principals Association: *Leadership & Literacy*, focused on building systems around literacy instruction, *Developing Your Personal Mission*, helping learners identify their guiding principles and values, and *School Vision for Learning*, around developing a common understanding of quality teaching and learning in a school setting. Lastly, the Michigan Association of School Administrators and *Michigan Virtual* launched a microcredential course covering key elements of communications practice in education - including proactive, operational, and crisis communications - as well as necessary concepts of communications law.

2(b)(vi) Create a statewide network of school-based mentors serving as liaisons between pupils, virtual instructors, parents, and school staff, as provided by the department or the center, and provide mentors with research-based training and technical assistance designed to help more pupils be successful virtual learners.

Michigan Virtual continues to advocate for strong mentors in online learning, a key leverage point that research has shown to be a critical factor in the success of online students. *Michigan Virtual* provides both face-to-face and online opportunities for those serving in this professional role to connect with peers and refine their skills. A statewide professional learning community for mentors, hosted by *Michigan Virtual*, grew to 248 members in 2018. A 12-SCECH course on online mentoring is also offered through the Professional Learning Portal. *Michigan Virtual* also facilitated nine face-to-face trainings across the state, bringing mentors together to identify problems of practice and focus on building relationships with online learners that are conducive to success. Some of the trainings, called Site Institutes, were hosted and facilitated by those identified as regional mentor leaders; these mentors lead exemplary programs and share resources and insights with other mentors through face-to-face trainings and the Online Mentor Community. Additionally, staff have shared resources and information with administrators and mentors at a panel presentation at the

Michigan School Counselors Association conference in November and at the Michigan Elementary and Middle School Principals Association's annual conference in December. Lastly, four case studies written by mentors of online students about their experiences as mentors and their programs were published as a blog series⁶³.

Dr. Jered Borup, an *MVLRI* fellow from George Mason University, completed the third phase of a three-year, three-phase research project examining student supports or the ways that teachers, mentors, parents, and peers can help students learn and engage in online courses. The final phase examined online learner perceptions of student support. *MVLRI* staff conducted eight focus groups at three Michigan high schools with a high online course completion rate. The research resulted in two reports⁶⁴. Dr. Borup and co-authors presented their findings through a webinar as well⁶⁵. The research-based best practices gleaned from this work will also be used to update our mentor guide to online learning, a seminal training guide for school personnel across Michigan and in other states who serve the role of a mentor.

2(b)(vii) Convene focus groups and conduct annual surveys of teachers, administrators, pupils, parents, and others to identify barriers and opportunities related to virtual learning.

Public Sector Consultants, on behalf of *Michigan Virtual*, conducted surveys⁶⁶ with 800 Michigan adults and 400 college students (88% from Michigan) as part of ongoing public opinion research designed to better understand the opinions, preferences, and beliefs of Michigan residents about online learning opportunities for high school students in the state. The adult survey was a follow-up to similar polls conducted by PSC in 2014, 2015, and 2016, and was designed to include common questions for comparison. The college student survey, new for the 2017 year, included questions about their specific experiences with online learning in high school and college. Taken together, these surveys allowed for continued monitoring of opinion trends about online learning while providing important context about the experiences of current college students.

As mentioned previously, research lead by *MVLRI* fellow, Dr. Jered Borup of George Mason University, examining student supports completed its third phase in 2017-18: student/peer support. As with the first two studies, data collection began with a student survey which was followed by a series of student focus groups to gather perceptions from students about their experience in online courses and their relationships with their online learning mentor and online teachers. Eight focus groups that included a total of 51 students were held at three schools whose mentors participated in the first study; the schools were located on the west side of the state, in the southwest corner, and in the Lansing area. One school held four focus groups involving a total of 25 students.

Michigan Virtual staff conducted a focus group at each of three high schools, interviewing a total of 23 students about why they chose to take courses online, what they liked and disliked about learning online, and what they felt could be improved about their experience taking *Michigan Virtual* courses.

2(b)(viii) Produce an annual consumer awareness report for schools and parents about effective virtual education providers and education delivery models, performance data, cost structures, and research trends.

Michigan Virtual continued to maintain and update its consumer awareness report⁶⁷. The report, which is listed as an important link on the *Micourses* website, contains sections Background, Providers and Delivery Models, Performance Data, Cost Structures, Research Trends, Conclusions and Resources. The purpose of this report is to make consumers aware of the status of online learning in Michigan and is specifically designed to inform parents, school personnel, and school board members of the nature of online learning options, their effectiveness for Michigan students, the cost of these programs and current trends.

2(b)(ix) Research and establish an Internet-based platform that educators can use to create student centric learning tools and resources and facilitate a user network that assists educators in using the platform. As part of this initiative, the Michigan Virtual University shall work collaboratively with districts and intermediate districts to establish a plan to make available virtual resources that align to Michigan's K-12 curriculum standards for use by students, educators, and parents.

As of September, 2018, *Michigan Virtual's* Learning Object Repository (LOR) has been placed in an archived state to allow for hosting of content and prevent new content from being added during the transition to a state platform. Over 900 *Michigan Virtual* resources have been identified that are being transferred to the #GoOpen system⁶⁸. Resources associated with Phenomenal Science and the GRACE projects were part of the first batch to be transferred and are available to the public. In collaboration with ISKME (Institute for the Study of Knowledge Management in Education), the creators of OER (Open Educational Resources) Commons and the #GoOpen Michigan repository, work is currently being done to further align taxonomies and metadata between the LOR and the #GoOpen repository as well as transfer hosted files to the ISKME Amazon storage facility. All the identified LOR resources were audited for valid links and proper content alignment which eliminated a portion of the resources as their linked content was no longer available. Over half of the valid resources have been transferred and published and are available for public view and consumption. Work is in progress to transfer the rest of the resources that needed extra care to the system and guide users to the new website for all their OER needs.

Michigan Virtual launched its *Makerspace*⁶⁹ platform in 2018; the platform is a free, open-source content creation tool that serves as a training sandbox for the creation of H5P elements for teachers' classrooms. Teachers can experiment and play as they create a variety of interactive learning objects, such as multiple choice questions, match and memory games, interactive videos, flashcards, personality quizzes and other assets. To support this platform, *Michigan Virtual* created and hosts on the Professional Learning Portal a skills course for educators to help familiarize them with the H5P content creation tool. There is also a second course that is focused more on implementation and helping teachers integrate the H5P objects in their instruction. The platform and courses were launched in September 2018 and have garnered 10 enrollments, with more anticipated in the upcoming fiscal year through additional marketing and awareness efforts.

2(b)(x) Create and maintain a public statewide catalog of virtual learning courses being offered by all public schools and community colleges in this state. The Michigan Virtual Learning Research Institute shall identify and develop a list of nationally recognized best practices for virtual learning and use this list to support reviews of virtual course vendors, courses, and instructional practices. The Michigan Virtual Learning Research Institute shall also provide a mechanism for intermediate districts to use the identified best practices to review content offered by constituent districts. The Michigan Virtual Learning Research Institute shall review the virtual course offerings of the Michigan Virtual University, and make the results from these reviews available to the public as part of the statewide catalog. The Michigan Virtual Learning Research Institute shall ensure that the statewide catalog is made available to the public on the Michigan Virtual University website and shall allow the ability to link it to each district's website as provided for in section 21f. The statewide catalog shall also contain all of the following:

(A) The number of enrollments in each virtual course in the immediately preceding school year.

(B) The number of enrollments that earned 60% or more of the total course points for each virtual course in the immediately preceding school year.

(C) The completion rate for each virtual course.

The catalog at Micourses.org is continually maintained by *Michigan Virtual* and allows districts and third-party providers to input course syllabi, course offerings, course reviews, and performance data. In September of each year, *Michigan Virtual* requests completion data from districts offering courses through the statewide catalog and offers to batch upload large data files for those districts. Courses input into the catalog are required to undergo an online course review. To facilitate and support this process, *Michigan Virtual* maintains the *Guidelines and Model Review Process for Online Courses*⁷⁰.

For districts and ISD wanting additional supports in completing the online course reviews, *Michigan Virtual* offered free training opportunities on the QM course review process to interested ISDs. This opportunity provides participating ISDs with tools to implement a quality assurance process, including access to K-12 online course review rubrics and workshops designed for teachers, curriculum directors, instructional designers, and virtual program administrators that focus on how to interpret and apply K-12 online course standards.

Michigan Virtual sent 15 semester-length student courses through a third-party quality review process. Quality Matters, a nationally-recognized and respected organization, certified each of the courses as passing their standards for quality online courses. This independent review of quality, is used to share ratings on *Michigan Virtual* courses in the catalog.

2(b)(xi) Develop prototype and pilot registration, payment services, and transcript functionality to the statewide catalog and train key stakeholders on how to use new features.

Michigan Virtual provides personalized support to users of the statewide course catalog around these new features. This includes creating new district catalog administrators, creating new vendors, uploading completion data, providing database support for reporting and for managing course offerings. Support materials include the use of knowledge base articles consisting of both visual and

written instructions. Additional trainings are provided through requests. The Micourses help documentation has also been updated to include step-by-step instructions for districts on how to allow and accept enrollments through the statewide catalog, how to manage payment options, and how to communicate student performance through the system.

2(b)(xii) Collaborate with key stakeholders to examine district level accountability and teacher effectiveness issues related to online learning under section 21f and make findings and recommendations publicly available.

In order to comply with state guidelines for teacher certification, *Michigan Virtual* implemented a new teacher effectiveness rating system in the 2017-18 school year. *Michigan Virtual* developed a modified version of the Charlotte Danielson tool to more closely align with the needs of the virtual environment. Based on guidance from a Danielson trainer as well as feedback from *Michigan Virtual* full-time instructors, administration implemented the tool through the use of the Frontline Evaluation System. This system functions as a conduit to share feedback with remote instructors and allows for conversations to take place rather than a one-sided evaluation process. A report of the development and implementation process⁷¹ is available on the *MVLRI* website.

Michigan Virtual also began working with CEPI in the fall of 2017 to understand the data that districts were expected to supply on third-party instructors as part of their Registry of Educational Personnel. Based on these requirements, *Michigan Virtual* was able to create a way for districts to download the necessary data on *Michigan Virtual* instructors who were serving a district. The process of each district reporting its virtual instructors to the state is a taxing one for school districts. Throughout the process *Michigan Virtual* identified potential bottlenecks in the REP reporting process and recognized that awareness of the reporting process is limited. *Michigan Virtual* provided CEPI feedback on possible strategies for making this process less time-consuming for districts and the two groups are frequently collaborating to refine and improve the process.

2(b)(xiii) - Provide a report on the activities of the Michigan Virtual Learning Research Institute.

The “Research Institute” section of this report provides the required reporting for *MVLRI*.

Appendix A – Michigan Virtual Student Enrollment Data

Figure 1. Districts Served by Michigan Virtual with Student Online Courses in 2017-18

LEA Districts:

Adrian Public Schools	Breckenridge Community S.	Davison Community S.
Airport Community Schools	Breitung Township S.D.	Dearborn City S.D.
Akron-Fairgrove Schools	Brighton Area Schools	Dearborn Heights S.D. #7
Alanson Public Schools	Brimley Area Schools	Deckerville Community S.D.
Alba Public Schools	Brown City Community S.	DeWitt Public Schools
Alcona Community Schools	Buchanan Community S.	Dexter Community S.D.
Allegan Public Schools	Buckley Community S.	Dowagiac Union S.D.
Allen Park Public Schools	Bullock Creek S.D.	Dryden Community Schools
Allendale Public Schools	Byron Area Schools	Durand Area Schools
Alma Public Schools	Byron Center Public Schools	East China School District
Almont Community Schools	Cadillac Area P.S.	East Grand Rapids P.S.
Alpena Public Schools	Caledonia Community S.	East Jordan Public Schools
Anchor Bay School District	Caro Community Schools	East Lansing School District
Ann Arbor Public Schools	Carson City-Crystal Area S.	Eaton Rapids P.S.
Armada Area Schools	Caseville Public Schools	Edwardsburg P.S.
Avondale School District	Cass City Public Schools	Engadine Consolidated S.
Bad Axe Public Schools	Cassopolis Public Schools	Escanaba Area P.S.
Baldwin Community S.	Cedar Springs P.S.	Essexville-Hampton P.S.
Bath Community Schools	Central Montcalm P.S.	Evart Public Schools
Battle Creek Public Schools	Centreville Public Schools	Ewen-Trout Creek C.S.D
Bay City School District	Charlevoix Public Schools	Fairview Area S.D.
Beal City Public Schools	Charlotte Public Schools	Farmington Public S.D.
Bear Lake Schools	Cheboygan Area Schools	Fennville Public Schools
Beaver Island Community S.	Chelsea School District	Fenton Area Public Schools
Beaverton Rural Schools	Chesaning Union Schools	Ferndale Public Schools
Bedford Public Schools	Chippewa Hills S.D.	Forest Hills Public Schools
Belding Area School District	Clarkston Community S.D.	Forest Park School District
Bellaire Public Schools	Clinton Community Schools	Fowler Public Schools
Bellevue Community S.	Clintondale Community S.	Fowlerville Community S.
Bentley Community S.D.	Clio Area School District	Frankenmuth S.D.
Benzie County Central S.	Coldwater Community S.	Frankfort-Elberta Area S.
Berrien Springs P.S.	Coloma Community S.	Fraser Public Schools
Big Bay De Noc S.D.	Columbia School District	Freeland Community S.D.
Birch Run Area Schools	Comstock Park P.S.	Fremont Public S.D.
Birmingham Public Schools	Comstock Public Schools	Fruitport Community S.
Bloomfield Hills Schools	Concord Community S.	Fulton Schools
Bloomington Public S.D.	Constantine Public S.D.	Galesburg-Augusta C.S.
Boyer City Public Schools	Coopersville Area P.S.D.	Gaylord Community S.
Brandon School District in the Counties of Oakland and Lapeer	Corunna Public Schools	Gibraltar School District
	Crestwood School District	Gladwin Community S.
	Dansville Schools	Glen Lake Community S.

Gobles Public S.D.
 Grand Blanc Community S.
 Grand Haven Area P.S.
 Grand Ledge Public Schools
 Grandville Public Schools
 Grant Public School District
 Grass Lake Community S.
 Greenville Public Schools
 Grosse Ile Township S.
 Grosse Pointe P.S.
 Gull Lake Community S.
 Hale Area Schools
 Hamilton Community S.
 Hancock Public Schools
 Harbor Springs S.D.
 Harper Creek Community S.
 Harper Woods, The School
 District of the City of
 Harrison Community S.
 Hart Public School District
 Hartford Public Schools
 Hartland Consolidated S.
 Haslett Public Schools
 Hastings Area S.D.
 Hemlock Public S.D.
 Hillman Community S.
 Holland City School District
 Holly Area School District
 Holt Public Schools
 Homer Community S.D.
 Hopkins Public Schools
 Houghton Lake C.S.
 Houghton-Portage T.S.D.
 Howell Public Schools
 Hudson Area Schools
 Huron School District
 Huron Valley Schools
 Imlay City Community S.
 Ionia Public Schools
 Iron Mountain P.S.
 Ishpeming P.S.D. No. 1
 Ithaca Public Schools
 Jackson Public Schools
 Jenison Public Schools
 Johannesburg-Lewiston S.

Jonesville Community S.
 Kalamazoo Public Schools
 Kalkaska Public Schools
 Kearsley Community S.D.
 Kelloggsville Public Schools
 Kenowa Hills P.S.
 Kent City Community S.
 Kentwood Public Schools
 Kingsley Area Schools
 Kingston Community S.D.
 Laingsburg Community S.
 Lake Linden-Hubbell S.D.
 Lake Orion Community S.
 Lake Shore P.S. (Macomb)
 Lakeshore S.D. (Berrien)
 Lakeview P.S. (Macomb)
 Lakeview S.D. (Calhoun)
 Lakeville Community S.D.
 Lakewood Public Schools
 L'Anse Area Schools
 L'Anse Creuse P.S.
 Lawrence Public Schools
 Lawton Community S.D.
 Leland Public S.D.
 Leslie Public Schools
 Lincoln Consolidated S.D.
 Linden Community Schools
 Livonia Public Schools S.D.
 Ludington Area S.D.
 Mackinac Island P.S.
 Mackinaw City P.S.
 Madison S.D. (Lenawee)
 Manchester Community S.
 Manistee Area P.S.
 Manistique Area Schools
 Manton Consolidated S.
 Maple Valley Schools
 Marlette Community S.
 Marquette Area P.S.
 Marshall Public Schools
 Martin Public Schools
 Marysville Public Schools
 Mason P.S. (Ingham)
 Mattawan Consolidated S.
 Mayville Community S.D.

Melvindale-North Allen Park
 Schools
 Memphis Community S.
 Mendon Community S.D.
 Menominee Area P.S.
 Merrill Community Schools
 Michigan Center S.D.
 Midland Public Schools
 Milan Area Schools
 Millington Community S.
 Mona Shores Public S.D.
 Monroe Public Schools
 Montabella Community S.
 Montague Area P.S.
 Montrose Community S.
 Negaunee Public Schools
 New Lothrop Area P.S.
 Newaygo Public S.D.
 Niles Community Schools
 North Branch Area Schools
 North Central Area Schools
 North Dickinson County S.
 North Huron School District
 North Muskegon P.S.
 Northport Public S.D.
 Northview Public Schools
 Northville Public Schools
 Norway-Vulcan Area S.
 Novi Community S.D.
 Oakridge Public Schools
 Okemos Public Schools
 Olivet Community Schools
 Onkama Consolidated S.
 Orchard View Schools
 Oscoda Area Schools
 Otsego Public Schools
 Ovid-Elsie Area Schools
 Owosso Public Schools
 Parchment School District
 Paw Paw Public S.D.
 Peck Community S.D.
 Pennfield Schools
 Perry Public Schools
 Pewamo-Westphalia C.S.
 Pickford Public Schools

Pinckney Community S.
 Pinconning Area Schools
 Plainwell Community S.
 Plymouth-Canton C.S.
 Port Huron Area S.D.
 Portage Public Schools
 Portland Public Schools
 Potterville Public Schools
 Public Schools of Calumet,
 Laurium & Keweenaw
 Public Schools of Petoskey
 Quincy Community Schools
 Rapid River Public Schools
 Ravenna Public Schools
 Reading Community S.
 Redford Union Schools,
 District No. 1
 Reed City Area P.S.
 Richmond Community S.
 River Valley School District
 Rochester Community S.D.
 Rockford Public Schools
 Romeo Community Schools
 Roscommon Area P.S.
 Royal Oak Schools
 Rudyard Area Schools
 Saginaw Township C.S.
 Saginaw, S.D. of the City of
 Saline Area Schools
 Sand Creek C.S.
 Sandusky Community S.D.
 Saranac Community S.
 Saugatuck Public Schools

PSA Districts

Achieve Charter Academy
 Arbor Preparatory H.S.
 Black River Public School
 Blue Water Middle College
 Byron Center Charter School
 Canton Charter Academy
 Canton Preparatory H.S.
 Chandler Park Academy
 Charlevoix Montessori
 Academy for the Arts
 Charlton Heston Academy

Sault Ste. Marie Area S.
 Schoolcraft Community S.
 Shepherd Public Schools
 South Haven Public Schools
 South Lyon Community S.
 South Redford S.D.
 Southfield Public S.D.
 Southgate Community S.D.
 Sparta Area Schools
 Spring Lake Public Schools
 Springport Public Schools
 St. Ignace Area Schools
 St. Johns Public Schools
 St. Joseph Public Schools
 Standish-Sterling C.S.
 Stephenson Area P.S.
 Stockbridge C.S.
 Sturgis Public Schools
 Summerfield Schools
 Superior Central S.D.
 Suttons Bay Public Schools
 Swan Valley School District
 Swartz Creek C.S.
 Tawas Area Schools
 Tecumseh Public Schools
 Thornapple Kellogg S.D.
 Three Rivers C.S.
 Traverse City Area P.S.
 Trenton Public Schools
 Tri County Area Schools
 Ubly Community Schools
 Union City C.S.
 Unionville-Sebewaing A.S.D.

Charyl Stockwell Academy
 Concord Academy - Boyne
 Cross Creek Charter A.
 DeTour Arts and Tech. A.
 Grand River Prep. H.S.
 Kensington Woods Schools
 LifeTech Academy
 Merritt Academy
 Midland Academy of
 Advanced and Creative
 Studies

Utica Community Schools
 Van Buren Public Schools
 Vanderbilt Area Schools
 Vandercook Lake P.S.
 Vicksburg Community S.
 Walkerville Public Schools
 Walled Lake Cons. S.
 Warren Woods P.S.
 Waterford School District
 Watervliet School District
 Waverly Community S.
 Wayne-Westland C.S.D.
 Webberville Community S.
 West Branch-Rose City A.S.
 West Iron County P.S.
 West Ottawa Public S.D.
 Western School District
 Whitefish Township S.
 Whiteford Agricultural
 School District of the
 Counties of Lenawee
 and Monroe
 Whitehall District Schools
 Whitmore Lake Public S.D.
 Whittemore-Prescott A.S.
 Williamston Community S.
 Wolverine Community S.D.
 Woodhaven-Brownstown
 School District
 Wyandotte, School District
 of the City of
 Yale Public Schools
 Zeeland Public Schools

Muskegon Covenant A.
 New School High
 NexTech High School
 NexTech High School of
 Metro Detroit
 Ojibwe Charter School
 Pansophia Academy
 Taylor Preparatory H.S.
 Washtenaw Technical M.C.
 Wellspring Preparatory H.S.
 West Michigan Aviation A.

Nonpublic Schools

Allendale Christian School
Austin Catholic High School
Calhoun Christian School
Calvary Baptist Academy
Cardinal Mooney Catholic
School
Detroit Cristo Rey High
School
Divine Child High School
Everest Academy
Farber Hebrew Day School -
Yeshivat Akiva
Fr. Gabriel Richard High
School
The Jean and Samuel
Frankel Jewish
Academy
Gabriel Richard Catholic
High School

Grand Rapids Christian High
School
Holland Christian High
School
Interlochen Arts Academy
Kalamazoo Christian High
School
Ladywood High School--
Detroit
Lansing Catholic Central
High School
Lansing Christian School
Muskegon Catholic Central
Notre Dame Preparatory
School
Nouvel Catholic Central
High School
Oakland Christian -
Clarkston

Plymouth Christian
Academy
Potters House High School
Regina High School
Sacred Heart Academy
Shrine Catholic High School
& Academy
South Christian High School
Southfield Christian School
St. Catherine of Siena
Academy
St. Gerard School
St. Mary Catholic School
St. Mary School
St. Thomas the Apostle
School
Unity Christian High School
Valley Lutheran High School
Washtenaw Christian
Academy

Figure 2. *Michigan Virtual* ISD, LEA, PSA District and Nonpublic Schools with Student Enrollments for the 2017-18 School Year



Figure 3. 2017-18 Michigan Virtual Student Courses Offered with Performance Data

NCES Subject Area	Course	Enroll Count	Pass Rate
Agriculture, Food, and Natural Resources	Veterinary Science	250	91%
Business and Marketing	Accounting (A)	177	82%
Business and Marketing	Accounting (B)	60	90%
Business and Marketing	Business Ethics	279	87%
Business and Marketing	Entrepreneurship	306	80%
Business and Marketing	Hospitality and Tourism	126	96%
Business and Marketing	Sports and Entertainment	251	91%
Communications and Audio/Visual Tech.	Journalism	100	77%
Computer and Information Sciences	AP Computer Science A (A)	154	86%
Computer and Information Sciences	AP Computer Science A (B)	118	88%
Computer and Information Sciences	Digital Literacy	56	23%
Computer and Information Sciences	Foundations of Programming	150	92%
Computer and Information Sciences	Game Design	156	78%
Computer and Information Sciences	Java Programming	142	76%
Computer and Information Sciences	Microsoft Office 2013	52	69%
Computer and Information Sciences	Social Media	147	82%
Computer and Information Sciences	Visual Basic.Net Programming	122	83%
Computer and Information Sciences	Web Design Basics HTML	119	84%
Engineering and Technology	Bioethics	118	91%
English Language and Literature	American Literature (A)	254	78%
English Language and Literature	American Literature (B)	237	81%
English Language and Literature	AP English Language & Composition (A)	39	79%
English Language and Literature	AP English Language & Composition (B)	32	78%
English Language and Literature	AP English Literature & Composition (A)	62	95%
English Language and Literature	AP English Literature & Composition (B)	59	95%
English Language and Literature	British Literature (A)	182	80%
English Language and Literature	British Literature (B)	173	84%
English Language and Literature	Composition - Advanced	32	88%
English Language and Literature	Composition - Beginning	91	81%
English Language and Literature	English 6 (A)	<10	60%
English Language and Literature	English 6 (B)	<10	100%
English Language and Literature	English 7 (A)	<10	50%
English Language and Literature	English 7 (B)	<10	89%
English Language and Literature	English 8 (A)	12	58%
English Language and Literature	English 8 (B)	13	62%
English Language and Literature	English 9 (A)	108	62%
English Language and Literature	English 9 (B)	108	67%
English Language and Literature	English 10 (A)	127	52%
English Language and Literature	English 10 (B)	153	64%
English Language and Literature	Mythology and Folklore	247	90%
English Language and Literature	Reading	67	84%

NCES Subject Area	Course	Enroll Count	Pass Rate
English Language and Literature	World Literature	70	93%
Fine and Performing Arts	American Film Survey	253	81%
Fine and Performing Arts	AP Art History (A)	29	79%
Fine and Performing Arts	AP Art History (B)	16	94%
Fine and Performing Arts	Art Appreciation	126	83%
Fine and Performing Arts	Digital Photography	193	89%
Fine and Performing Arts	Directors of the Golden Age	66	92%
Fine and Performing Arts	Music Appreciation	176	85%
Health Care Sciences	Medical Terminology	666	90%
Life and Physical Sciences	Anatomy & Physiology (A)	217	87%
Life and Physical Sciences	Anatomy & Physiology (B)	104	95%
Life and Physical Sciences	AP Biology (A)	64	97%
Life and Physical Sciences	AP Biology (B)	62	95%
Life and Physical Sciences	AP Chemistry (A)	22	59%
Life and Physical Sciences	AP Chemistry (B)	11	91%
Life and Physical Sciences	AP Environmental Science (A)	33	94%
Life and Physical Sciences	AP Environmental Science (B)	28	96%
Life and Physical Sciences	AP Physics 1 (A)	54	78%
Life and Physical Sciences	AP Physics 1 (B)	48	88%
Life and Physical Sciences	AP Physics 2 (A)	18	83%
Life and Physical Sciences	AP Physics C - Mechanics (A)	51	84%
Life and Physical Sciences	AP Physics C - Mechanics (B)	41	93%
Life and Physical Sciences	Astronomy	304	84%
Life and Physical Sciences	Biology (A)	143	71%
Life and Physical Sciences	Biology (B)	158	75%
Life and Physical Sciences	Chemistry (A)	131	61%
Life and Physical Sciences	Chemistry (B)	146	56%
Life and Physical Sciences	Earth Science (A)	137	74%
Life and Physical Sciences	Earth Science (B)	79	80%
Life and Physical Sciences	Environmental Science (A)	77	94%
Life and Physical Sciences	Environmental Science (B)	23	87%
Life and Physical Sciences	Oceanography (A)	240	89%
Life and Physical Sciences	Oceanography (B)	65	92%
Life and Physical Sciences	Physical Science (A)	53	68%
Life and Physical Sciences	Physical Science (B)	43	88%
Life and Physical Sciences	Physics (A)	134	77%
Life and Physical Sciences	Physics (B)	122	87%
Life and Physical Sciences	Science 6 (A)	<10	50%
Life and Physical Sciences	Science 6 (B)	<10	100%
Life and Physical Sciences	Science 7 (A)	<10	50%
Life and Physical Sciences	Science 7 (B)	11	64%
Life and Physical Sciences	Science 8 (A)	11	64%

NCES Subject Area	Course	Enroll Count	Pass Rate
Life and Physical Sciences	Science 8 (B)	11	73%
Life and Physical Sciences	Science Tracks	<10	NA
Mathematics	Algebra 1 (A)	156	66%
Mathematics	Algebra 1 (B)	220	65%
Mathematics	Algebra 1 Testing Out	<10	NA
Mathematics	Algebra 2 (A)	216	70%
Mathematics	Algebra 2 (B)	239	72%
Mathematics	AP Calculus AB (A)	42	95%
Mathematics	AP Calculus AB (B)	34	97%
Mathematics	AP Calculus BC (A)	50	98%
Mathematics	AP Calculus BC (B)	46	87%
Mathematics	AP Statistics (A)	90	94%
Mathematics	AP Statistics (B)	65	92%
Mathematics	Calculus (A)	55	85%
Mathematics	Calculus (B)	33	88%
Mathematics	Geometry (A)	234	74%
Mathematics	Geometry (B)	253	75%
Mathematics	Math Tracks	<10	NA
Mathematics	Mathematics 6 (A)	<10	67%
Mathematics	Mathematics 6 (B)	<10	67%
Mathematics	Mathematics 7 (A)	<10	71%
Mathematics	Mathematics 7 (B)	<10	83%
Mathematics	Mathematics 8 (A)	<10	43%
Mathematics	Mathematics 8 (B)	<10	57%
Mathematics	Mathematics in the Workplace	106	92%
Mathematics	Mathematics of Baseball	178	88%
Mathematics	Personal Finance (A)	377	90%
Mathematics	Pre-Algebra (A)	22	86%
Mathematics	Pre-Algebra (B)	18	72%
Mathematics	Pre-Calculus (A)	168	83%
Mathematics	Pre-Calculus (B)	145	88%
Mathematics	Probability and Statistics (A)	149	81%
Mathematics	Probability and Statistics (B)	43	95%
Mathematics	Supplemental Math	518	NA
Mathematics	Trigonometry	66	89%
Miscellaneous	Career Planning	412	87%
Miscellaneous	Careers - Find Your Future	319	83%
Miscellaneous	Employability Skills	319	92%
Miscellaneous	Leadership Skills Development	73	74%
Miscellaneous	Leadership Skills Development (A)	44	61%
Miscellaneous	Leadership Skills Development (B)	<10	75%
Miscellaneous	PBIS	25	68%

NCES Subject Area	Course	Enroll Count	Pass Rate
Miscellaneous	Study Skills	318	79%
Physical, Health, and Safety Education	Health	630	88%
Physical, Health, and Safety Education	Health – Testing Out	30	NA
Physical, Health, and Safety Education	Personal Fitness	495	90%
Public, Protective, and Government Service	Forensic Science - Introduction	388	80%
Religious Education and Theology	World Religions	112	87%
Social Sciences and History	Anthropology (A)	113	94%
Social Sciences and History	AP Human Geography	37	97%
Social Sciences and History	AP Macroeconomics	159	86%
Social Sciences and History	AP Microeconomics	139	93%
Social Sciences and History	AP Psychology	477	93%
Social Sciences and History	AP U.S. Government & Politics	130	89%
Social Sciences and History	AP U.S. History (A)	49	88%
Social Sciences and History	AP U.S. History (B)	44	86%
Social Sciences and History	AP World History (A)	62	89%
Social Sciences and History	AP World History (B)	54	93%
Social Sciences and History	Archaeology	42	98%
Social Sciences and History	Civics	600	91%
Social Sciences and History	Criminology	608	83%
Social Sciences and History	Economics	600	85%
Social Sciences and History	Native American History	79	85%
Social Sciences and History	Personal Finance	232	92%
Social Sciences and History	Philosophy	129	91%
Social Sciences and History	Psychology	336	82%
Social Sciences and History	Sociology (A)	258	75%
Social Sciences and History	Sociology (B)	38	95%
Social Sciences and History	U.S. History & Geography (A)	198	72%
Social Sciences and History	U.S. History & Geography (B)	191	74%
Social Sciences and History	U.S. History 8 (A)	16	69%
Social Sciences and History	U.S. History 8 (B)	16	81%
Social Sciences and History	World Cultures 6 (A)	<10	17%
Social Sciences and History	World Cultures 6 (B)	<10	100%
Social Sciences and History	World Geography 7 (A)	12	83%
Social Sciences and History	World Geography 7 (B)	17	88%
Social Sciences and History	World History & Geography (A)	228	83%
Social Sciences and History	World History & Geography (B)	270	89%
Social Sciences and History	World History (A)	26	38%
Social Sciences and History	World History (B)	10	40%
World Languages and Literature	American Sign Language 1 (A)	1,564	74%
World Languages and Literature	American Sign Language 1 (B)	908	89%
World Languages and Literature	American Sign Language 2 (A)	513	81%
World Languages and Literature	American Sign Language 2 (B)	411	88%

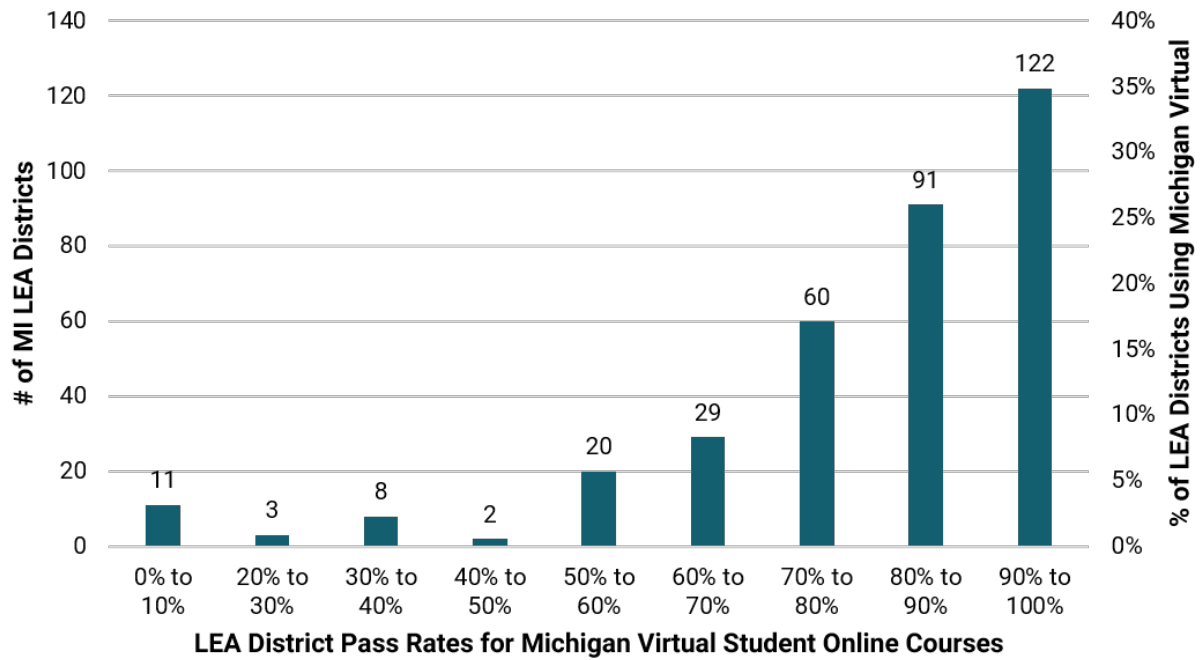
NCES Subject Area	Course	Enroll Count	Pass Rate
World Languages and Literature	AP Chinese (A)	17	82%
World Languages and Literature	AP Chinese (B)	13	85%
World Languages and Literature	AP French (A)	<10	78%
World Languages and Literature	AP French (B)	<10	80%
World Languages and Literature	AP Spanish (A)	52	77%
World Languages and Literature	AP Spanish (B)	43	95%
World Languages and Literature	Chinese 1 (A)	61	75%
World Languages and Literature	Chinese 1 (B)	35	94%
World Languages and Literature	Chinese 2 (A)	62	89%
World Languages and Literature	Chinese 2 (B)	57	95%
World Languages and Literature	Chinese 3 (A)	24	92%
World Languages and Literature	Chinese 3 (B)	26	96%
World Languages and Literature	Chinese 4 (A)	28	96%
World Languages and Literature	Chinese 4 (B)	21	100%
World Languages and Literature	French 1 (A) (6-8)	24	92%
World Languages and Literature	French 1 (B) (6-8)	18	94%
World Languages and Literature	French 2 (A) (6-8)	<10	100%
World Languages and Literature	French 2 (B) (6-8)	<10	100%
World Languages and Literature	French 1 (A)	253	74%
World Languages and Literature	French 1 (B)	158	87%
World Languages and Literature	French 2 (A)	171	80%
World Languages and Literature	French 2 (B)	138	89%
World Languages and Literature	French 3 (A)	59	71%
World Languages and Literature	French 3 (B)	38	68%
World Languages and Literature	German 1 (A) (6-8)	12	75%
World Languages and Literature	German 1 (B) (6-8)	10	100%
World Languages and Literature	German 2 (A) (6-8)	<10	100%
World Languages and Literature	German 2 (B) (6-8)	<10	100%
World Languages and Literature	German 1 (A)	232	72%
World Languages and Literature	German 1 (B)	142	88%
World Languages and Literature	German 2 (A)	123	72%
World Languages and Literature	German 2 (B)	99	84%
World Languages and Literature	German 3 (A)	51	76%
World Languages and Literature	German 3 (B)	29	86%
World Languages and Literature	German 4 (A)	18	83%
World Languages and Literature	German 4 (B)	13	92%
World Languages and Literature	Japanese 1 (A)	203	70%
World Languages and Literature	Japanese 1 (B)	125	81%
World Languages and Literature	Japanese 2 (A)	56	80%
World Languages and Literature	Japanese 2 (B)	45	100%
World Languages and Literature	Latin 1 (A)	115	86%
World Languages and Literature	Latin 1 (B)	86	86%

NCES Subject Area	Course	Enroll Count	Pass Rate
World Languages and Literature	Latin 2 (A)	51	94%
World Languages and Literature	Latin 2 (B)	53	91%
World Languages and Literature	Latin 3 (A)	<10	100%
World Languages and Literature	Latin 3 (B)	<10	100%
World Languages and Literature	Spanish 1 (A) (6-8)	23	74%
World Languages and Literature	Spanish 1 (B) (6-8)	13	92%
World Languages and Literature	Spanish 2 (A) (6-8)	10	100%
World Languages and Literature	Spanish 2 (B) (6-8)	<10	100%
World Languages and Literature	Spanish 1 (A)	233	69%
World Languages and Literature	Spanish 1 (B)	183	83%
World Languages and Literature	Spanish 2 (A)	195	82%
World Languages and Literature	Spanish 2 (B)	176	80%
World Languages and Literature	Spanish 3 (A)	117	83%
World Languages and Literature	Spanish 3 (B)	100	85%
World Languages and Literature	Spanish 4 (A)	47	66%
World Languages and Literature	Spanish 4 (B)	30	70%

Figure 4. 2017-18 Michigan Virtual Student Performance Data by NCES Subject Area

NCES Subject Area	Attempted Count	Withdrawn	Completed/Failed	Michigan Virtual Pass Rate	Statewide 16 17 Pass Rate
Agriculture, Food, and Natural Resources	250	0%	8%	91%	77%
Business and Marketing	1,199	1%	13%	86%	64%
Communications and Audio/Visual Tech.	100	2%	21%	77%	74%
Computer and Information Sciences	1,216	1%	19%	80%	57%
Engineering and Technology	118	2%	8%	91%	59%
English Language and Literature	2,087	2%	20%	78%	52%
Fine and Performing Arts	859	1%	14%	85%	57%
Foreign Language and Literature	7,340	2%	18%	81%	60%
Health Care Sciences	666	1%	9%	90%	81%
Life and Physical Sciences	2,651	2%	17%	81%	53%
Mathematics	3,041	2%	18%	81%	49%
Miscellaneous	1,514	1%	15%	84%	53%
Physical, Health, and Safety Education	1,125	1%	10%	89%	59%
Public, Protective, and Government Service	388	2%	19%	80%	78%
Religious Education and Theology	112	1%	13%	87%	81%
Social Sciences and History	5,178	1%	13%	86%	56%
Total	27,844	1%	16%	83%	55%

Figure 5. 2017-18 Michigan Virtual Student Performance Data by LEA District



Appendix B – Michigan Virtual Professional Learning Data
Figure 6. 2017-18 Michigan Virtual Professional Learning Courses

Course Title	Enroll Count
10 Free Microsoft Tools that Make Learning Fun!	32
21st Century Skills	21
A to Z Grant Writing	25
Acknowledgements in SWPBIS: Understanding the How	202
Acknowledgements in SWPBIS: Understanding the Why	153
Active Shooter On Campus (A.L.I.C.E.)	559
Advanced Microsoft Excel 2010	<10
Aiding Students with Learning Disabilities	18
An Introduction to Teaching ESL/EFL	<10
Anger Management & Effective Discipline to Prevent Violence, Part I	30
Anger Management & Effective Discipline to Prevent Violence, Part II	<10
AOD: Catechist Certification - Topic 1	194
AOD: Catechist Certification - Topic 2	164
AOD: Catechist Certification - Topic 3	157
AOD: Catechist Certification - Topic 4	147
AOD: Catechist Certification - Topic 5	152
AOD: Catechist Certification - Topic 6	149
Art Safety for Educational Facilities	105
Assessment and Grading for Student Achievement	<10
Assessment and the Common Core State Standards	<10
Assessment as a Tool for Systems Change	<10
Authentic Innovation in the 21st Century Classroom	<10
Basic First Aid	534
Becoming a Culturally Responsive Teacher	14
Becoming a Reflective Teacher	<10
Beginning Conversational French	<10
Behavior Science and the Three Term Contingency	108
Best Practices for Teaching African American Boys	14
Best Practices in Defining Problem Behaviors	182
Big Ideas of Early Reading: Fluency	149
Big Ideas of Early Reading: Phonics	174
Big Ideas of Early Reading: Vocabulary	149
Big Ideas of School-wide Positive Behavioral Interventions and Support	117
Blended Learning - 1 Day Event	135
Blended Learning with Office 365	11
Blogging and Podcasting for Beginners	15
Bloodborne Pathogens	12,121
Bloodborne Pathogens for Research and Campus Activities	516
Book Study: Visible Learning for Mathematics, Grades K-12	11
Building Academic Language, Grades K-6	<10
Building Level Implementation	89
Building Teams That Work	15
Campus Emergency Action Plans	170
Challenging Gifted and All Students with the Cluster Grouping Model	<10
Changing Minds to Address Poverty in the Classroom	1,549
Character Education, Part I	12

Course Title	Enroll Count
Character Education, Part II	<10
Charlotte Danielson's A Framework for Teaching	<10
Chemical Hygiene Plan	20
Chemical Safety	25
Coaching Role	93
Common Core in ELA: Instructional Shifts for Effective Implementation, Grades 6-8	<10
Common Core in ELA: Instructional Shifts for Effective Implementation, Grades 9-12	<10
Common Core in Mathematics: Instructional Shifts for Effective Implementation, Grades 6-8	<10
Common Core in Mathematics: Instructional Shifts for Effective Implementation, Grades 9-12	<10
Common Core Standards for English Language Arts K-5	<10
Common Core State Standards in Literacy, Grades 3-8	<10
Common Core State Standards in Mathematics, Grades 3 - 8	<10
Computer Skills for the Workplace	<10
Conflict Resolution Strategies	183
Content Literacy: Grades 6-12	<10
Correcting Behavior Fluently	172
Counseling in the College Selection Process	142
CPR Refresher	370
Creating a Classroom Website	22
Creating a Professional Learning Community at Work: Foundational Concepts and Practice	<10
Creating Classroom Centers	30
Creating the Inclusive Classroom: Strategies for Success	<10
CSS Community	13
Curriculum Leadership Institute - Phase I	22
Curriculum Leadership Institute - Phase II	10
Data-Driven Decision Making	<10
Deeper Dialogue: Teaching with Poverty in Mind Chapter 1	49
Deeper Dialogue: Teaching with Poverty in Mind Chapter 2	37
Deeper Dialogue: Teaching with Poverty in Mind Chapter 3	36
Deeper Dialogue: Teaching with Poverty in Mind Chapter 4	31
Deeper Dialogue: Teaching with Poverty in Mind Chapter 5	32
Deeper Dialogue: Teaching with Poverty in Mind Chapter 6	32
Designing and Developing in the Blended Classroom	128
Differentiated Instruction in the Classroom	12
Differentiated Instruction: Maximizing Learning for All	925
Differentiating Instruction Using the Common Core State Standards	<10
Differentiating K-12 Assessments	<10
Differentiation and the Brain	<10
Digital Storytelling on ANY Device with Sway	<10
Discover Sign Language	20
Discrimination in the Workplace	37
Diversity in the Workplace	125
DLN: Curriculum & Instruction Alignment	18
DLN: Foundations of Restorative Practices: The Social Science of Human Behavior	<10
DLN: Mentoring through Coaching Certification	17
DLN: School Improvement	13
Driving On and Off Campus	<10
Early Literacy Coaches Online Community	779
Early Warning System: Installation of an Early Warning System	27

Course Title	Enroll Count
Early Warning System: Why an Early Warning System	45
Early Warning Systems Module 1	61
Early Warning Systems Module 2	54
Educator Evaluation in MI: Measurement of Student Growth	<10
Elementary Reading Intervention Strategies	18
Emergency Action Plans for Office Employees	83
Emergency Response	301
Empowering Students With Disabilities	10
Engaging Students with Interactive Content Using Michigan Virtual's Makerspace	<10
Enhance Assessment for the 21st Century Classroom	<10
Enhancing Language Development in Childhood	<10
Enhancing Your Curriculum through Art	<10
Essential Instructional Practices in Early Literacy: Foundations and Pre-K Essential 1	343
Essential Instructional Practices in Early Literacy: K-3 Essential 1	2,986
Essential Instructional Practices in Early Literacy: K-3 Essential 2	1,500
Essential Instructional Practices in Early Literacy: K-3 Essential 3	1,486
Essential Instructional Practices in Early Literacy: K-3 Essential 4	965
Essential Instructional Practices in Early Literacy: K-3 Essential 5	850
Essential Instructional Practices in Early Literacy: K-3 Essential 6	697
Essential Instructional Practices in Early Literacy: K-3 Essential 7	175
Essential Instructional Practices in Early Literacy: K-3 Essential 8	36
Essential Instructional Practices in Early Literacy: Pre-K Essential 2	183
Essentials Online Instructor Training Course	19
Facilitating Learning for Speakers of Non-Standardized English	<10
FERPA - Family Educational Rights and Privacy Act	1,035
Fire Safety	55
Fire Safety On Campus	19
Flu Symptoms and Prevention Strategies	82
Food Safety	120
Formative Assessment 101	122
Formative Assessment and Standards-Based Grading	<10
Foundations for Online Student Success	12
General Safety	35
Geographic Information Systems (GIS) PD Part 1	23
Get Assertive!	13
Get Grants!	<10
GIS Professional Development for Michigan's Upper Peninsula Teachers	45
Grading and Reporting for All Students	<10
Grading: A Guide to Effective Practice	<10
Grammar Refresher	17
Guided Reading and Writing: Strategies for Maximum Student Achievement	<10
Guided Reading: Strategies for the Differentiated Classroom	12
Hand and Power Tool Safety	11
Hazard Communication	212
Hazardous Materials Management	21
Hazardous Waste Awareness (RCRA)	14
HIPAA Compliance Training	623
Human Anatomy and Physiology	<10
Human Anatomy and Physiology II	<10

Course Title	Enroll Count
ILC: Implementing Effective Instruction Non-Facilitated	571
Implementation Science: An Overview	29
Implementing Professional Learning Communities	58
Importance of Universal Screening Within an MTSS Model	49
Improving Instruction through Strategic Conversations with Teachers	<10
Individual Excellence	<10
Instructional Leaders Institute	<10
Integrating Technology in the Classroom	16
Interpersonal Communication	<10
Intro to Online Teaching and Learning	110
Introduction to Algebra	21
Introduction to Biology	<10
Introduction to Chemistry	<10
Introduction to Microsoft Excel 2010	<10
Introduction to Microsoft Excel 2013	<10
Introduction to Microsoft PowerPoint 2013	<10
Introduction to Microsoft Word 2013	<10
Introduction to OSHA	57
Introduction to Phenomenal Science	497
Introduction to Phenomenal Science, Grade 1	62
Introduction to Phenomenal Science, Grade 2	40
Introduction to Phenomenal Science, Grade 3	58
Introduction to Phenomenal Science, Grade 4	55
Introduction to Phenomenal Science, Grade 5	46
Introduction to Phenomenal Science, Grade K	45
Keys to Effective Communication	<10
Kitchen Equipment Safety	10
Laboratory Safety – Biological Hazards	29
Laboratory Safety – Chemical Hazards	<10
Laboratory Safety in Research and Education	<10
Latex Allergy	27
Lawful Hiring Practices	24
Lawful Terminations and Employee Separation	23
Leadership	13
Leadership and Literacy	<10
Learning First, Technology Second	<10
Learning Without Borders with Mystery Skype	<10
MAC: Assessment Systems That Support 21st Century Learners	18
MAC: Developing a High Quality Balanced Assessment System	41
MAC: Developing Appropriate Assessments	39
MAC: Making Meaning from Student Assessments	18
MAC: Selecting Appropriate Assessments	41
MAC: Understanding the Formative Assessment Process	42
MAC: Understanding the Technical Concepts Used in Student Assessment	16
MAC: Using Assessment Data Well	<10
Making Student Thinking Visible	<10
Manage It All: Students, Curriculum, and Time	10
MASA: Communications Microcredential	<10
Mastering Public Speaking	<10

Course Title	Enroll Count
MDE Assessment Security	4,273
MDE Program Evaluation Tool	66
Measuring Implementation Fidelity at the School Level	64
Mentor Site Institute	103
Mentoring Students Enrolled in Online Essentials Courses	108
Mentors Network	98
MI Excel Coaching: Being A Math Coach	260
MI Excel Coaching: Being A Reading Coach	340
MI Excel Coaching: Being A Science Coach	171
MI Excel Coaching: Being A Social Studies Coach	191
MI Excel Coaching: Being A Writing Coach	269
MI Excel Coaching: Module 1 - Coaching Basics	359
MI Excel Coaching: Module 2 - Using Data to Inform Instruction	310
MI Excel Coaching: Module 3 - Coaching Instructional Planning & Practice	279
MI Excel Coaching: Module 4 - Multi-Tiered System of Supports	272
Michigan Continuous School Improvement (MI-CSI)	98
Michigan's K-12 Virtual Learning Effectiveness Report	18
Microsoft Innovative Educator Teacher Academy	<10
Microsoft PowerPoint 2013 in the Classroom	<10
Monitoring Behavior	89
Motivating and Engaging Students	<10
Multi-Tier System of Support Overview	55
Music Made Easy	<10
MyPD	13
Occupational Safety and Health Programs	<10
Office Safety	83
Online Course Facilitation, 6-12	<10
Online Mentor Training	40
OSHA Reporting and Recordkeeping	21
Overview of Tier 2 Behavior Supports	51
PBIS Assessment Coordinator Certification Module	87
Personal Finance	15
Personal Protective Equipment	107
Podcast PD	382
Podcast PD: Google Forms, Failure-Free Failing & CBE	<10
Podcast PD: Screencasting, the Future of Education	11
Portable Fire Extinguishers	<10
POWERful Coaching	<10
Prepare for the GED Test	<10
Problem Solving with SWIS Data: School-wide	27
PTL: Application	227
PTL: Module 1	128
PTL: Module 2	85
PTL: Module 3	142
PTL: Module 4	89
PTL: Module 5	145
PTL: Module 6	124
PTL: Module 7	133
PTL: Module 8	135

Course Title	Enroll Count
PTL: Orientation	231
Race to the Top Module 1	<10
Reading Tiered Fidelity Inventory Facilitator Training	224
Ready, Set, Read!	11
Response to Intervention: Reading Strategies That Work	14
Seclusion and Restraint	473
Sexual Harassment and Discrimination for Employees	1,491
Sexual Harassment Prevention for Managers	23
Shifting Instruction with the Five Core Practices	<10
SIF and DIF 2.0 Overview Course	10
Singapore Math Strategies: Advanced Model Drawing for Grades 6-9	<10
Singapore Math: Number Sense and Computational Strategies	<10
Slips, Trips and Falls	503
Soft Skills of Coaching	69
Solving Classroom Discipline Problems	24
Solving Classroom Discipline Problems II	<10
Spanish in the Classroom	14
Speed Spanish	15
Speed Spanish II	10
Speed Spanish III	<10
Speedgeeking Powered by Microsoft - 30 Apps to Transform Learning	<10
STEM Teacher Network	97
Student Engagement	49
Student Risk Screening Scale	53
Surveys of Enacted Curriculum: Promoting a Culture of Growth and Support (Facilitator Training)	176
Survival Kit for New Teachers	<10
Survival Strategies for New Teachers, Grades K-5	<10
SWPBIS: Identifying 3-5 Behavioral Expectations	68
Teaching Adult Learners	<10
Teaching Behavior Expectations	94
Teaching Boys in Poverty	<10
Teaching English Language Learners Across the Curriculum, Part I	<10
Teaching High School Students	10
Teaching in the Blended and Online Classroom	89
Teaching Math: Grades 4-6	<10
Teaching Reading and Comprehension to English Learners, K-5	<10
Teaching Science: Grades 4-6	<10
Teaching Smarter With SMART Boards	<10
Teaching Students With ADHD	18
Teaching Students With Autism: Strategies for Success	15
Teaching Writing: Grades 4-6	<10
Teaching, Learning, and Leading in the Digital Age	<10
The Creative Classroom	14
The Differentiated Instruction and Response to Intervention Connection	<10
Tier 1 Elementary Problem Solving Day 1 Trainer Support Session	18
Tier 1 Reading Elementary Grade Level Problem Solving Day 2 Trainer Support Session	23
Title IX/Sexual Misconduct at Educational Facilities	526
Trainer Support Session District Mid-Year Continuous Data Review	12
Trainer Support Session Elementary Winter Data Review Series	<10

Course Title	Enroll Count
Trainer Support Session for Check-In, Check-Out	14
Trainer Support Session for District Fall Continuous Data Review	13
Trainer Support Session for District Fall Data Review	12
Trainer Support Session for District Mid-Year Continuous Data Review	<10
Trainer Support Session for Elementary and Secondary Fall Data Review Series	11
Trainer Support Session for Elementary Spring Data Review	11
Trainer Support Session for Elementary Spring Data Review Coaching Support Session	<10
Trainer Support Session for ISD Fall Continuous Data Review	<10
Trainer Support Session for ISD Systems Review	<10
Trainer Support Session for Secondary Spring Data Review	<10
Trainer Support Session for Secondary Spring Data Review Coaching Support Session	<10
Trainer Support Session for Secondary Winter Data Review Coaching Support Session	<10
Trainer Support Session for Secondary Winter Data Review Series	<10
Trainer Support Session for Tier 1 Elementary Reading Systems	16
Trainer Support Session for Tier 1 Elementary Reading Systems Coaching Support Session	12
Trainer Support Session for Winter Data Review Elementary and Secondary	17
Trainer Support Session ISD Mid-Year Continuous Data Review	<10
Transforming School Culture	<10
Understanding Adolescents	13
Understanding Blended Learning for School Leaders	86
Understanding Culture and Race	<10
Understanding the Digital Generation	<10
Universal Screening Flowchart	28
Using Digital Media to Enhance Learning	<10
Using GIS in Your School and Community - Module 4	<10
Using the Internet in the Classroom	<10
Violence in the Workplace	259
Working With Lasers in Research and Education	<10
Writing Essentials	<10
Writing for Children	<10

Figure 7. Districts Served by *Michigan Virtual* with Professional Learning Courses in 2017-18

LEA Districts

Adams Township S.D.	Bendle Public Schools	Carson City-Crystal Area S.
Addison Community S.	Bentley Community S.D.	Carsonville-Port Sanilac S.D.
Adrian Public Schools	Benton Harbor Area S.	Caseville Public Schools
Airport Community Schools	Benzie County Central S.	Cass City Public Schools
Akron-Fairgrove Schools	Berkley School District	Cassopolis Public Schools
Alanson Public Schools	Berrien Springs P.S.	Cedar Springs P.S.
Alba Public Schools	Bessemer Area S.D.	Center Line Public Schools
Alcona Community Schools	Big Bay De Noc S.D.	Central Lake Public Schools
Algonac Community S.D.	Big Jackson School District	Central Montcalm P.S.
Allegan Public Schools	Big Rapids Public Schools	Centreville Public Schools
Allen Park Public Schools	Birch Run Area Schools	Charlevoix Public Schools
Allendale Public Schools	Birmingham Public Schools	Charlotte Public Schools
Alma Public Schools	Blissfield Community S.	Chassell Township S.D.
Almont Community Schools	Bloomfield Hills Schools	Cheboygan Area Schools
Alpena Public Schools	Bloomington Public S.D.	Chelsea School District
Anchor Bay School District	Boyne City Public Schools	Chesaning Union Schools
Ann Arbor Public Schools	Boyne Falls Public S.D.	Chippewa Hills S.D.
Arenac Eastern S.D.	Brandon S.D. in the	Chippewa Valley Schools
Armada Area Schools	Counties of Oakland	Church School District
Arvon Township S.D.	and Lapeer	Clare Public Schools
Ashley Community Schools	Brandywine Community S.	Clarenceville School District
Athens Area Schools	Breckenridge Community S.	Clarkston Community S.D.
Atherton Community S.	Breitung Township S.D.	Clawson Public Schools
Atlanta Community Schools	Bridgeport-Spaulding C.S.D.	Climax-Scotts C.S.
Au Gres-Sims S.D.	Bridgman Public Schools	Clinton Community Schools
Avondale School District	Brighton Area Schools	Clintondale Community S.
Bad Axe Public Schools	Brimley Area Schools	Clio Area School District
Baldwin Community S.	Britton Deerfield Schools	Coldwater Community S.
Bangor P.S. (Van Buren)	Bronson Community S.D.	Coleman Community S.
Bangor Township S/D #8	Brown City Community S.	Coloma Community S.
Bangor Township Schools	Buchanan Community S.	Colon Community S.D.
Baraga Area Schools	Buckley Community S.	Columbia School District
Bath Community Schools	Bullock Creek S.D.	Comstock Park P.S.
Battle Creek Public Schools	Byron Area Schools	Comstock Public Schools
Bay City School District	Byron Center Public Schools	Concord Community S.
Beal City Public Schools	Cadillac Area P.S.	Constantine Public S.D.
Beaver Island Community S.	Caledonia Community S.	Coopersville Area P.S.D.
Beaverton Rural Schools	Camden-Frontier School	Corunna Public Schools
Bedford Public Schools	Capac Community Schools	Covert Public Schools
Beecher Community S.D.	Carman-Ainsworth C.S.	Crawford AuSable Schools
Belding Area School District	Carney-Nadeau P.S.	Crestwood School District
Bellaire Public Schools	Caro Community Schools	Croswell-Lexington C.S.
Bellevue Community S.	Carrollton Public Schools	Dansville Schools

Davison Community S.
 Dearborn City S.D.
 Dearborn Heights S.D. #7
 Decatur Public Schools
 Deckerville Community S.D.
 Delton Kellogg Schools
 DeTour Area Schools
 Detroit City School District
 Detroit Public Schools
 Community District
 DeWitt Public Schools
 Dexter Community S.D.
 Dollar Bay-Tamarack City
 Area Schools
 Dowagiac Union S.D.
 Dryden Community Schools
 Dundee Community Schools
 East China School District
 East Grand Rapids P.S.
 East Jackson Community S.
 East Jordan Public Schools
 East Lansing School District
 Eastpointe Community S.
 Eaton Rapids P.S.
 Eau Claire Public Schools
 Ecorse Public Schools
 Education Achievement
 Authority of Michigan
 Edwardsburg P.S.
 Elk Rapids Schools
 Elkton-Pigeon-Bay Port
 Laker Schools
 Ellsworth Community S.
 Engadine Consolidated S.
 Escanaba Area P.S.
 Essexville-Hampton P.S.
 Evart Public Schools
 Ewen-Trout Creek C.S.D.
 Fairview Area S.D.
 Farmington Public S.D.
 Farwell Area Schools
 Fennville Public Schools
 Fenton Area Public Schools
 Ferndale Public Schools
 Fitzgerald Public Schools

Flat Rock Community S.
 Flint, S.D. of the City of
 Flushing Community S.
 Forest Area Community S.
 Forest Hills Public Schools
 Forest Park School District
 Fowler Public Schools
 Fowlerville Community S.
 Frankenmuth S.D.
 Frankfort-Elberta Area S.
 Fraser Public Schools
 Freeland Community S.D.
 Fremont Public S.D.
 Fruitport Community S.
 Fulton Schools
 Galesburg-Augusta
 Community Schools
 Garden City Public Schools
 Gaylord Community S.
 Genesee School District
 Gibraltar School District
 Gladstone Area Schools
 Gladwin Community S.
 Glen Lake Community S.
 Gobles Public S.D.
 Godfrey-Lee Public Schools
 Godwin Heights P.S.
 Goodrich Area Schools
 Grand Blanc Community S.
 Grand Haven Area P.S.
 Grand Ledge Public Schools
 Grand Rapids P.S.
 Grandville Public Schools
 Grant Public School District
 Grass Lake Community S.
 Greenville Public Schools
 Grosse Ile Township S.
 Grosse Pointe P.S.
 Gull Lake Community S.
 Gwinn Area Community S.
 Hale Area Schools
 Hamilton Community S.
 Hamtramck, School District
 of the City of
 Hancock Public Schools

Hanover-Horton S.D.
 Harbor Beach Community S.
 Harper Creek Community S.
 Harper Woods, The School
 District of the City of
 Harrison Community S.
 Hart Public School District
 Hartford Public Schools
 Hartland Consolidated S.
 Haslett Public Schools
 Hastings Area S.D.
 Hazel Park, School District
 of the City of
 Hemlock Public S.D.
 Hesperia Community S.
 Highland Park City Schools
 Hillman Community S.
 Hillsdale Community S.
 Holland City School District
 Holly Area School District
 Holt Public Schools
 Holton Public Schools
 Homer Community S.D.
 Hopkins Public Schools
 Houghton Lake C.S.
 Houghton-Portage T.S.D.
 Howell Public Schools
 Hudson Area Schools
 Hudsonville Public S.D.
 Huron School District
 Huron Valley Schools
 Ida Public School District
 Imlay City Community S.
 Inland Lakes Schools
 Ionia Public Schools
 Iron Mountain P.S.
 Ironwood Area Schools of
 Gogebic County
 Ishpeming P.S.D. No. 1
 Jackson Public Schools
 Jefferson Schools (Monroe)
 Jenison Public Schools
 Johannesburg-Lewiston
 Area Schools
 Jonesville Community S.

Kalamazoo Public Schools
 Kaleva Norman Dickson
 School District
 Kalkaska Public Schools
 Kearsley Community S.D.
 Kelloggsville Public Schools
 Kenowa Hills P.S.
 Kent City Community S.
 Kentwood Public Schools
 Kingsley Area Schools
 Kingston Community S.D.
 Laingsburg Community S.
 Lake City Area S.D.
 Lake Fenton Community S.
 Lake Linden-Hubbell S.D.
 Lake Orion Community S.
 Lake Shore P.S. (Macomb)
 Lakeshore S.D. (Berrien)
 Lakeview C.S. (Montcalm)
 Lakeview P.S. (Macomb)
 Lakeview S.D. (Calhoun)
 Lakeville Community S.D.
 Lakewood Public Schools
 Lamphere Public Schools
 L'Anse Area Schools
 L'Anse Creuse P.S.
 Lansing Public S.D.
 Lapeer Community Schools
 Lawrence Public Schools
 Lawton Community S.D.
 Leland Public S.D.
 Les Cheneaux C.S.
 Leslie Public Schools
 Lincoln Consolidated S.D.
 Lincoln Park, School District
 of the City of
 Linden Community Schools
 Litchfield Community S.
 Livonia Public Schools S.D.
 Lowell Area Schools
 Ludington Area S.D.
 Mackinac Island P.S.
 Mackinaw City P.S.
 Madison District P.S.
 Madison S.D. (Lenawee)

Mancelona Public Schools
 Manchester Community S.
 Manistee Area P.S.
 Manistique Area Schools
 Manton Consolidated S.
 Maple Valley Schools
 Marcellus Community S.
 Marion Public Schools
 Marlette Community S.
 Marquette Area P.S.
 Marshall Public Schools
 Martin Public Schools
 Marysville Public Schools
 Mason C.S. (Monroe)
 Mason P.S. (Ingham)
 Mattawan C.S.
 Mayville Community S.D.
 McBain Rural Agricultural S.
 Melvindale-North Allen Park
 Schools
 Memphis Community S.
 Mendon Community S.D.
 Menominee Area P.S.
 Meridian Public Schools
 Merrill Community Schools
 Mesick Consolidated S.
 Michigan Center S.D.
 Midland Public Schools
 Milan Area Schools
 Millington Community S.
 Mio-AuSable Schools
 Mona Shores Public S.D.
 Monroe Public Schools
 Montabella Community S.
 Montague Area P.S.
 Montrose Community S.
 Moran Township S.D.
 Morenci Area Schools
 Morley Stanwood C.S.
 Morrice Area Schools
 Mount Clemens C.S.D.
 Mt. Morris Consolidated S.
 Mt. Pleasant City S.D.
 Munising Public Schools

Muskegon, Public Schools
 of the City of
 Napoleon Community S.
 Negaunee Public Schools
 New Buffalo Area Schools
 New Lothrop Area P.S.
 Newaygo Public S.D.
 NICE Community S.D.
 Niles Community Schools
 North Adams-Jerome P.S.
 North Branch Area Schools
 North Central Area Schools
 North Dickinson County S.
 North Huron School District
 North Muskegon P.S.
 Northport Public S.D.
 Northview Public Schools
 Northville Public Schools
 Northwest Community S.
 Norway-Vulcan Area S.
 Nottawa Community School
 Novi Community S.D.
 Oak Park, S.D. of the City of
 Oakridge Public Schools
 Okemos Public Schools
 Olivet Community Schools
 Onaway Area C.S.D.
 Onekama Consolidated S.
 Onsted Community Schools
 Ontonagon Area S.D.
 Orchard View Schools
 Oscoda Area Schools
 Otsego Public Schools
 Ovid-Elsie Area Schools
 Owosso Public Schools
 Oxford Community Schools
 Parchment School District
 Paw Paw Public S.D.
 Peck Community S.D.
 Pellston Public Schools
 Pennfield Schools
 Perry Public Schools
 Pewamo-Westphalia C.S.
 Pickford Public Schools
 Pinckney Community S.

Pinconning Area Schools
 Pine River Area Schools
 Pittsford Area Schools
 Plainwell Community S.
 Plymouth-Canton C.S.
 Pontiac City School District
 Port Huron Area S.D.
 Portage Public Schools
 Portland Public Schools
 Posen Cons. S.D. No. 9
 Potterville Public Schools
 Powell Township Schools
 Public Schools of Calumet,
 Laurium & Keweenaw
 Public Schools of Petoskey
 Quincy Community Schools
 Rapid River Public Schools
 Ravenna Public Schools
 Reading Community S.
 Redford Union Schools,
 District No. 1
 Reed City Area P.S.
 Reese Public Schools
 Reeths-Puffer Schools
 Republic-Michigamme S.
 Richmond Community S.
 River Rouge, School District
 of the City of
 River Valley School District
 Rochester Community S.D.
 Rockford Public Schools
 Rogers City Area Schools
 Romeo Community Schools
 Romulus Community S.
 Roscommon Area P.S.
 Roseville Community S.
 Royal Oak Schools
 Rudyard Area Schools
 Saginaw Township C.S.
 Saginaw, S.D. of the City of
 Saline Area Schools
 Sand Creek Community S.
 Sandusky Community S.D.
 Saranac Community S.

Sault Ste. Marie Area S.
 S.D. of the City of Inkster
 Schoolcraft Community S.
 Shelby Public Schools
 Shepherd Public Schools
 Sigel Township S/D #3F
 Sodus Township S/D #5
 South Haven Public Schools
 South Lake Schools
 South Lyon Community S.
 South Redford S.D.
 Southfield Public S.D.
 Southgate Community S.D.
 Sparta Area Schools
 Spring Lake Public Schools
 Springport Public Schools
 St. Charles Community S.
 St. Johns Public Schools
 St. Joseph Public Schools
 St. Louis Public Schools
 Standish-Sterling C.S.
 Stanton Township P.S.
 Stephenson Area P.S.
 Stockbridge Community S.
 Sturgis Public Schools
 Summerfield Schools
 Superior Central S.D.
 Suttons Bay Public Schools
 Swan Valley School District
 Swartz Creek Community S.
 Tawas Area Schools
 Taylor School District
 Tecumseh Public Schools
 Tekonsha Community S.
 Thornapple Kellogg S.D.
 Three Rivers Community S.
 Traverse City Area P.S.
 Trenton Public Schools
 Tri County Area Schools
 Troy School District
 Ubly Community Schools
 Union City Community S.
 Unionville-Sebewaing Area
 S.D.

Utica Community Schools
 Van Buren Public Schools
 Van Dyke Public Schools
 Vanderbilt Area Schools
 Vandercook Lake P.S.
 Vassar Public Schools
 Vicksburg Community S.
 Wakefield-Marenisco S.D.
 Waldron Area Schools
 Walkerville Public Schools
 Walled Lake Cons. S.
 Warren Consolidated S.
 Warren Woods P.S.
 Waterford School District
 Watersmeet Township S.D.
 Watervliet School District
 Waverly Community S.
 Wayland Union Schools
 Wayne-Westland C.S.D.
 West Bloomfield S.D.
 West Branch-Rose City Area
 Schools
 West Iron County P.S.
 West Ottawa Public S.D.
 Western School District
 Westwood Community S.D.
 Westwood Heights Schools
 White Cloud Public Schools
 White Pigeon Community S.
 Whitefish Township S.
 Whitehall District Schools
 Whitmore Lake Public S.D.
 Whittemore-Prescott Area
 Schools
 Williamston Community S.
 Wolverine Community S.D.
 Woodhaven-Brownstown
 School District
 Wyandotte, School District
 of the City of
 Wyoming Public Schools
 Yale Public Schools
 Ypsilanti Community S.
 Zeeland Public Schools

PSA Districts

Academic and Career
Education Academy
Academy for Business and
Technology
Academy of Int. Studies
ACE Academy (SDA)
Achieve Charter Academy
Advanced Tech. Academy
AGBU Alex-Marie
Manoogian School
American International
Academy
American Montessori
Academy
Arbor Preparatory H.S.
Arts Academy in the Woods
Arts and Technology
Academy of Pontiac
Battle Creek Montessori
Academy
Bay City Academy
Benton Harbor Charter
School Academy
Black River Public School
Blue Water Middle College
Bradford Academy
Bridge Academy
Burton Glen Charter A.
Byron Center Charter School
Caniff Liberty Academy
Canton Charter Academy
Canton Preparatory H.S.
Capstone Academy Charter
School (SDA)
Central Academy
Cesar Chavez Academy
Chandler Park Academy
Chandler Woods Charter A.
Charlevoix Montessori
Academy for the Arts
Charyl Stockwell Academy
Chatfield School
Clara B. Ford A. (SDA)
Cole Academy

Concord Academy - Boyne
Concord A. - Petoskey
Cornerstone Health and
Technology School
Cornerstone Jefferson-
Douglass Academy
Countryside Academy
Covenant House A. Detroit
Covenant House Academy
Grand Rapids
Creative Montessori A.
Creative Technologies A.
Crescent Academy
Cross Creek Charter A.
Crossroads Charter A.
Da Vinci Institute
David Ellis Academy
David Ellis Academy West
DeTour Arts and
Technology Academy
Detroit Academy of Arts and
Sciences
Detroit Community Schools
Detroit Delta Preparatory
Academy for Social
Justice
Detroit Edison P.S.A.
Detroit Innovation Academy
Detroit Leadership Academy
Detroit Merit Charter A.
Detroit Premier Academy
Detroit Public Safety A.
Detroit Service Learning A.
Dove Academy of Detroit
Dr. Joseph F. Pollack
Academic Center of
Excellence
Eagle Crest Charter A.
Eagle's Nest Academy
East Arbor Charter A.
East Shore Leadership A.
Eaton Academy
El-Hajj Malik El-Shabazz A.
Endeavor Charter Academy

Excel Charter Academy
Faxon Language Immersion
Academy
Flat River Academy
Fortis Academy
Four Corners Montessori A.
Francis Reh PSA
Frederick Douglass
International Academy
Frontier International A.
GEE Edmonson Academy
GEE White Academy
Genesee STEM Academy
George Crockett Academy
Global Heights Academy
Global Preparatory A.
Global Tech Academy
Grand Blanc Academy
Grand River Academy
Grand River Prep. H.S.
Grand Traverse Academy
Great Lakes Academy
Great Lakes Cyber Academy
Great Oaks Academy
Greater Heights Academy
Hamilton Academy
Hamtramck Academy
Hanley International A.
Henry Ford Academy
Henry Ford Academy:
School for Creative
Studies (PSAD)
Highland Park Public School
Academy System
Highpoint Virtual Academy
of Michigan
Hillsdale Preparatory S.
Holly Academy
Honey Creek Community S.
Hope Academy
Hope Academy of West MI
Hope of Detroit Academy
ICademy Global
Inkster Preparatory A.

Innocademy
 Innocademy Allegan
 Campus
 Insight School of Michigan
 International A. of Flint
 International A. of Saginaw
 Island City Academy
 Jalen Rose Leadership A.
 Jefferson International A.
 Joseph K. Lumsden
 Bahweting Anishnabe
 Academy
 Joy Preparatory Academy
 Keys Grace Academy
 Keystone Academy
 Kingsbury Country Day S.
 Knapp Charter Academy
 Lakeside Charter School
 Landmark Academy
 Lansing Charter Academy
 Laurus Academy
 Leelanau Montessori P.S.A.
 Legacy Charter Academy
 Life Skills Center of Pontiac
 LifeTech Academy
 Light of the World Academy
 Lighthouse Academy
 Linden Charter Academy
 MacDowell Preparatory A.
 Macomb Montessori A.
 Madison Academy
 Madison-Carver Academy
 Martin Luther King, Jr.
 Education Center
 Academy
 Marvin L. Winans Academy
 of Performing Arts
 Merritt Academy
 Metro Charter Academy
 Michigan Connections A.
 Michigan Educational
 Choice Center
 Michigan Great Lakes
 Virtual Academy

Michigan Mathematics and
 Science Academy
 Michigan Virtual Charter A.
 Midland Academy of
 Advanced and Creative
 Studies
 Mid-Michigan Leadership A.
 Mildred C. Wells Prep. A.
 Multicultural Academy
 Muskegon Covenant A.
 Muskegon Heights P.S.A.
 System
 New Bedford Academy
 New Branches Charter A.
 New Paradigm College Prep
 New Paradigm Glazer-
 Loving Academy
 New School High
 NexTech High School
 Noor International Academy
 North Saginaw Charter A.
 North Star Academy
 Northridge Academy
 Oakland Academy
 Oakland International A.
 Oakside Scholars Charter A.
 Ojibwe Charter School
 Old Redford Academy
 Paramount Charter A.
 Plymouth Educational
 Center Charter School
 Plymouth Scholars Charter
 Academy
 Pontiac Academy for
 Excellence
 Prevail Academy
 Quest Charter Academy
 Reach Charter Academy
 Regent Park Scholars
 Charter Academy
 Relevant Academy of Eaton
 County
 Renaissance P.S.A.
 Richfield Public School A.
 Ridge Park Charter A.

Riverside Academy
 Rutherford Winans A.
 Saginaw Learn to Earn A.
 Sarah J. Webber Media Arts
 Academy
 South Arbor Charter A.
 South Canton Scholars
 Charter Academy
 South Pointe Scholars
 Charter Academy
 Southwest Detroit C.S.
 Star International Academy
 State Street Academy
 Summit Academy
 Taylor Exemplar Academy
 Taylor International A.
 Taylor Preparatory H.S.
 The Greenspire School
 The James and Grace Lee
 Boggs School
 The New Standard A.
 Three Lakes Academy
 Three Oaks P.S.A.
 Timberland Academy
 Tipton Academy
 Trillium Academy
 Triumph Academy
 Universal Academy
 Universal Learning A.
 University Preparatory
 Academy (PSAD)
 University Prep. Science
 and Math (PSAD)
 University Yes Academy
 Vanderbilt Charter Academy
 Vanguard Charter Academy
 Vista Charter Academy
 Voyageur Academy
 Walden Green Montessori
 Walton Charter Academy
 Warrendale Charter A.
 Washington-Parks Academy
 Washtenaw Technical
 Middle College
 W-A-Y Academy

WAY Academy - Flint
 WAY Michigan
 Wellspring Preparatory H.S.
 West MI Academy of Arts
 and Academics

West Michigan Aviation A.
 White Pine Academy
 Will Carleton Charter School
 Academy
 William C. Abney Academy

Windemere Park Charter A.
 Windover High School
 Woodland Park Academy
 Woodland School
 Woodward Academy

Nonpublic Schools

Academy of Sacred Heart -
 Bloomfield Hills
 Ada Christian School - Ada
 Alderbrook Sterling South-
 Detroit Campus -
 Bloomfield Hills
 All Saints Academy
 Elementary - Grand
 Rapids
 All Saints Catholic School -
 Alpena
 All Saints Catholic School -
 Canton
 Allendale Christian School -
 Allendale
 Ann Arbor Academy - Ann
 Arbor
 Ann Arbor Christian School -
 Ann Arbor
 Assumption of the Blessed
 Virgin Mary Catholic
 School - Belmont
 Austin Catholic High School
 - Chesterfield
 Barry County Christian
 School - Hastings
 Bethel Lutheran School -
 Bay City
 Bethlehem Lutheran School
 - Saginaw
 Bishop Baraga Catholic
 School - Iron Mountain
 Bishop Foley Catholic High
 School - Madison
 Heights
 Bishop Kelley Memorial
 School - Lapeer
 Borculo Christian School -
 Zeeland

Brookfield Academy - West
 Bloomfield
 Brother Rice High School -
 Bloomfield Hills
 Cabrini High School - Allen
 Park
 Calvin Christian Middle
 School & High School -
 Grandville
 Cardinal Mooney Catholic
 School - Marine City
 Catholic Central High
 School - Grand Rapids
 Christ the King Lutheran-
 Sebewaing - Sebewaing
 Christ the King School -
 Detroit
 Concordia Lutheran North -
 Farmington Hills
 Corpus Christi Catholic
 School - Holland
 Covenant Christian High
 School - Grand Rapids
 Crescent Academy
 International - Canton
 Cross Lutheran School -
 Pigeon
 Daystar Christian Academy -
 Ewart
 DeLaSalle Collegiate High
 School - Warren
 Detroit Catholic Central
 High School - Novi
 Detroit Country Day Lower
 School - Bloomfield Hills
 Detroit Country Day Upper
 School - Beverly Hills
 Detroit Cristo Rey High
 School - Detroit

Divine Child Elementary
 School - Dearborn
 Divine Child High School -
 Dearborn
 Divine Providence Academy
 - Conklin - Conklin
 Divine Providence Academy
 - Ravenna - Ravenna
 Eagle Creek Academy -
 Oakland
 East Martin Christian
 School - Martin
 Ebenezer Christian School -
 Ellsworth
 Faith Baptist School -
 Davison
 Faith Community Christian
 School - Belding
 Faith Lutheran School - Bay
 City
 Faithway Christian School -
 Burton
 Farber Hebrew Day School -
 Yeshivat Akiva -
 Southfield
 Fr. Gabriel Richard High
 School - Ann Arbor
 Fr. Luke M. Powers High
 School - Flint
 Fr. Marquette Catholic
 School - Marquette
 Fr. Marquette Middle School
 - Marquette
 Fremont Christian School -
 Fremont
 Gabriel Richard Catholic
 High School - Riverview
 Genesee Academy - Swartz
 Creek

Genesee Christian School -
 Burton
 Gesu Elementary School -
 Detroit
 Golden Rule School -
 Bronson
 Grand Rapids Christian
 Elementary School -
 Grand Rapids
 Grand Rapids Christian High
 School - Grand Rapids
 Grand Rapids Christian
 Middle School - Grand
 Rapids
 Greenhills School - Ann
 Arbor
 Grosse Pointe Academy -
 Grosse Pointe Farms
 Hackett Catholic Prep -
 Kalamazoo
 Hillsdale Academy -
 Hillsdale
 Holland Christian High
 School - Holland
 Holy Angels Elementary
 School - Traverse City
 Holy Cross Catholic School -
 Marine City
 Holy Family Regional
 School - Rochester Hills
 Holy Family School - East
 Tawas
 Holy Name School -
 Birmingham
 Holy Redeemer Elementary
 School - Detroit
 Holy Spirit Roman Catholic
 School - Brighton
 Holy Spirit School - Grand
 Rapids
 Huda School and
 Montessori - Franklin
 Huron Valley Catholic
 School - Ypsilanti

Immaculate Conception
 Elementary School -
 Traverse City
 Immaculate Conception
 School - Ira
 Immaculate Conception
 Ukranian School -
 Warren
 Immanuel - St. James
 Lutheran School - Grand
 Rapids
 Immanuel Lutheran School -
 Bay City
 Immanuel Lutheran School -
 Macomb
 Immanuel Lutheran School -
 Saginaw
 Inter City Baptist School -
 Allen Park
 Interlochen Arts Academy -
 Interlochen
 Jenison Christian School -
 Jenison
 John Paul II Catholic School
 - Lincoln Park
 Kalamazoo Christian High
 School - Kalamazoo
 Kalamazoo Christian School
 - Kalamazoo
 Ladywood High School--
 Detroit - Livonia
 Lake Area Christian School -
 Sturgis
 Lake Michigan Academy -
 Grand Rapids
 Lansing Catholic Central
 High School - Lansing
 Lansing Christian School -
 Lansing
 Legacy Christian School -
 Grand Rapids
 Libertas Christian School -
 Hudsonville

Livingston Christian
 Schools - Whitmore
 Lake
 Lumen Christi Catholic
 School - Jackson
 Lutheran High School-North
 - Macomb
 Marian High School -
 Bloomfield Hills
 Mercy High School -
 Farmington Hills
 Midland Christian School -
 Midland
 Moline Christian School -
 Moline
 Monroe Catholic ES - St.
 John Campus - Monroe
 Monroe Catholic ES - St.
 Mary Campus - Monroe
 Monroe Catholic ES - St.
 Michael Campus -
 Monroe
 Montessori Children's
 Center - Kalamazoo
 Montessori Children's
 Center of Allen Park,
 Inc. - Allen Park
 Most Holy Trinity School -
 Detroit
 Muskegon Catholic Central -
 Muskegon
 New Life Christian Academy
 - Kimball
 Niles SDA School - Niles
 Northern Michigan Christian
 School - Mc Bain
 Northpointe Christian
 School - Grand Rapids
 Notre Dame Preparatory
 School - Pontiac
 Nouvel Catholic Central
 High School - Saginaw
 Oakland Christian School -
 Auburn Hills

Otsego Christian Academy -
 Otsego
 Our Lady of Consolation
 School - Rockford
 Our Lady of Good Counsel
 School - Plymouth
 Our Lady of Lake Huron
 School - Harbor Beach
 Our Lady of Refuge School -
 Orchard Lake
 Our Lady of Sorrows School
 - Farmington Hills
 Our Lady of the Lake School
 - Prudenville
 Our Lady of the Lakes
 School - Waterford
 Our Lady of Victory School -
 Northville
 Our Lady Queen of Martyrs
 School - Beverly Hills
 Our Lady Star of the Sea
 School - Grosse Pointe
 Woods
 Our Savior Lutheran School
 - Lansing
 Our Savior Lutheran School
 - Marlette
 Our Shepherd Lutheran
 School - Birmingham
 Parkway Christian School -
 Sterling Heights
 Plymouth Christian
 Academy - Canton
 Plymouth Christian High
 School - Grand Rapids
 Potters House School -
 Wyoming
 Queen of Miraculous Medal
 School - Jackson
 Regina High School -
 Warren
 Resurrection School -
 Lansing

Roeper City and Country
 Elementary School -
 Bloomfield Hills
 Rudolf Steiner School of
 Ann Arbor - Ann Arbor
 Sacred Heart Academy -
 Mount Pleasant
 Sacred Heart School -
 Dearborn
 Sacred Heart School -
 Mount Pleasant
 Saginaw Chippewa Indian
 Tribe of Michigan -
 Mount Pleasant
 Saint John Paul II Catholic
 Academy - Menominee
 Shajara Tayyiba School -
 Canton
 Shrine Catholic Grade
 School - Royal Oak
 Shrine Catholic High School
 & Academy - Royal Oak
 South Olive Christian School
 - Holland
 Southfield Christian School -
 Southfield
 Spiritus Sanctus Academy -
 Ann Arbor
 Spiritus Sanctus Academy -
 Plymouth
 SS. Peter and Paul School -
 Ionia
 St. Ann School - Cadillac
 St. Anne Catholic Grade
 School - Warren
 St. Anselm School -
 Dearborn Heights
 St. Augustine Cathedral
 School - Kalamazoo
 St. Augustine Catholic
 School - Richmond
 St. Brigid Catholic School -
 Midland
 St. Catherine of Siena
 Academy - Wixom

St. Charles Borromeo
 Catholic School -
 Coldwater
 St. Charles Catholic School -
 Greenville
 St. Charles School -
 Newport
 St. Clare of Montefalco
 School - Grosse Pointe
 Park
 St. Edith School - Livonia
 St. Edward on the Lake
 School - Lakeport
 St. Elizabeth Catholic
 School - Reese
 St. Fabian Catholic School -
 Farmington Hills
 St. Frances Cabrini School -
 Allen Park
 St. Francis de Sales School -
 Manistique
 St. Francis High School -
 Traverse City
 St. Francis of Assisi School
 - Ann Arbor
 St. Francis Xavier School -
 Petoskey
 St. Gerard School - Lansing
 St. Germaine Elementary
 School - Saint Clair
 Shores
 St. Hugo of the Hills School
 - Bloomfield Hills
 St. Isaac Jogues Catholic
 School - Saint Clair
 Shores
 St. Joan of Arc School -
 Saint Clair Shores
 St. John Lutheran School -
 New Boston
 St. John the Evangelist
 School - Fenton
 St. Johns Lutheran Amelith -
 Bay City

St. John's Lutheran School - Midland
 St. Joseph Catholic School - Erie
 St. Joseph Catholic School - Lake Orion
 St. Joseph Elementary School - Battle Creek
 St. Joseph School - Howell
 St. Joseph School - Pewamo
 St. Joseph School - Trenton
 St. Joseph the Worker School - Mount Pleasant
 St. Joseph's School - Wayne
 St. Lawrence School - Utica
 St. Linus School - Dearborn Heights
 St. Luke Lutheran School - Clinton Township
 St. Luke's Lutheran School - Vassar
 St. Mary Cathedral School - Gaylord
 St. Mary Catholic Central High School - Monroe
 St. Mary Catholic School - Sault Sainte Marie
 St. Mary Catholic School - Spring Lake
 St. Mary School - Big Rapids
 St. Mary School - Charlotte
 St. Mary School - Lake Leelanau
 St. Mary School - Mount Clemens
 St. Mary School - Mount Morris
 St. Mary School - Niles
 St. Mary School - Pinckney
 St. Mary School - Royal Oak
 St. Mary School - Saint Clair
 St. Mary School - Wayne
 St. Mary School - Williamston

St. Mary/McCormick Catholic Academy - Port Huron
 St. Mary's Preparatory School - Orchard Lake
 St. Mary's Visitation School - Byron Center
 St. Matthew Lutheran School - Westland
 St. Michael Lutheran School - Wayne
 St. Michael School - Livonia
 St. Michael School - Remus
 St. Patrick School - Ada
 St. Patrick School - Brighton
 St. Patrick School - Carleton
 St. Patrick School - White Lake
 St. Patrick's School - Portland
 St. Paul Lutheran School - Bay City
 St. Paul Lutheran School - Lapeer
 St. Paul Lutheran School - Millington
 St. Paul Lutheran School - Northville
 St. Paul Lutheran School - Royal Oak
 St. Paul School - Grosse Pointe Farms
 St. Paul The Apostle School - Grand Rapids
 St. Peter Lutheran School - Eastpointe
 St. Peter Lutheran School - Macomb
 St. Pius Catholic School - Southgate
 St. Pius X School - Flint
 St. Regis School - Bloomfield Hills
 St. Rose of Lima Catholic School - Hastings

St. Sebastian School - Dearborn Heights
 St. Stephen School - Grand Rapids
 St. Thecla Catholic School - Clinton Township
 St. Thomas the Apostle School - Ann Arbor
 St. Thomas the Apostle School - Grand Rapids
 St. Valentine School - Redford
 The Pathfinder School, Inc. - Traverse City
 Traverse City Christian School - Traverse City
 Trinity Ev Lutheran School - Bay City
 Trinity Lutheran Monitor - Bay City
 Trinity Lutheran School - Jackson
 Trinity Lutheran School - Monroe
 Trinity Lutheran School - Reed City
 Trinity Lutheran School - Reese
 Trinity Lutheran School - Utica
 University of Detroit Jesuit - Detroit
 University-Liggett School - Grosse Pointe Woods
 Waldorf School Assn. of Michigan - Detroit
 Washtenaw Christian Academy - Saline
 West Catholic High School - Grand Rapids
 West Michigan Lutheran High School - Wyoming
 West Side Christian School - Grand Rapids

Western Michigan Christian
High School - Muskegon
Westside Christian
Academy - Detroit
WISE Academy - Dearborn
Heights

Zeeland Christian School -
Zeeland
Zion Evangelical Lutheran
School - Chesaning
Zion Lutheran Beaver
School - Auburn

Zion Lutheran School - Bay
City
Zion Lutheran School -
Harbor Beach
Zion Lutheran School -
Monroe

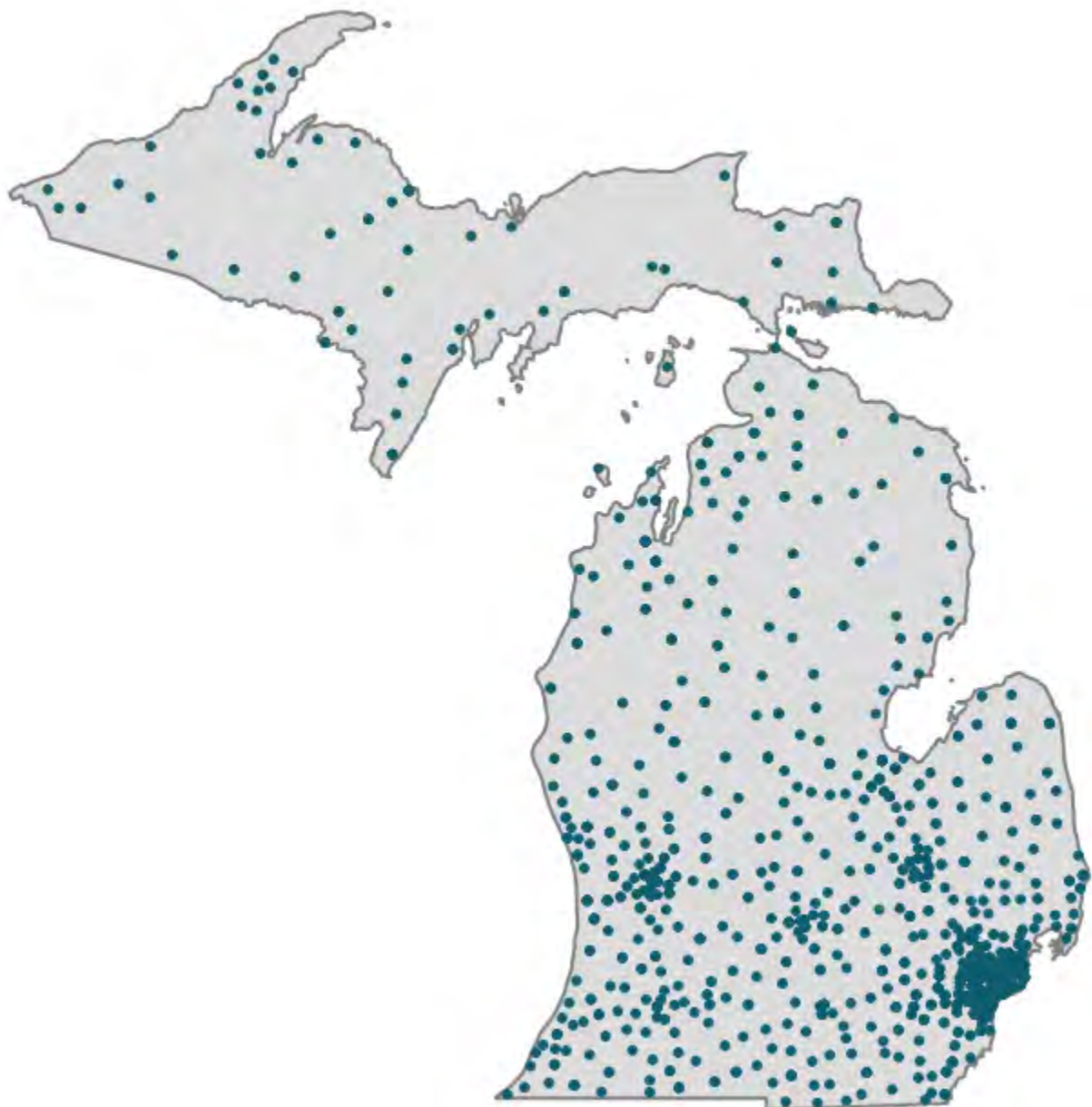
ISDs

Allegan Area E.S.A.
Alpena-Montmorency-
Alcona ESD
Barry ISD
Bay-Arenac ISD
Berrien RESA
Branch ISD
C.O.O.R. ISD
Calhoun ISD
Charlevoix-Emmet ISD
Cheb-Otsego-Presque Isle
ESD
Clare-Gladwin Regional
E.S.D.
Clinton County RESA
Copper Country ISD
Delta-Schoolcraft ISD
Dickinson-Iron ISD
Eastern Upper Peninsula
ISD
Eaton RESA

Genesee ISD
Gogebic-Ontonagon ISD
Gratiot-Isabella RESD
Hillsdale ISD
Huron ISD
Ingham ISD
Ionia ISD
Iosco RESA
Jackson ISD
Kalamazoo RESA
Kent ISD
Lapeer ISD
Lenawee ISD
Lewis Cass ISD
Livingston ESA
Macomb ISD
Manistee ISD
Marquette-Alger RESA
Mecosta-Osceola ISD
Menominee ISD
Midland County E.S.A

Monroe ISD
Montcalm Area ISD
Muskegon Area ISD
Newaygo County RESA
Oakland Schools
Ottawa Area ISD
Saginaw ISD
Sanilac ISD
Shiawassee Regional ESD
St. Clair County RESA
St. Joseph County ISD
State of Michigan
Traverse Bay Area ISD
Tuscola ISD
Van Buren ISD
Washtenaw ISD
Wayne RESA
West Shore E.S.D.
Wexford-Missaukee ISD

Figure 8. *Michigan Virtual* ISD, LEA, PSA District and Nonpublic Schools with Professional Learning Enrollments for the 2017-18 School Year



Endnotes

¹ Statistics cited from *Michigan's K-12 Virtual Learning Effectiveness Report 2016-17* available at <https://mvlri.org/research/publications/michigans-k-12-virtual-learning-effectiveness-report-2016-17/>

² See the *Michigan Merit Curriculum Guidelines: Online Experience* document available at https://www.michigan.gov/documents/mde/Online10.06_final_175750_7.pdf

³ A full text version of Section 21f is available online at [http://www.legislature.mi.gov/\(S\(ot33jfuslznlezro3trtx5b\)\)/mileg.aspx?page=GetObject&objectname=mcl-388-1621f](http://www.legislature.mi.gov/(S(ot33jfuslznlezro3trtx5b))/mileg.aspx?page=GetObject&objectname=mcl-388-1621f)

⁴ The statewide catalog of online courses can be found at <https://micourses.org>.

⁵ The survey instrument and report for both the adult and college student populations were published in *Public Awareness and Views of K-12 Online Learning in Michigan 2017* available at <https://mvlri.org/research/publications/public-awareness-and-views-of-k-12-online-learning-in-michigan-2017/>

⁶ The 55% statewide pass rate is published in *Michigan's K-12 Virtual Learning Effectiveness Report 2016-17*. See page 5.

⁷ This number reflects the number of unique students tracked through *Michigan Virtual's* Student Learning Portal. However, *Michigan Virtual* also had 497 additional enrollments through a third-party product, called EdReady, which are not included in this count.

⁸ CEPI's Entity Quick Search can be accessed at <https://www.cepi.state.mi.us/eem/EntitySearchQuick.aspx>

⁹ To learn more about the *Michigan Virtual's* Collaborative partnership opportunities visit <https://michiganvirtual.org/professionals/collaborative/>

¹⁰ The PLP is available at <https://plp.mivu.org/>

¹¹ For more information about the NuTeacher app, please visit <https://www.nuteacher.com/nuteacher/groups/michigan-virtual>

¹² For more information about the Essential Instructional Practices, please visit <https://literacyessentials.org/essentials/>

¹³ For more information about MyPD, please visit <https://michiganvirtual.org/professionals/mypd/>

¹⁴ More information about this course, including how to enroll, can be found at <https://michiganvirtual.org/course/mde-assessment-security/>

¹⁵ More information about this course, including how to enroll, can be found at <https://michiganvirtual.org/course/seclusion-and-restraint/>

- ¹⁶ More information about this module is available at https://media.mivu.org/mvu_pd/FAME/story_html5.html?lms=1
- ¹⁷ More information about this course, including how to enroll can be found at <https://michiganvirtual.org/course/educator-evaluation-in-mi-measurement-of-student-growth/>
- ¹⁸ More information about this course, including how to enroll, can be found at <https://michiganvirtual.org/course/differentiated-instruction-maximizing-learning-for-all/>
- ¹⁹ More information about this course, including how to enroll, can be found at <https://michiganvirtual.org/course/changing-minds-to-address-poverty-in-the-classroom/>
- ²⁰ The literacy essentials website can be found at <http://www.literacyessentials.org>
- ²¹ Additional information about the METS-S is available at <http://www.techplan.org/mitecs/mets/>
- ²² Visit <https://goopenmichigan.org/> for more information about this initiative.
- ²³ The Digital Makerspace can be accessed at <https://michiganvirtualmakerspace.org/>
- ²⁴ The report on the discussion and engagement patterns in online PLCs is available at <https://mvlri.org/research/publications/engagement-and-discourse-of-educators-through-online-professional-learning-communities/>
- ²⁵ The Mentor Blog Series posts are available at <https://mvlri.org/tag/mentoring/>
- ²⁶ More information about Day Camp 2018 is available at <https://michiganvirtual.org/daycamp-resources/>
- ²⁷ More information about the Blended Suite of Services is available at <https://michiganvirtual.org/professionals/blended-learning/>
- ²⁸ More information about Coaching is available at <https://michiganvirtual.org/professionals/coaching/>
- ²⁹ More information about Learn.BLEND.Lead is available at <https://michiganvirtual.org/learn/learn-blend-lead/>
- ³⁰ More information about Blended Learning Live! is available at <https://michiganvirtual.org/learn/bl-l-romulus/>
- ³¹ For more information about MyPD, please visit <https://michiganvirtual.org/professionals/mypd/>
- ³² For more information about the PD course, please visit <https://michiganvirtual.org/course/podcast-pd-screencasting-the-future-of-education/>
- ³³ For more information about the PD course, please visit <https://michiganvirtual.org/course/podcast-pd-google-forms-failure-free-failing-cbe/>
- ³⁴ The Toolkit is available at <http://lor.mivu.org/educational-tools>

- ³⁵ More information about the Online Mentor Community, including how to enroll in it, can be found at <https://michiganvirtual.org/course/online-mentor-community/>
- ³⁶ The report, *Engagement and Discourse of Educators through Online Professional Learning Communities*, is available at <https://mvlri.org/research/publications/engagement-and-discourse-of-educators-through-online-professional-learning-communities/>
- ³⁷ Part one of the blog teacher design research work is available at <https://mvlri.org/blog/michigan-virtual-teacher-professional-learning-community-design-research-blog-part-1/>
- ³⁸ Part two of the blog teacher design research work is available at <https://mvlri.org/blog/michigan-virtual-teacher-professional-learning-community-design-research-blog-part-2/>
- ³⁹ The Web Accessibility Resource page is available at art two of the blog teacher design research work is available at <https://michiganvirtual.org/resources/accessibility/>
- ⁴⁰ The three webinars on accessibility issues can be viewed at <https://mvlri.org/research/webinar-podcast/?search=accessibility>
- ⁴¹ The Student Learning Portal is available at <https://slp.michiganvirtual.org>
- ⁴² The report, *2017-18 Michigan Virtual Initiatives: Collaborative Partnerships, Credit Recovery, and Middle School Bundles*, is available at <https://mvlri.org/research/publications/2017-18-michigan-virtual-initiatives-collaborative-partnerships-credit-recovery-and-middle-school-bundles/>
- ⁴³ The report, *Research and design of a mobile application for K-12 professional learning*, is available at <https://mvlri.org/research/publications/research-and-design-of-a-mobile-application-for-k-12-professional-learning/>
- ⁴⁴ The report, *Combining data and text mining to develop an early warning system using a deep learning approach*, is available at <https://mvlri.org/research/publications/combining-data-and-text-mining-to-develop-an-early-warning-system-using-a-deep-learning-approach/>
- ⁴⁵ The report, *Engaging teachers in professional development through online book studies*, is available at <https://www.mvlri.org/research/publications/engaging-teachers-in-professional-development-through-online-book-studies/>
- ⁴⁶ The report, *Learning Trajectories in Online Mathematics Courses*, is available at <https://mvlri.org/research/publications/learning-trajectories-in-online-mathematics-courses/>
- ⁴⁷ The report, *Blended Teaching Readiness: Phase 2 – Instrument Development*, is available at <https://mvlri.org/research/publications/blended-teaching-readiness-phase-2-instrument-development/>
- ⁴⁸ The webinar recording, *Developing a Survey Instrument for Evaluating K-12 Blended Teacher Readiness*, is available at <https://mvlri.org/research/webinar-podcast/developing-a-survey-instrument-for-evaluating-k-12-blended-teacher-readiness/>
- ⁴⁹ The report, *Racial and Economic Diversity Trends in Virtual Charter Schools: An Analysis of National Enrollment Data, 2015-16*, is available at <https://mvlri.org/research/publications/racial-and->

[economic-diversity-trends-in-virtual-charter-schools-an-analysis-of-national-enrollment-data-2015-16/](#)

⁵⁰ The *Michigan Virtual Learning Effectiveness Report 2016-17* is available at <https://mvlri.org/research/publications/michigans-k-12-virtual-learning-effectiveness-report-2016-17/>

⁵¹ The Effectiveness Report webinar can be viewed at <https://mvlri.org/research/webinar-podcast/effectiveness-report-05-2018/>

⁵² More information on the self-paced Effectiveness Report course can be found at <https://michiganvirtual.org/course/michigans-k-12-virtual-learning-effectiveness-report/>

⁵³ The *Parent Guide to Online Learning*, *Mentor Fundamentals: A Guide to Mentoring Online Learners*, *Student Guide to Online Learning*, *Teacher Guide to Online Learning*, *Implementation Guidelines: Section 21f of the State School Aid Act*, and *School Board Guide to Online Learning* are available at <https://mvlri.org/resources/guides/>

⁵⁴ The *School Board Guide to Online Learning* is available at <https://mvlri.org/resources/guides/school-board-guide/>

⁵⁵ The *Teacher Evaluation and Effectiveness Report* is available at <https://mvlri.org/research/publications/teacher-evaluation-and-effectiveness-report>

⁵⁶ The Research Clearinghouse for K-12 Blended & Online Learning is at <https://k12onlineresearch.org/>

⁵⁷ *Learning Trajectories in Online Mathematics Courses* report is at <https://mvlri.org/research/publications/learning-trajectories-in-online-mathematics-courses/>

⁵⁸ The *Virtual School Course Design* report can be found at <https://mvlri.org/research/publications/virtual-school-course-design-accommodating-students-disabilities/>

⁵⁹ The report, *The Role of Online Teaching in Michigan Teacher Preparation Programs*, is available on the MVLRI website at <https://mvlri.org/research/publications/the-role-of-online-teaching-in-michigan-teacher-preparation-programs/>

⁶⁰ The report, *Blended Teaching Readiness: Phase 2 - Instrument Development*, is available on the MVLRI website at <https://mvlri.org/research/publications/blended-teaching-readiness-phase-2-instrument-development/>

⁶¹ MVLRI blog posts can be accessed at <https://mvlri.org/research/blog/>

⁶² MVLRI webinars may be viewed at <https://mvlri.org/research/webinar-podcast/>

⁶³ The mentor blog posts are available at <https://mvlri.org/tag/mentoring/>

⁶⁴ - *Helping Online Students Be Successful: Student Perceptions of Online Teacher and On-site Mentor Facilitation Support* (<https://mvlri.org/research/publications/helping-online-students-be-successful-student-perceptions-of-support/>) and *Helping Online Students Be Successful: Student Perceptions of*

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(<https://mvlri.org/research/publications/helping-online-students-be-successful-student-perceptions-of-online-teacher-and-on-site-mentor-instructional-support/>) are available as free downloads.

⁶⁵ The webinar is available at <https://mvlri.org/research/webinar-podcast/teachers-and-mentors-students-talk-about-online-learner-supports/>

⁶⁶ The published report detailing the results from these two surveys is available at <https://mvlri.org/research/publications/public-awareness-and-views-of-k-12-online-learning-in-michigan-2017/>

⁶⁷ The consumer awareness report can be accessed directly at <https://mvlri.org/consumer-awareness/>

⁶⁸ The State of Michigan #GoOpen repository is available at <https://goopenmichigan.org/>

⁶⁹ The *Michigan Virtual* Makerspace is available at <https://michiganvirtualmakerspace.org/>

⁷⁰ The *Guidelines and Model Review Process for Online Courses* is available at http://media.mivu.org/institute/pdf/guidelines_model_2013.pdf

⁷¹ The report, *Teacher Evaluation and Effectiveness*, is available on the MVLRI website at <https://mvlri.org/research/publications/teacher-evaluation-and-effectiveness-report/>

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