Online and Digital Learning in Minnesota

Report of the Online and Digital Learning Advisory Council

September 2013 - December 2013

The Online and Digital Learning Advisory Council was created by

the Minnesota Legislature Online Learning Option Act MS 124D.095 in 2005 and

reauthorized in 2009 and 2013.

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Introduction

In an ever evolving technological society, there are many things that continue to be of importance to education in our schools. There continues to be a divide among the technology available to students and access to high speed broadband. A variety of technology and digital tools are useful for improving learning. Digital tools and skills increase the productivity, scope, and magnitude of potential activity and impact that students will have. Resources and specialized training are important components to today's classroom.

Teaching students to use them means modeling--adapting to an individualized approach that also increases the productivity, scope, and magnitude of the effort we make toward moving students forward. In order to begin to utilize the tools, both students and teachers need high quality examples of the technologies that are available to improve learning. To individualize instruction and maximize each student's progress, each student needs access to a device, a broadband Internet connection, high quality digital content and teachers trained to help them use it.

Our primary recommendation is that the Commissioner and Legislature recognize the impressive accomplishments of Minnesota schools and understand the innovative initiatives under way before prescribing new directives.

K-12 Online Learning Advisory Council Members

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Purpose and Structure of the Advisory Council

Purpose: The advisory council shall make policy recommendations to the commissioner and committees of the legislature having jurisdiction over kindergarten through grade 12 education annually by December 15 of each year, including implementation plans based on recommendations from previous councils and task forces related to online and digital learning.

The third MN K-12 Online Learning Advisory Council was authorized in 2013 by the Minnesota Legislature in [statute 124D.095 Subd. 10](#). Members were appointed in September 2013 and the first meeting held October 11, 2013. The Council consists of 14 members representing education stakeholders from across the state. This report includes findings and recommendations from the first three months of the Advisory Council's operations.

Minutes from meetings and support documents are available at the [MN Online and Digital Learning Advisory Council website](#). All meetings are open to the public and dates are posted on the [MN Department of Education website](#).

Initial Actions

Review of the [Historical Background of Online Learning Reports and Legislation](#).
Adoption of a set of [Guiding Principles](#) for the current term.
Revision of the [Definitions of Online and Digital Learning Terminology for 2013](#).

Two items of most critical importance have been identified for the state to address immediately:
1. Open Educational Resources (OER): collaborative development and use of digital curriculum that is openly licensed and free to use.
2. Professional Development: making high quality training available for all teachers in the use of digital content and the changes that emerge with a shift to digitally-based curriculum and instruction.

The Council will continue to review reports and recommendations from previous years and monitor current trends and developments as we bring forward recommendations for implementation.

1. Open Educational Resources (OER)

The extraordinary expansion of open educational resources in the last few years has accelerated the pace of adoption by making it financially feasible for public schools to make a rapid transition to digital content. The availability of high-quality, low-cost digital resources for use across the spectrum of site-based classroom, blended, and fully online settings has become an important element touching fair and equal access, quality assurance and teacher training. As public schools move to implement digital learning through 1:1 device initiatives, flipped, blended, and other learning programs, the notion that all teachers will be using digital content is becoming a reality.

The current council members reviewed the previous reports regarding open digital resources, and identified it as the most important topic to highlight in our first report to the Legislature and Commissioner for the following reasons:

1. Financial impact: Taking advantage of free and low cost materials can free funds in tight budgets to address other pressing issues, such as professional development in moving to individualized instructional models, access to devices and broadband internet, learning interventions, expansion of curriculum options and college and career readiness.

2. Quality assurance: Schools now have greater access to exemplary content from educational pioneers at top universities, schools and organizations in Minnesota, the nation and throughout the world. These resources include professional development opportunities for staff as well as lessons for K-12 students to use in classrooms or as models to be adapted to specialized needs. The ability to adopt, adapt and improve content immediately at its source is critical to responding to the rapid pace of change experienced by today's students. However, practices and structures for vetting educational resources for quality and appropriateness are still emergent.

3. Instructional best practices: In order to gain maximum benefit from quality OER curriculum development efforts already put forth, it is vital that K-12 educators have the knowledge, training, and tools necessary to implement OER in the classroom. Toward that end, K-12 educators need a portfolio of best practices related to vetting and integrating OERs in the classroom. Educators and public school systems should be systematically learning from each other as these new technologies are incorporated – they should not all be starting from scratch.

First Council Actions and Recommendations

The 2006-2008 Advisory Council addressed the issue of shared resources in its Program Design Recommendations:
- Develop structures that encourage resource sharing to enhance online learning, create greater opportunity and accessibility for students and schools, provide quality instruction and professional development and avoid unnecessary duplication of resources and effort.

Likewise, this was included in its Fair and Equitable Access Recommendations:
- Develop a common digital repository such as an online learning commons serving the entire state, accessible to students, parents, and teachers.

Second Council Actions

A number of significant developments have occurred in the past few years, from grass-roots initiatives to national and state projects. The OER Sub-group of the Second Council reviewed a wide range of projects and provided support and advice toward a number of them. For details on the sub-group findings, please see MNOLAC Sub-group Report on OER. Their recommendations were:
1. Determine a funding mechanism to support OER
2. Support the OER Institute initiative

Third Council Continuing Work: Definition of Open Educational Resources

Open Educational Resources include digital content that is available for public use, download, re-use, remixing and distribution. Cost basis is free or based on initial investment with limited restriction on usage once acquired. See OER Definition for further considerations and wider meanings.

The Council will continue to refine the definition of OER by convening a sub-group with MDE, MNLC, MEMO, the state librarian's office and Minitex to adopt a formal definition of Open Educational Resources for Minnesota K-12 education as it applies to state law and educational policy. The definition will address issues of:
1. Proprietary, commercial and non-commercial uses
2. Cost
3. Copyright
4. Control over content
5. Quality review
6. Sustainability
7. Scope

<u>Examples of Open Educational Resources and related projects in Minnesota</u>
High quality, well-designed, free or low cost (for additional features)

1. **Minnesota Learning Commons (MNLC)** (https://mnlearningcommons.us/): The MNLC was developed in 2009 from the Minnesota Learning Innovations Council, with the intent of gathering online and digital resources into a central location for the state.

2. **National Repository for Online Courses (NROC):** A statewide subscription (http://www.montereyinstitute.org/nroc/) was initiated in 2010 through the efforts of partners in the MN Learning Commons.
   - The University of Minnesota, Minnesota State Colleges and Universities (MNSCU) and Minitex (FY11&12) or MDE (currently), contribute $25,000 each toward the subscription.
   - The NROC resources were put into a Moodle instance at Intermediate District 287 (http://courses.district287.org/course/category.php?id=5), with access granted for any teacher or school in the state to download.
   - Over 70 districts have downloaded the courses since they were opened.
   - Teachers and students also access the NROC materials through the NROC site, called Hippocampus (http://hippocampus.org/).
   - Free at basic level, subscription allows for higher level of service.

3. **MoodleShare** (http://moodleshare.org/) was launched by Minnesota teacher and digital learning facilitator Jon Fila, providing access to courses and units available worldwide for free download.

4. **Ed/Tech ARRA Grant:** Over 125 digital units were added to MoodleShare with the support of an American Reinvestment and Recovery Act Educational Technology Grant. Teachers were trained in the skills to find, design and build digital curriculum and share it openly under a Creative Commons License. These are now available on Moodleshare (http://moodleshare.org/).

5. **MERLOT** (http://www.merlot.org): The Multimedia Educational Resource for Learning and Online Teaching (MERLOT) continues to be a key resource for finding free digital content.

6. **Sophia** (http://www.sophia.org/) was launched with a vision of transforming education through a vibrant online community of teachers and learners. A customizable education platform that offers more than 37,000 academic tutorials, Sophia provides self--paced, inspirational and relevant curriculum to learners of all stages and ages.

7. **Minnesota Digital Curriculum Catalog** (http://mndigitalcatalog.org/): Designed and implemented in 2013, as a project of the Advisory Council to meet the legislative requirement passed in 2012. The catalog provides information on digital curriculum that is already aligned to Minnesota academic standards.

8. **OER Institute with Achieve, Inc.:** Several Council members and MDE representatives attended this national conference to support and share OER initiatives across states. A draft plan for establishing OER in Minnesota was drafted and incorporated into the [Digital Curriculum Catalog project](#).

9. **Minnesota Partnership for Collaborative Curriculum** (http://mncollaborativecurriculum.org/): Launched in 2013 with the goal of creating open digital courses for grades 3-12 in Math, English/Language Arts, Science and Social Studies. With the proliferation of 1:1 device initiatives, the desire for quality digital courses has compelled 31 districts to contribute toward a common effort to create open digital courses and resources.

Recommendations: Open Educational Resources

1.1 Determine a funding mechanism to support OER
   a. Encourage public schools, either individually or through consortia, to devote a percentage of their curriculum budget to the implementation, and development where needed, of high quality collaborative, open educational resources. A key benefit will be to focus critical funds on developing and sharing expertise and tailored curricula within and between individual schools and school systems.
   b. Match a portion of the budget committed by a district or charter school to implement and create digital materials that are made available under an open license. These matching funds would be dedicated to training teachers in the implementation of digital curriculum in the classroom.

1.2 MDE and the Legislature will support OER initiatives that ensure quality and provide a structure to assist in teacher adoption.
   a. Establish an outreach strategy to connect teachers and their administrators with OER options and benefits.
   b. Establish a recognition program for teachers who have implemented OER and shown leadership in OER implementation through the professional development of their colleagues.
   c. Include training in the implementation (including understanding of copyright and licensing) and evaluation of OER in the pre-service preparation of teachers in Professional Development Recommendations (see Part 2 below).
   d. Provide support and facilitation of review processes that ensure quality for OER.
   e. Support efforts to create quality guidelines for OER adoption.

2. Professional Development

The 2006-2008 Council reviewed Teacher Qualifications and the skills set for online teaching, finding that "not all teachers who are successful in a face-to-face environment are as proficient in an online environment" (17). Identified needs included: fund, conduct, synthesize, and disseminate research on best practices in online instruction… and develop clear, streamlined standards for effective teaching in online learning environments based on the principles of best practices in online instruction" (17).

Their recommendations echo those from earlier reviews:
- Establish a mechanism in the proposed unit of online learning (Appendix M) to gather and synthesize existing research and fund, implement, and disseminate new research in online learning. This research will form the foundation of the standards of effective practice for online learning.
- Develop clear and streamlined standards of effective practice in online learning and instruction. These standards should be distinguished from the Standards of Effective Practice for Minnesota Teachers, as licensed Minnesota teachers have already demonstrated proficiency in the existing standards.
- Create a voluntary certificate program by schools of education in collaboration with online learning providers to provide training opportunities for teachers. Such programs would provide recognition to teachers demonstrating proficiency in the best practices of online instruction.
- Establish incentives for teachers to pursue the optional certificate or endorsement. For example, educational institutions might receive special recognition or distinction in their accreditation and certification procedures for having a certain proportion of their faculty possess the online instruction certificate.

Second Council Actions

The Sub-group on Professional Development reviewed requirements in other states and Minnesota teacher preparation programs. For details on their review, please see MNOLAC Sub-group on Professional Development. In the 2012 legislative session, language on Professional Development was added to require teacher preparation and development in online and digital pedagogy.

Subcommittee Conclusions/Beliefs:
- Digital learning will change what teachers need to learn in order to remain highly qualified. As teaching becomes more differentiated, so will teacher training.
- Highly qualified, licensed teachers need specific training to be effective teachers of digital education. Training should require teachers to demonstrate competency in applying technological-pedagogical-content knowledge to meet the needs of diverse learners in different educational contexts.

- Digital learning can change how teachers receive training and professional development. Professional development needs to be dynamic and "on-demand" and should model effective use of educational technologies in a blended or completely online educational format.
- Teachers should be expected to verify that they are qualified to teach in a blended or online classroom.
- Online curriculum does not diminish the role of the licensed teacher; it shifts the role of the teacher to facilitator supporting mastery-based learning and higher-order thinking.
- The state needs to carefully consider teacher licensure issues such as teaching across state lines and the use of non-certified personnel. Student-teacher ratios should also be considered as they relate to student achievement.

Third Council Continuing Work: Summarization of Professional Development

The following requirements were passed by the legislature in 2012:

122A.60 STAFF DEVELOPMENT PROGRAM.
Subd. 1a.Effective staff development activities.
(a) Staff development activities must:
(4) enhance teacher content knowledge and instructional skills, including to accommodate the delivery of digital and blended learning and curriculum and engage students with technology;

122A.18 BOARD TO ISSUE LICENSES.
Subd. 3a.Technology strategies.
All colleges and universities approved by the Board of Teaching to prepare persons for classroom teacher licensure must include in their teacher preparation programs the knowledge and skills teacher candidates need to deliver digital and blended learning and curriculum and engage students with technology.

The definition of the "knowledge and skills...to deliver digital and blended learning and curriculum and engage students with technology" has remained vague and uncertain. To move toward accomplishment of the intended results, the Council will continue to work on the following aspects of professional development:

Training content and parameters
- This training must "meet nationally recognized professional standards" (MS 124D.095 subd 7) of high quality digital teaching. Nationally recognized standards include the International Association of Online Learning (iNACOL) Standards for Quality Online Teaching, SREB Standards for Quality Online Teaching and ISTE NETS-T standards. They would address several needs:
    - Acknowledgement of different skill set and experience;
    - Recognition and enhancement of existing training programs;

- ○ Process to document or demonstrate how nationally recognized standards for quality digital teaching have been met;
- ○ Consideration of endorsement or certificate;
- ○ Inclusion in teacher-preparation programs.

Implementation
- ● Requirement for tracking teacher digital tool training requirements
  - ○ Conversation with MDE, Board of Teaching, MACTE, MEMO, MNLC and ODLAC
  - ○ Consideration of funding a professional training portal
- ● MN Learning Commons investigation and reporting of standards that are used to evaluate skills
  - ○ Develop and conduct a survey of all teacher programs
  - ○ Suggested Review for Online and Digital Teaching requirements or demonstrable skill-set that may include the following structure:
    - ■ Foundations for Teaching and Learning Online
    - ■ Creating Your Learning Environment using Strategies for Active Learning Assessment (Getting started Basics Learning Management System, LMS)
    - ■ Teaching with Technology (Understanding of digital literacy for both teachers and students and for example an investigation of the Northstar Digital Literacy Project within Minnesota and other resources available)

Recommendations: Professional Development

2.1 In order for teachers to meet the requirements established in law to gain the "knowledge and skills to accommodate the delivery of digital and blended learning and curriculum and engage students with technology" (2012 legislation), the Minnesota Learning Commons (K-20 initiative), with state funding and in coordination with the Board of Teaching, MACTE and MDE will:
- ● Identify and adopt nationally recognized standards for assessing these skills;
- ● Identify criteria for quality training programs to meet those standards;
- ● Develop and implement in conjunction with teacher education programs the quality review process for the digital teacher training, including:
  - ○ Definition of the parameters and the need;
  - ○ Identification of support for review and improvement.

2.2 Training to teach in a digital learning classroom should be delivered in a flexible, on-demand format that models effective use of educational technologies and pedagogies in a blended or online educational format.

Conclusion

Our recommendations are concise and are made with the belief that, if adopted, they would provide the most efficient far-reaching benefits to all Minnesota students.

The previous councils recognized the importance of digital learning to promote and enhance learning for all students through individualized approaches to instruction. The new council will work towards goals of making this a reality for students.

Minnesota has provided national leadership in the development of new instructional models, innovative policy, cutting edge initiatives and collaborative solutions. Much remains to be done, and we look forward to building on this tradition to raise achievement for all students.