

STEM Committee Meeting Minutes

Ohio Department of Education
25 South Front Street,
Columbus, OH 43215
Conference Room B-004
May 31, 2017

A meeting of the STEM Designation Committee established in Ohio Revised Code 3326.02 was held on May 31, 2017, at 10:00 a.m. at the offices of the Ohio Department of Education.

Committee members in attendance:

- Dr. Tom Schwieterman (Chair), VP, Clinical Affairs and Chief Medical Officer, Midmark Corporation, Appointed by the Ohio Senate.
- Mr. Paolo DeMaria, Superintendent of Public Instruction, Ohio Department of Education;
- Mr. Matt Peters, Assistant Director, Ohio Development Services Agency (designee for David Goodman);
- Ms. Jessica Mercerhill, Senior Director of Educator Preparation, Ohio Department of Higher Education (designee for John Carey).

Not present:

- Mr. Stephen Lyons, EVP, The Columbus Partnership, Appointed by the Ohio House of Representatives.

Also present were:

- David Burns, Director, Battelle STEM Innovation Networks - Ohio STEM Learning Network;
- Buddy Harris, Director, Office of Innovation, Ohio Department of Education;
- Holly Lavender, STEM Education Lead, Ohio Department of Education;
- Brittany Steele Sendi, Assistant Legal Counsel, Ohio Department of Education;
- Annalies Corbin, PAST Foundation;
- Ryan Burgess, Governor's Office of Workforce Transformation;
- Dr. Steve Gratz, Senior Executive Director, Center for Student Support and Educational Options, Ohio Department of Education;
- Chad Watchorn, Regional STEM Collaborative;
- Heather Sherman, Ohio STEM Learning Network;
- Kelly Zywczyk, Canal Winchester Middle School;
- Kevin Cornell, Dayton Regional STEM Center;
- Mary Petelin, St. Mary – Chardon;
- Amber Yeager, St. Mary – Chardon;
- Julie Fedak, St. Mary – Chardon;
- Robert Brownfield, St. Vincent – St. Mary High School;
- Kirk Koennecke, Graham Local Schools;
- Brian Coffey, Herbert Mills Elementary School;
- Tracy Martz, DECA Prep;
- Jeanne Gogolski, Ohio Soybean Council;
- Jenni Domo, Unioto Elementary School;

- Andrew Dougherty, Ohio State University Dept. of Physics;
- Tisha Lewis, Career Connections, Ohio Department of Education;
- Chantal Hayes, Cincinnati Museum Center;
- Malia Mast, Express

I. Call to order:

Dr. Tom Schwieterman called the meeting to order at 10:05 a.m.
Minutes were recorded by Holly Lavender.

II. Welcome and introductions:

Buddy Harris, Mr. Paolo DeMaria and Dr. Tom Schweiterman welcomed all attendees, and the committee members introduced themselves.
Buddy Harris provided a brief overview of the purpose of the meeting.

III. Approval of minutes:

Minutes from the March 28, 2017, meeting were sent to committee prior to the meeting.
Mr. Matt Peters moved to **Approve** the minutes from the March 28, 2017, meeting of the STEM Committee, seconded by Mr. Paolo DeMaria.
The **motion carried**.

IV. Review of Linden McKinley progress toward meeting conditions for approval:

At the June 6, 2016 meeting to designate new STEM schools, Linden McKinley STEM Academy was approved with conditions. These conditions outlined a review of specific curriculum items, conducted by the Ohio STEM Learning Network and scheduled at 3 month intervals, and stated that OSLN would report back to the committee following each review. The school was to meet the conditions for full approval within one year.

David Burns from the Ohio STEM Learning Network (OSLN) provided an update on the progress of Linden McKinley. Because of a shooting that took place at the school earlier in the year, work toward curriculum development was temporarily suspended in order to focus on student support. Mr. Burns recommended that the committee extend the opportunity to Linden McKinley to meet the requirements for full approval by one year (to 2018) due to the setback. However, this opportunity would not be extended indefinitely.

Mr. Matt Peters moved and Mr. Paolo DeMaria seconded the motion to **approve** an extension for Linden McKinley STEM Academy to meet the conditions for full designation to May of next year (2018).
The **motion carried**.

V. Discussion and Resolution on proposals for STEM Designation:

1. *DECA Prep (Montgomery County – amendment to add grades K-5 to existing designation)*

Recommendation from OSLN (David Burns): Recommend approval to extend the designation to include grades K-5 with no reservations.

Mr. Matt Peters moved and Ms. Jessica Mercerhill seconded the motion to **Approve** the amendment from DECA Prep to extend the school's existing STEM designation equivalent to its K – 5 grade levels.
The **motion carried**.

2. *St. Mary School - Chardon (Geauga County)*

At the March 28, 2017 meeting, the committee approved a motion to return the STEM designation application to the school, and requested that the school bring additional evidence for consideration when the committee reconvened in May.

Recommendation from OSLN (David Burns): At the March meeting the application was 99% there, but had appeared to be programmatic. This was due to the way the application was written. Heather Sherman (OSLN) worked with the school and there is an understanding that STEM is integrated throughout the school. Recommend approval.

Mr. Matt Peters moved and Ms. Jessica Mercerhill seconded the motion to **Approve** the application for STEM designation equivalent for St. Mary School – Chardon.

The **motion carried**.

3. *St. Vincent – St. Mary High School (Summit County)*

At the March 28, 2017 meeting, the committee approved a motion to return the STEM designation application to the school, and requested that the school bring additional evidence for consideration when the committee reconvened in May.

Recommendation from OSLN (David Burns): At the March meeting the application appeared to be programmatic. This was due to the way the application was written. Heather Sherman (OSLN) visited the school. It's good to have all kinds of schools on board. Recommend approval.

Ms. Jessica Mercerhill moved and Mr. Matt Peters seconded the motion to **Approve** the application for STEM designation equivalent for St. Vincent – St. Mary High School.

The **motion carried**.

VI. **Committee discussion around engaging business and industry partners in STEM**

Dr. Tom Schwieterman, committee chair, invited members of the STEM Innovation Working Group and the Governor's Office of Workforce Transformation to engage in the committee discussion:

Dr. Schwieterman stated that schools and industry have tended to be siloed. The goal of STEM is to create innovation around problem-based learning. His company has recently expanded into a small town, and there is a need for a powerful STEM program in Ohio to bring it along. There is opportunity for the STEM committee to engage in "push-pull" rather than "all pull" from the schools, looking for best practices.

Dr. Annalies Corbin, president and CEO of the PAST Foundation, talked about the work of her organization in bridging education and industry. Their facility provides a space for business, industry, K-12 and the community to all come together. Other schools (not STEM designated) are coming in to visit, and many career centers have taken a lot of interest and are looking to make the image of CTE "retooled" to be relevant to the emerging workforce. PAST recently worked with High Point Career Center to create two new pathways in Advanced Manufacturing and Smart Technology. Helping schools to understand the skill set is important. One of the reasons High Point went this direction was because their leadership identified the ability of their space to tap into areas where districts are not (local industry, advanced manufacturing). There needs to be a meaningful way to share pathways with districts. Many students could benefit from these opportunities.

David Burns spoke on the notion of the silo: How to get around the Carnegie Unit? Breaking this mold is hard. The way to break it is to show people how to do it, for example, the Opioid Design Challenge.

Annalies Corbin stated that creating pathways is hard because of current "buckets" for CTE courses. Buckets are pre-structured at the state level, making it hard to be flexible to meet local industry needs. The teaching profession is somewhat insular by design. Very few have ever stepped out into the world of industry. It is very difficult for traditional teaching systems to keep up world of industry. We need to organically merge teaching and industry to solve this problem. Higher Ed needs to be retooled as well. PAST did a study of the Hybrid Teaching Model they developed in South Dakota. As a result of this study, South Dakota University has decided to retool their teacher preparation program to include the Hybrid Teaching Model.

Ryan Burgess, from the Governor's Office of Workforce Transformation, stated that the Governor's Workforce Board conducted an exercise to identify challenges. They determined there is a need to better align education and industry, and a need for a culture of continuous learning to accommodate change. It is incumbent for industry to step up, and take the first step to contact superintendents and let them know what is needed, and to initiate these connections.

Jessica Mercerhill asked about what is being done at the superintendent level to help them?

Chad Watchorn, director of the Regional STEM Collaborative (western Ohio) spoke to the committee about the work of the RSC in connecting high schools with local industry. Looking at the Ohio Means Jobs website, there are lots of college-level internships available, but not high school. We have a working model for “What does it look like to employ a 17-year-old?” Industry needs help in knowing how to do this; a “play book.” The RSC can help to build this out for them (for high school). For example, what are the learning outcomes that matter for industry? How can industry best help? A playbook could be a game changer. These things are universal and could be done over any industry sector.

The Quality Metric the STEM working group is working on is the “connective tissue,” is critical to make everything happen. We’re on a good road, with lots of groundwork being laid and we have the tools to get there.

Annalies Corbin stated that high school is too late. Much could happen in the K-12 space much earlier. High school is a stretch for industry but what could this look like for elementary and middle school?

Kirk Koennecke, superintendent of Graham Local Schools, stated that it’s important to consider the local Chamber of Commerce as a long-term investor. They’re on our side and they’re not moving elsewhere. Perhaps consider a policy to require job shadowing and internships.

VII. Closing Remarks

Dr. Tom Schwieterman made a few closing remarks:

- How can we make the playbook idea a reality?
- Would like to see the committee outreach to some of the STEM school facilities, to see them.
- Perhaps let students document some of their experiences.

VIII.

Mr. Matt Peters moved to adjourn the meeting, seconded by Dr. Tom Schwieterman.

The meeting adjourned at 11:49 a.m.