ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

With a goal to accelerate student achievement, the Ohio Appalachian Collaborative—Personalized Learning Network (OAC-PLN) began in 2014 and involved 27 school districts mostly located in Eastern/Southern Ohio. OAC objectives included developing student access to advanced learning and effective instruction through a networked, 6-12th grade, high-quality blended learning and dual enrollment system. Battelle for Kids served as the project management organization for the Collaborative and subcontracted with Ohio University’s Voinovich School of Leadership and Public Affairs to conduct a multi-year external evaluation of the Ohio Department of Education’s Straight A-funded initiative.

PRIMARY RESULTS

The project has effectively addressed equity in student access to dual enrollment/dual credit opportunities for these rural school districts located mostly in Appalachian Ohio, which has historically lower educational attainment.

The emphasis on improved learning environments and effective instructional practices has improved student outcomes on a number of education metrics.

Sharing synchronous dual credit courses across districts via Polycom systems proved challenging in a number of ways, most notably, in aligning course schedules.

The technology influx drastically increased student access to 1:1 computing devices and shifted teachers and districts toward deep integration of these learning-enabling digital learning devices.

The collaborative, networked learning structure of the OAC-PLN provided school districts (mostly rural Appalachian school districts) a boost toward meeting students’ academic needs.
PROJECT DESCRIPTION

The shared aim of districts, partners and stakeholders was to overcome the rural opportunity gap by increasing student access to advanced learning and effective instruction through a networked blended and dual enrollment learning system.

The project was unique in that it involved 27 rural school districts geographically disbursed across approximately one-third of the state. Inter-district collaboration, joint professional development, and information sharing (i.e., best practices, course development, lessons learned) were necessary for successful implementation of the project, but it is impossible for all the work to occur face-to-face. Thus, web-based resources were a key component of the project. That included incorporation of online learning platforms for teachers, online virtual meetings, and incorporation of shared synchronous and asynchronous learning platforms for students.

COLLABORATIVE GOALS

**Increase rural student aspiration and achievement** through unbounded access to advanced learning, high-quality content, and effective instruction that results in securing postsecondary credentials with real labor market value;

**Move more educational resources to the control of the learner** through blended learning and digital technologies that accelerate learner feedback and personal mastery;

**Reduce postsecondary education costs for rural students and their families** through a shared dual enrollment system led by a network of highly effective and properly credentialed high school teachers;

**Rapidly build the capacity of rural educators to increase and more personalize student access to advanced learning** through a shared professional learning network and platform that gives them unbounded access to the resources and supports they need; and,

**Make the shift to more personalized learning sustainable for rural schools** through shared services and the power of a large and influential consortium to change the system and save costs.
STUDENTS

PROJECT AIMS AND EFFORTS

The primary goal of the OAC-PLN was to increase student achievement via access to advanced learning, high-quality content, and effective instruction toward postsecondary achievement.

Efforts toward improved student outcomes:
- ✔ Increased access to dual enrollment/credit and blended learning opportunities;
- ✔ Teacher professional development in Project Based Learning (PBL) and Formative Instructional Practices (FIP);
- ✔ Development of career pathways;
- ✔ Increased student access to digital learning/computing devices.

STUDENT OUTCOMES

Through the OAC-PLN, high school students in many of the participating districts are now able to personalize their education via increased blended learning, dual enrollment (DE) and dual credit opportunities. Students can enroll in dual credit online courses to meet their personal interests or enroll in in-person dual credit courses and graduate from high school with several college credits or even an associate's degree. Many students reported in focus groups that the dual credit courses were more rigorous and that motivated them to work harder. Further, some students not yet enrolled in dual credit courses noted the future opportunity to enroll in them was motivating as evidenced by the following comment: "Definitely trying harder I think. Because there's a possibility that more classes through colleges are going to be offered next year and I don't know what the requirements are going to be. So I gotta' make sure all my grades are good enough for them to like allow me to take them."

The OAC-PLN also included substantial resources for technological infrastructure such as improved broadband capabilities and purchase of Polycom systems for streaming synchronous DE courses. There was also an influx of computing devices such as Chromebooks. This led to many more students in these rural districts having one-to-one access to such devices.

While students could be taught dual credit courses by a teacher in a partnering district, or by a teacher in their own district, there was a preference for the familiar teachers in their home districts. Students noted they were more comfortable with those teachers and felt as though they could communicate more easily as well as access them for assistance.

1,860 more students had access to 1:1 computing devices from 2017 to 2018.

Sample of 16 districts.

“And more specialized towards what you want. So I feel like I learn a lot more in them (dual credit courses) because I care about what I’m learning versus just trying to get the letter grade that I want.”

High School Student
The OAC-PLN has effectively brought about change for the majority of districts in two key student outcome metrics—acquisition of college credits and scoring remediation-free on the ACT. Both metrics are key indicators of student success in postsecondary education (Karp et al., 2008; Noble & Sawyer, 2002). Specifically, data reported to the Ohio Department of Education show substantial improvements in both student acquisition of dual enrollment credits as well as the percentage of students scoring remediation-free on the ACT. Twenty-two districts improved the percentage of students graduating with three or more DE credits from 2014 to 2018. Further, in several districts the percentages improved dramatically from the baseline year 2013/2014 to 2017/2018. Specifically, 18 districts improved by 20 to 40 or more percent of students earning three or more DE credits by graduation, whereas among the comparison districts only two made such gains. Most notably, 22 of the 26 OAC-PLN districts had a higher percentage of students earning three or more DE credits, compared to a similar district (Figure 1). Thirteen OAC districts started out with a lower percentage of students graduating with three or more DE credits but ended up surpassing their comparison district. This is a dramatic change, and it is evident that credentialing teachers in these rural districts has helped bring equity to the issue of student access to such opportunities.

As for improvement in students scoring remediation-free on the ACT, we see that 20 (or over ¾ of the districts) (Figure 2) have an improvement from baseline year in 2013/2014 to 2017/2018. In addition, 15 of the OAC-PLN districts had a higher percentage of students remediation-free compared to a similar district. This is a more moderate change and difference than the comparison districts.

“I think they’re more rigorous (DE courses) but at the same time I feel more motivated in them. Because I know the value in the end and how much time and money it could save me and prepare me for my future.”

High School Student

Figure 1.
District Results in Dual Enrollment

22 out of 26 districts had an increased percentage of students garnering three or more Dual Enrollment Credits by graduation.

Figure 2.
District Results on Remediation-Free on the ACT

20 out of 26 districts had an increased percentage of students scoring remediation-free on the ACT.
For several other secondary data metrics (Figure 3), we see mixed results but over half faring better than a similar comparison district on most remaining metrics. In some ways, it is not surprising that we see more change in the student acquisition of DE credits, as the link between credentialing teachers and student access to the credit opportunities is quite direct.

**STUDENT CHALLENGES AND SOLUTIONS**

Some students reported they preferred DE courses taught by teachers in their own districts whom they were familiar with and whom they felt they could more easily access. A solution to this challenge is to have these teachers offer the courses or prepare the students for taking courses with unfamiliar teachers.

Figure 3
**Student Outcomes on District-Level Metrics**

**OAC districts with gains from baseline**

- High school graduates earning three or more dual enrollment credits while in high school: 22/26
- High school graduates scoring remediation-free on ACT College Entrance Exam: 20/26
- Four-year graduation rate: 16/26
- High school graduates participating in ACT College Entrance Exam: 20/26
- Four-year graduation cohort enrolled in college within two years of high school: 11/26
- High school graduates earning industry-recognized credentials: 8/26
- Four-year graduation rate - Economically Disadvantaged students: inadequate data

**OAC Districts faring better than their similar non-OAC comparison district in 2018**

- High school graduates earning three or more dual enrollment credits while in high school: 20/26 OAC Districts
- High school graduates scoring remediation-free on ACT College Entrance Exam: 15/26 OAC Districts
- Four-year graduation rate: 16/26 OAC Districts
- High school graduates participating in ACT College Entrance Exam: 20/26 OAC Districts
- Four-year graduation cohort enrolled in college within two years of high school: 14/26 OAC Districts
- High school graduates earning industry-recognized credentials: 14/26 OAC Districts
- Four-year graduation rate - Economically Disadvantaged students: inadequate data

“You could see that there were kids taking the course at the college and then also on the screen you could see that there were two other high schools that were video streaming.”

School District Administrator
PROJECT AIMS AND EFFORTS

Teachers in the participating districts received support for pursuing credentials to teach dual credit courses. Professional development in Formative Instructional Practices (FIP) and Project Based Learning (PBL) was a substantial emphasis. An online platform known as Schoology allowed teachers to network and collaborate.

TEACHER OUTCOMES

Credentialing well over 135 teachers to offer dual enrollment and dual credit courses greatly increased student access to such courses (Figure 4), which has had a continuous effect on student acquisition of DE credits.

Figure 4. Number of Teachers Credentialed

The OAC met and exceeded the number of credentialed teachers to teach DE for the collaborative

“Students now have an opportunity to earn high school credit and college credit, which is extremely beneficial since we live in a region where students do not have access to college curriculum.”

Middle School Principal
Throughout the evaluation, teachers and students emphasized that the dual credit courses were rigorous and often more rigorous than typical high school courses. Further, teacher surveys show increased alignment of dual credit courses with national standards. Specifically, from 2014-2015 to 2016-2017 there was an improvement in teacher perceptions for six dual credit course standards that align with the National Concurrent Enrollment Partnership Standards (NACEP, 2011).

Teacher surveys also show that high percentages of teachers are implementing in their classrooms what they learned in PD—most notably, FIP, new learning technologies, student motivation strategies, and PBL.

The online learning platform made available to teachers and administrators, Schoology, received mixed reviews. Some teachers and administrators thought it was helpful and useful, but more found it challenging and difficult to use. Few enrolled in courses offered through Schoology.

**TEACHER CHALLENGES AND SOLUTIONS**

Teachers reported challenges with balancing the pursuit of credentials for DE—which for some included a full master’s degree with teaching full time and family commitments. Some districts managed this by offering additional release time or an additional planning period for teachers to work on graduate courses. They also reported some challenges with managing the extra work related to teaching dual credit courses. To address this, districts provided varying levels of stipends to compensate teachers for their additional time and effort in teaching such courses. Lastly, teachers’ tuition for acquiring dual credit teaching credentials was covered by the districts, so the districts established agreements with them to in effect keep them in the district for a certain number of years after they were credentialed.

“Compared to other high school classes that you take, I feel like I have to study more for my college ones. And put more work into it than I’d have to in a regular class.”

High School Student

“I am concerned about the planning and requirements of the college, as well as the high school. It is a lot of work and the texts change frequently, as does the contact at the college. It is hard to manage my time and also teach my regular high school classes.”

DE Credentialed HS Teacher
DISTRICT-LEVEL AIMS AND EFFORTS

District-level OAC efforts included collaboration opportunities with other districts within the Collaborative to develop a network of districts sharing ideas and resources. Efforts also included technology infrastructure upgrades, including improved broadband and Polycom video conferencing classrooms. Additionally, districts sought to develop Career Pathways for students via a collection of courses in STEM, Arts and Communications, Business and Entrepreneurship and Health and Human Services. Districts also attempted to share synchronous dual credit courses with other OAC-PLN districts. Lastly, they also tried to participate in an online, collaborative-wide dual credit course catalogue of courses in which, theoretically, any students in the collaborative could enroll.

DISTRICT OUTCOMES

There is indication that involvement in the OAC-PLN has had a lasting and sustainable impact on many of the participating school districts. They now have a cadre of teachers credentialed to offer dual credit courses to students. Provided the teachers remain in the districts, they will be able to continue to offer such courses. Many districts are also now collaborating with several institutions of higher education (IHE) for offering the dual credit or dual enrollment courses. Additionally, technology use such as I-Pads, Chromebooks and online instruction led to an overall increased digital approach to instruction. In a number of districts, there is now a district-level commitment to improved digital approaches to instruction. This may help students be ready for future careers or postsecondary education. Further, several districts established learning labs with computers and Polycom video conferencing capabilities.
These resources can continue to improve student access not only to technology but to dual credit opportunities—whether as synchronous or asynchronous courses taught by a high school teacher in another district or by college faculty. Further, some district administrators note the positive effect on the overall learning orientation of their district in regard to incorporation of technology.

Participating districts also developed career pathways that students could choose. Enrollment in the four pathways (STEM, Arts and Communications, Business and Entrepreneurship, and Health and Human Services) varied over the course of the project but certainly increased overall. Districts worked to design pathways and determine enrollment criteria.

Many district administrators note that the opportunities to share and address challenges or approaches to goals were helpful to move their initiatives forward. Coming together at Collaborative–wide meetings and online meetings furthered the collaboration and learning opportunities.

As previously noted, the OAC-PLN set out to improve student outcomes in seven key metrics reported to the Ohio Department of Education:

- Four year graduation rate;
- Four year graduation rate among economically disadvantaged students;
- Students earning three or more DE credits by graduation;
- Students earning industry-recognized credentials;
- Students taking the ACT;
- Students scoring remediation-free on the ACT; and
- Student enrollment in college within two years of graduation from high school.

Another way to examine the outcome metric data is by the number of metrics each district improved. When that is considered, 20 of the districts improved in over half (four or more) of the metrics (Figure 5).

It is unclear why some districts were able to move all or most (10 improved five metrics) while others improved few metrics, but it warrants further exploration.
DISTRICT CHALLENGES AND SOLUTIONS

The participating districts had challenges with sharing dual credit courses with other districts within the collaborative. One way this was addressed was to add class periods at the beginning or end of the day or in essence a “zero or 10th period”. As of spring 2018, a survey of districts (16 responded) showed that 39 students enrolled in shared courses that academic year. While this was a substantial increase from no students enrolled in such courses, it is a fraction of the eligible students. Another challenge related to course sharing was calamity days if one school called off and the other did not. A reported solution was to video-record the lecture or class activity so that the students who missed it could catch up.

The Collaborative also set out to establish an online course catalog of the shared courses available to students across the districts. This proved onerous to maintain and update on an annual basis. Shared courses seemed to work best when two districts collaborated closely to set them up and meet the needs of students in their respective districts. Some districts report moving more toward asynchronous or, in other words, not-in-real-time dual credit courses. This essentially entails working with an IHE on establishing the course and students accessing the material during any point of the day. This would allow multiple districts to enroll students in the same course.

The costs associated with the dual credit courses were also a challenge for the districts, and one in particular was purchasing textbooks. A potential solution was to establish a lending library at an educational service center. Theoretically, districts could then reserve a batch of books if the district planned to offer a specific course. The tuition costs per credit hour were also a challenge for the districts. A lowest or “floor” amount was negotiated with the IHEs, but the expense remained a concern.

“The other part of the program I would say the College Credit Plus. We’ve created this learning lab, we’ve made a commitment and we will continue pursuing opportunities for kids because the kids at this point expect those opportunities...... with or without any money in the future, that’s still going to be there.”

School District Administrator

“I think online shared course work is much more feasible. So, whether it’s synchronous or asynchronous, it’s much more feasible….So, let’s say I have an instructor teaching an online course from Ohio University and kids from 3 or 4 districts can enroll in that course, right? Why wouldn’t we be running a section, that online course is much easier, particularly asynchronous, because kids can access it at any time. It’s not so heavily dependent on technology at one point in given time. The contents are there still. The instructors, they are reachable.”

School District Administrator
CONCLUSION AND NEXT STEPS

The OAC-PLN included substantial collaboration, professional development and teacher credentialing for offering dual credit courses. The data gathered and analyzed indicates that the project has brought about positive changes in the districts as well as positive short-term outcomes for the students. In particular, when compared to similar districts, three quarters of the OAC-PLN districts fare better in regard to student acquisition of three or more dual enrollment credits by graduation. This especially strong finding speaks to the effectiveness of the strategy (Zinth, 2014). Further, because the participating districts fare better than comparison districts the overall increases in student acquisition of DE credits is not solely attributable to College Credit Plus legislation, which first affected schools for the 2015-2016 academic year and replaced the Post-Secondary Enrollment Options program. Many district administrators also report changes in their approach to education, to prioritizing technology, and increased partnerships with IHEs: they now have a cadre of teachers credentialed to offer dual credit courses. All of these changes are generally sustainable. The OAC-PLN also experienced challenges, most notably with offering synchronous dual credit courses as well as with maintaining an online course catalogue of available dual credit courses.

The evaluators will continue to analyze data reported to the Ohio Department of Education, which serves as the primary source of outcome metric data. They will pay particular attention to data on student matriculation to post-secondary education. They will also survey districts one last time in the late spring or early summer of 2019.

“The biggest asset of the PLN is the connection with 27 other like-districts that are available for ideas and innovations.”

School District Superintendent
METHODOLOGY

Researchers deployed a mixed methods approach to evaluate the OAC-PLN (Patton, 2012). The project is unique in that it involves 27 rural school districts geographically disbursed across approximately one-third of the state. Data were collected and analyzed across the multi-year project to address both formative and summative evaluation components. The evaluation team is tracking progress toward student achievement goals that were specified in the funded proposal.

EVALUATION ACTIVITIES

- Analysis of student achievement data and district-level data metrics;
- Site visits including focus groups and/or interviews with administrators, implementation team members, counselors, teachers, and students;
- Observation of OAC-PLN meetings;
- Surveys of 6-12th grade teachers and administrators in participating districts;
- District-level surveys;
- Review of implementation documents and activities.
REFERENCES


Noble, J., & Sawyer, R. (2002). Predicting different levels of academic success in college using high school GPA and ACT composite score. Iowa City, IA: American College Testing Program.


APPENDIX

Percent of Students Remediation Free on ACT

OHIO APPALACHIAN COLLABORATIVE | Voinovich School of Leadership and Public Affairs | 14
Percent Earning 3+ Dual Enrollment Credits

- Alexander Local ~ Northern Local
- Barnesville Exempted Village ~ Westfall Local
- Batavia Local ~ Coventry Local
- Bellefontaine City ~ Piqua City
- Belpre City ~ Bridgeport Exempted Village
- Bethel-Tate Local ~ Northwestern Local
- Bloom-Venon Local ~ Twin Valley Community Local
- Buckeye Local ~ Rolling Hills Local
- Carrollton Exempted Village ~ Switzerland of Ohio Loc
- Cloverleaf Local ~ East Muskingum Local
- Conotton Valley Union Local ~ Wolf Creek Local
- Cohocton City ~ Ironon City
- Crooksville Exempted Village ~ Wellston City
- East Guernsey Local ~ Manchester Local
- East Liverpool City ~ Maysville Local
- East Palestine City ~ Georgetown Exempted Village
- Edgewood City ~ Tri-Valley Local
- Edison Local ~ Fort Frye Local
- Franklin Local ~ Greenville City
- Harrison Hills City ~ Noble Local
- Hillsboro City ~ Morgan Local
- Indian Valley Local ~ Southeast Local
- Lakewood Local ~ West Muskingum Local
- Meigs Local ~ New Lexington City
- Miami Trace Local ~ River View Local
- Triway Local ~ Warren Local

Report Card Year:
- 2013-14
- 2014-15
- 2015-16
- 2016-17
- 2017-18

Legend:
- Most Similar District
- OAC District
Four Year Longitudinal Graduation Rate

- Alexander Local ~ Northern Local
- Barnesville Exempted Village ~ Westfall Local
- Batavia Local ~ Coventry Local
- Bellefontaine City ~ Piqua City
- Belpre City ~ Bridgeport Exempted Village
- Belden-Tate Local ~ Northwestern Local
- Bloom-Vernon Local ~ Twin Valley Community Local
- Buckeye Local ~ Rolling Hills Local
- Hamilton Exempted Village ~ Switzerland of Ohio Local
- Cloverleaf Local ~ East Muskingum Local
- Conotton Valley Union Local ~ Wolf Creek Local
- Coshocton City ~ Ironton City
- Crocksville Exempted Village ~ Wellston City
- East Guernsey Local ~ Manchester Local
- East Liverpool City ~ Maysville Local
- East Palestine City ~ Georgetown Exempted Village
- Edgewood City ~ Tri-Valley Local
- Edison Local ~ Fort Frye Local
- Franklin Local ~ Greenville City
- Harrison Hills City ~ Noble Local
- Hillsboro City ~ Morgan Local
- Indian Valley Local ~ Southeast Local
- Lakewood Local ~ West Muskingum Local
- Meigs Local ~ New Lexington City
- Miami Trace Local ~ River View Local
- Tri-Valley Local ~ Warren Local

Report Card Year

- Most Similar District
- OAC District
Four Year Longitudinal Graduation Rate - Economically Disadvantaged

- Alexander Local ~ Northern Local
- Barnesville Exempted Village ~ Westfall Local
- Batavia Local ~ Coventry Local
- Bellefontaine City ~ Pike City
- Belpre City ~ Bridgeport Exempted Village
- Barlow-Tate Local ~ Northwestern Local
- Bexley-Vernon Local ~ Twin Valley Community Local
- Buckeye Local ~ Rolling Hills Local
- Carrollton Exempted Village ~ Switzerland of Ohio Local
- Cuyahoga Falls Local ~ East Muskingum Local
- Coshocton Valley Union Local ~ Wolf Creek Local
- Coshocton City ~ Ironon City
- Crossville Exempted Village ~ Wellston City
- East Guernsey Local ~ Manchester Local
- East Liverpool City ~ Maysville Local
- East Palestine City ~ Georgetown Exempted Village
- Ensign City ~ Tri-Valley Local
- Edison Local ~ Fort Frye Local
- Franklin Local ~ Greenville City
- Harrison Hills City ~ Noble Local
- Hillsboro City ~ Morgan Local
- Indian Valley Local ~ Southeast Local
- Lakeview Local ~ West Muskingum Local
- Meigs Local ~ New Lexington City
- Miami Trace Local ~ River View Local
- Triad Local ~ Warren Local

Report Card Year

Most Similar District — OAC District
Percent Earning Industry Recognized Credentials

- Alexander Local ~ Northern Local
- Barnesville Exempted Village ~ Westfall Local
- Batavia Local ~ Coventry Local
- Bellefontaine City ~ Piqua City
- Belpre City ~ Bridgeport Exempted Village
- Bethel-Tate Local ~ Northwestern Local
- Bloom-Vernon Local ~ Twin Valley Community Local
- Buckeye Local ~ Rolling Hills Local
- Carrollton Exempted Village ~ Switzerland of Ohio Locc
- Cloverleaf Local ~ East Muskingum Local
- Conotton Valley Union Local ~ Wolf Creek Local
- Coehocton City ~ Ironon City
- Crooksville Exempted Village ~ Wellston City
- East Guernsey Local ~ Manchester Local
- East Liverpool City ~ Maysville Local
- East Palestine City ~ Georgetown Exempted Village
- Edgewood City ~ Tri-Valley Local
- Edison Local ~ Fort Frye Local
- Franklin Local ~ Greenville City
- Harrison Hills City ~ Noble Local
- Hillsboro City ~ Morgan Local
- Indian Valley Local ~ Southeast Local
- Lakewood Local ~ West Muskingum Local
- Meigs Local ~ New Lexington City
- Miami Trace Local ~ River View Local
- Triway Local ~ Warren Local

Report Card Year

Most Similar District OAC District