STATE OF OHIO
FRANKLIN COUNTY

PUBLIC INTEREST REPORT

E-SCHOOL FUNDING AND FTE MONITORING

Dave Yost · Auditor of State

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To the Ohio Board of Education, Superintendent DeMaria, Office of Community Schools, Office of School Budget and Funding, and the General Assembly:

The Auditor of State (AOS) conducted interviews of the Ohio Department of Education (ODE), learning management software (LMS) vendors, as well as community school administrators and reviewed a sampling of Ohio's electronic community schools or "e-schools" regarding Ohio's standards for e-school funding and ODE's Full-Time Equivalency (FTE) Reviews for the period covering fiscal year 2016 - 2017, under the authority of Ohio Revised Code Section 117.11.

This report is being provided to the Ohio Department of Education (ODE) and the General Assembly. AOS also shared the results of this report with the administrators, principals, treasurers, management companies, sponsors of the selected e-schools. This report includes a summary of the interviews conducted, systems reviewed, corrective action recommendations for ODE, and legislative recommendations for the General Assembly. ODE and the General Assembly are encouraged to use the results of this report as a resource in improving their community school guidance and funding processes.

This engagement is not a financial or performance audit, the objectives of which could be vastly different. Therefore, it is not within the scope of this work to conduct a comprehensive and detailed examination of Ohio's Foundation funding of e-schools or ODE's FTE Review process. Additionally, certain information included in this report was derived from community school management, operators, sponsors, and ODE. AOS interviewed approximately 19 e-schools, eight ODE employees, and reviewed approximately 20 Learning Management Systems, Student Information Systems and third-party curriculum providers.

Additional copies of this report can be requested by calling the Clerk of the Bureau's office at (614) 466-2310 or toll free at (800) 282-0370. In addition, this report can be accessed online through the AOS website at http://www.ohioauditor.gov by choosing the "Audit Search" option.

Sincerely,

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OVERVIEW

During the period that includes fiscal years 2017 and 2016, under the authority of Ohio Revised Code Section 117.11, Auditor Dave Yost directed auditors to review the systems, policies, and practices in place for e-schools in Ohio and to evaluate whether these schools were capable of complying with ODE's funding and documentation requirements. AOS conducted interview of the Ohio Department of Education as well as community school administrators. Auditors interviewed approximately 19 e-schools, eight ODE employees, and reviewed approximately 20 Learning Management Systems, Student Information Systems, and third-party curriculum providers.

Despite efforts to bring more accountability to Ohio's e-schools, many key issues remain to be addressed by the Ohio Department of Education and the Ohio General Assembly.

This is a matter of concern to the Auditor of State, because the office is charged with auditing e-schools, including e-school enrollment, in accordance with standards set by the Education Department. Recent changes in these enrollment standards have plunged some e-schools into financial crisis, leading to school closures, lawsuits and public controversy.

This report examines the problems now besetting Ohio's e-schools and the state system for overseeing them. It is based on AOS audits of e-school attendance, reviews of e-school learning management systems, interviews with e-school and Education Department officials, and observations by staff of the Auditor of State's office since 2016.

This study identifies persistent problems in e-school oversight and makes recommendations intended to ensure that public money directed to e-schools results in high-quality education for students and full value to Ohio's taxpayers.

The report examines these key areas of concern:

- Changes in the way e-school attendance is measured
- Shortcomings of e-school data-tracking technology
- Inconsistency and gaps in ODE oversight of e-schools
- Lack of clear definitions in state law and ODE administration of e-schools
- Budgeting difficulties
- Blurred lines and blended learning
- 105-hour rule and truancy

Changes in the Way E-School Attendance is Measured

While education funding in general is a perennial topic of debate in Ohio, state funding of online community schools is a subset that is uniquely complex and difficult, primarily because the funding method for e-schools is so different from the funding of traditional public schools and brick-and-mortar community schools.

E-schools found themselves faced with new ODE reporting requirements that they and their learning management systems and computerized student information systems are ill-equipped to satisfy.

To put the differences in simplest terms, it helps to consider how traditional brick-and-mortar public schools are funded. Basically, what is required for traditional brick-and-mortar public schools to receive their state education subsidy is to accurately report how many students are enrolled.

The presumption is that if students are sitting at desks and receiving instruction, then education is occurring and the school is meeting its obligation to taxpayers. Any taxpayer who wants to see how his or her tax dollars are being used can simply visit a school to see teachers engaging with students.

However, e-school students do not report to a building where they can be seen and counted. They are scattered far and wide, accessing educational programs over the internet with school provided computers at their homes. They work according to their own schedule, logging on and off at will. To verify the time they spend in educational activities requires recording the time that they spend online accessing instruction and educational materials, and manually recording the time that they spend offline reading, studying or working on assignments.

But until recently, the Ohio Department of Education did not verify e-school attendance this way. Instead, it essentially allowed e-school funding to be based on the mere fact of enrollment in the e-school, with teachers certifying that each student had been provided with required learning opportunities, whether or not the student took advantage of those opportunities.

Though the Department had the legal authority to require e-schools to document the actual participation of e-school students in learning opportunities, it wasn't until 2016 that ODE began insisting on these more stringent requirements, in part due to House Bill 2 that was backed by the Auditor of State which pushed for more accountability of community schools and their sponsors. ODE began to require e-schools to document that each student _participated_ in a minimum of 920 hours of instruction a year.

Any shortfall in documented instructional hours results in a proportional reduction in the state's payment to the e-school. Since the shortfalls only become apparent in ODE reviews conducted after schools have received their state subsidy, schools whose student participation documentation falls short find themselves required to repay some percentage of the subsidy. These repayments are commonly called clawbacks. The Auditor of State conducts independent audits of community schools regularly which are unrelated to the reviews performed by ODE. These audits include compliance testing over certain legal requirements, including FTE reporting. Issues identified during the course of an AOS audit do not result in clawbacks, rather they result in citations for noncompliance, and potentially other reportable findings, which are referred to ODE for further consideration since ODE is the authority over community school funding.

This new standard for documentation was introduced virtually without warning by ODE, and e-schools, which never before had been required to document participation data – also called durational data – were caught flatfooted. In fact, the Education Department did not inform the Auditor of State's office about this change either, and initially asserted that no change had occurred. This is an important point because it is the job of AOS to periodically audit e-school enrollment. The AOS annually updates the Ohio Compliance Supplement (OCS) on the office's website. The OCS, issued as guidance to auditors and government entities, incorporates information and standards included in ODE's annual FTE Review Manuals (called "handbooks" prior to 2016). If the Department changes those standards, it is vital that the new standards be communicated to AOS.

AOS auditors only became aware of the Department's change in the enrollment verification standards when one e-school suddenly was hit with a significant clawback. In some subsequent cases, these clawbacks were devastating financial blows to e-schools. The most prominent example is the Electronic Classroom of Tomorrow, Ohio's largest e-school, which was forced to shut down in January 2018, after the state demanded repayment of nearly $60 million from 2016 and nearly $20 million from 2017 because the school could not document that it had provided an adequate education to many of its students.

But other e-schools also were hit with substantial repayment demands by the Education Department, including Provost Academy Ohio in Columbus, and Akron Digital Academy, both of which ultimately closed.

The ECOT clawbacks prompted the e-school to file a lawsuit against ODE, arguing that the agency did not have the legal authority to make such a change to e-school funding rules. The case eventually reached the Ohio Supreme Court, which ruled in February 2018, that ODE does have the authority to base funding on documented participation in learning activities. (See **Appendix A: Basis For Participation Documentation)**

This topic is analyzed in depth beginning on Page 17.

Shortcomings of E-School Technology

Every Ohio e-school is subject to a review by the Ohio Department of Education to verify student data that is the basis for funding the school for educating students. These are called FTE (full-time equivalent) reviews and they are conducted by ODE personnel called Area Coordinators at every e-school at least once every five years, but also more frequently if ODE believes the schools require closer scrutiny for reasons outlined in ODE's FTE Manual.

Every student who completes a full year of instruction as defined by Ohio law counts as one FTE. E-schools receive payment from the state based on the number of FTEs. It is the job of Area Coordinators to confirm the number of FTEs claimed by each school.

As noted earlier, until recently, these FTE reviews involved little more than Area Coordinators asking e-schools to verify that a certain number of students were enrolled and were provided with learning opportunities. In the past, this would be sufficient evidence for the Education Department to have the State fund the e-school. Often the number of learning opportunities for a student was verified via signed teacher certifications for an entire school year.

However, starting with the FTE reviews conducted late in the 2015-16 school year, the Education Department began requiring documentation that students had participated in learning activities and no longer accepted blanket certifications from teachers.

Henceforth, schools would be funded only for the documented time that students had actually spent engaged in learning activities. This participation now would have to be documented with data gleaned from the educational software used by students or by manually logging the time students spent offline studying or working on assignments. Both methods of documentation pose problems.

E-schools provide educational programming to students through electronic learning management systems. These systems serve as a portal for students, parents, teachers, and administrators to access curriculum, homework, assessments, messages, school announcements and other materials and information. At their core, learning management systems are designed to track student engagement and progress to provide useful information to schools and educators in order to fine tune any particular student's digital curriculum. The systems are typically not designed to track granular durational data.

The learning management system is a portal to the education programs that students access online. Often, schools use education programs from multiple vendors, and typically these separate programs do not share the same underlying technology, meaning that the programs are incapable of sharing information and do not store data in compatible formats. For separate systems to properly interface, the systems must share the same language standards. For example, Learning Tools Interoperability (LTI) is a standard developed by the IMS Global Learning Consortium that allows systems to seamlessly link to external content and resources. A learning management system that uses LTI can easily capture information from external sources that also use LTI.

IMS Global Learning Consortium is a nonprofit organization that developed and maintains certifications related to standards such as LTI, amongst others. IMS maintains a directory of products and vendors that are certified to offer products and services that meet certain certifications. Any vendor or product certified by IMS is guaranteed to integrate seamlessly with other products of the same data standard. For example, if a school only purchases products and works with vendors that are LTI certified from the IMS database, the school can be assured that all the products will integrate with each other and perform the functions the school desires. Products and vendors must pass IMS' testing standards and continue to maintain IMS certification to continue on their product directory.

When ODE began requiring detailed participation data, the learning management systems and educational programs linked to them were not designed to capture it. In cases where educational programs do record such data, it often was not available because program vendors -- who previously had not been required to supply this data -- periodically purged the data in order to free digital storage space.

In addition, even when the participation data was available, its accuracy was not guaranteed. For example, simply measuring the time a student was logged into an educational program – say for two hours -- does not prove that the student actually engaged in learning for those two hours. Perhaps she logged in and then took a two-hour nap. Certainty of active participation is often not possible based on how the learning management system tracks and incorporates idle time, time within educational modules, or forced logouts. In the case of the napping student, one system may show the student as active for 15 minutes, followed by 105 minutes of inactivity, while a second system may simply show 120 minutes of login time.

Some educational programs not only record login and logout times, but also each click a student makes during the time she is logged in. These clicks are an indication of activity that could be used to measure participation time. But a school would have to add up all the times between clicks to come up with total participation time, and perform this calculation for each student for an entire year.

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This also presents scenarios with large gaps of time between clicks in which case a reasonable method of limiting the amount of allowable time between clicks as educational activity should be implemented.

Another problem arises when a student logs into multiple educational programs at the same time. Clearly, a student who has three educational applications or sites engaged simultaneously for two hours can't be working on all three at the same time for two hours. He might work on one for 20 minutes, another for an hour, and another for 40 minutes, for a total of two hours.

But simply measuring login and logout times for all three programs would show, falsely, that the student had completed six hours of participation. Because these individual programs do not communicate with one another, which program was being used for how long is difficult or impossible to determine. Thus, duplication of participation times is a serious risk.

These are a just a few of the complications e-schools face in accurately reporting participation data.

Technological solutions to such problems exist, but they require that e-schools possess the expertise to implement them or the wherewithal to pay for outside expertise and software. Because the Education Department imposed the stringent new documentation requirements without warning, some e-schools have struggled to pay for efforts to overcome these technological challenges even as their finances are taking a hit from Education Department clawbacks.

Vendors of the educational programs presumably could build more tracking capabilities into their products, but, because Ohio is the only state that bases e-school funding on participation data, vendors that do business nationwide might not have a strong incentive to invest in development of the additional features needed only by Ohio's e-schools. It is likely that any vendor willing to add this feature would increase the price of these products for Ohio's e-schools, potentially allowing only the largest e-schools with the most resources to comply.

Yet another problematic issue in measuring e-school enrollment is documenting the time students are engaged in learning that does not involve logging into the school's educational software, such as reading a book or writing in word-processing program such as Microsoft Word that does not record participation time. Since teachers are not present when students pursue this offline learning, students or their parents must be relied on to document the time spent in these activities.

This imposes difficulties on teachers in two ways. First, they must spend significant time trying to contact students and parents to ensure that they are submitting reports of their offline time. Time spent on this essentially administrative activity reduces the time teachers have to spend teaching. Second, schools allow teachers to adjust the offline time based on the quality of the schoolwork that results from the claimed offline activity. If a student turns in a poor assignment, a teacher might reduce the amount of offline time claimed because the quality of the homework does not reflect the time a student claims to have spent on it.

As detailed in the "Non-Computer Time section," there also can be circumstances in which a student's reported offline time might understate the true length of time the student spent in learning activities. In such cases, teachers will not increase the documented offline time because if the beefed up participation time later is deemed to be fraudulent, it could lead to loss of the individual's teaching certificate.

Finally, whether a teacher reduces or increases a student's reported offline participation, this is a judgment call, largely based on the teacher's knowledge of the learning style of each student. This subjectivity makes it very difficult for a school to establish a consistent policy to guide such decisions, and makes it impossible for the Education Department or the Auditor of State's office to evaluate.

The 2019 FTE Manual states:

"Schools may not estimate the time it takes for students to complete tasks. Schools can claim only the verified time a student is taking part in classroom or non-classroom-based learning opportunities. Teachers must certify non-classroom-based learning opportunities."

AOS is aware of many schools that say their teachers routinely adjust times for student work downward based on the quality of submitted assignments. AOS is not aware of any school that increases student time; however, we are aware of circumstances where a student inadvertently enters less time by inputting hours in place of minutes. For example, a student submits an assignment that took two hours to complete. The student enters 2.00 into the school's LMS to indicate that the student spent two hours on the assignment, but the LMS requires time to be input in minutes. Therefore, the school is credited for two minutes of duration rather than two hours, and is shorted by 118 minutes. Teachers will not increase time in this scenario since the certifications might put their teaching licenses at risk if this certification was questioned.

A typical scenario is when a student overstates the amount of time she spent working on an assignment. Teachers may be wary of certifying a student's time for an assignment if the teacher believes the time might be inflated.

For instance, a teacher assigns homework that the teacher believes should take roughly an hour for the average student. If a student reports the assignment took four hours, the teacher might reduce the student's time based on the quality of the assignment submitted. Auditors were informed by one school that this practice has led to confrontation between teachers and their students and the students' parents, who feel the teacher is essentially calling the student a liar. ODE has allowed schools to make downward adjustments to student reported time, despite language in the FTE Manuals which forbids estimates. AOS does not take issue with schools that adjust time downward, because it may be deemed reasonable and a more conservative approach to recording duration. The inherent risk with adjusting student duration based on subjective measures would be if teachers or schools increase duration to increase the amount of funding the school receives.

This topic is analyzed in depth beginning on Page 26.

Inconsistency and Gaps in ODE Oversight of E-Schools

The primary responsibility for oversight of e-schools lies with the Ohio Department of Education. The Department performs an FTE enrollment review of each e-school at least once every five years, and more often if the school has experienced difficulties in this area. Schools that are cited for issues in their reviews are scheduled for a subsequent review in the following year. ODE's FTE Manual also outlines further criteria for justifying FTE reviews. Department staff who carry out these reviews are called Area Coordinators.

The role of the Auditor of State is to conduct financial audits of e-schools annually, or sometimes biennially. The Auditor's office annually publishes the Ohio Compliance Supplement (OCS) on the office's website to be used by both auditors and government entities. Previously the OCS included language allowing auditors to rely on ODE's FTE reviews as evidence of school compliance with FTE requirements. Additional procedures include information based on ODE's FTE Manuals. In a number of cases, auditors have found errors in e-school FTE reports that had been accepted as accurate by the Education Department's Area Coordinators in violation of Department policy.

AOS auditors also found that some Area Coordinators were unfamiliar with the details of a school's learning management system and thus lacked the knowledge necessary to identify participation-time overlaps, duplications and related problems mentioned earlier in this report.

As a result, AOS auditors found that some Area Coordinators had not verified that schools were accurately reporting student participation time, but simply accepted the school's assurances that its data was accurate. In a majority of the schools tested by AOS auditors, there were overlaps and duplications of participation times.

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Area Coordinators relied on the schools to have sufficient internal controls, which AOS auditors subsequently found to be lacking.

In interviews with Area Coordinators and officials of the Education Department, it was revealed that when the Department imposed the stringent new documentation rules in the 2015-2016 school year, Area Coordinators were as confused about the new requirements as the e-schools. When asked if they had based their reviews on durational time for participation, Area Coordinators said they had never done so and were unaware that the documentation requirements had changed.

Whatever training the Education Department provided to Area Coordinators failed to give them a solid understanding of the new standards.

This topic is analyzed in depth beginning on Page 54.

Lack of Clear Definitions in State Law and ODE Administration of E-Schools

The ability to comply with a law – and the ability to gauge compliance -- is directly related to the ability to understand the law. When crucial terms are vague or ambiguous, then compliance is harder to achieve and accountability is harder to enforce.

Some key concepts in the Education Department's rules for counting enrollment are vague.

If student participation is now the fundamental measure of enrollment, then participation and duration must be clearly defined, spelling out precisely what kind of data is necessary and to what degree of exactitude. At present, neither state law nor Education Department guidelines are entirely clear, and this lack of clarity is evident in the inconsistencies in the online data that has been accepted by the Education Department, data which in numerous cases is flawed because of overlap and duplication.

Vendors of the online educational materials used by e-schools also need clear definitions if they are to modify their programs to track the data now required.

Likewise, the measurement of offline learning time can be subjective, varying from student to student, parent to parent, teacher to teacher and school to school. Without clarity about how this time should be measured, inconsistencies are bound to occur, and as mentioned earlier, teachers will be concerned about risking their teaching licenses if the validity of their subjective judgment is questioned.

While the FTE Manuals include example documentation, which outlines the required information to be recorded by students, auditors have noted instances where Area Coordinators have accepted substantially different documentation at one school while rejecting certain documentation from others.

This topic is analyzed in depth beginning on Page 58.

Budgeting Difficulties

Funding e-schools entirely based on documentation of participation makes it difficult for schools to budget because they lack certainty about how much they will be paid by the state. If documentation is deemed incomplete, they likely will have to reimburse the state for overpayments. Also, payment based on participation may not recompense schools for the efforts they make to ensure students participate, including the time and effort that administrators and teachers spend encouraging students to participate and to properly log their offline learning activities.

This topic is analyzed in depth beginning on Page 69.

Blurred Lines and Blended Learning

There can be significant overlap in the way e-schools and conventional brick-and-mortar schools are organized and use technology. But even in cases in which they are mirror images of each other, Ohio law and ODE treat e-schools more stringently. For example, an e-school can use chatroom technology that emulates a brick-and-mortar classroom by putting a teacher directly into contact with students in real time, allowing the teacher to take attendance and witness participation. Likewise, a conventional brick-and-mortar school can use the same online learning resources employed by e-schools. But in such cases, the Ohio Department of Education holds e-schools to stringent documentation of participation while not imposing a similar requirement on the brick-and-mortar school. Sometimes this makes e-schools financially untenable and leads to their absorption by their local conventional school district. Once absorbed, they continue to function as before, but now are freed of participation-documentation requirements.

This is just one example of the disparity of treatment between e-schools and conventional brick-and-mortar schools.

This topic is analyzed in depth beginning on Page 73

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105-Hour Rule and Truancy

State law requires that community schools withdraw students who miss 105 consecutive hours of learning opportunities, if they don't have a valid excuse. This rule is easily gamed by students who can avoid doing any schoolwork for 104 hours, then log in once to reset the 105-hour clock and resume their inactivity. A related problem arises from the provisions of H.B. 410, which defines habitual truancy and excessive absences based on the number of hours missed either consecutively, in one month, or for the school year. This conflicts with one of the basic principles of e-schools, which is that students should be able to work at their own pace, according to their own schedule. If a diligent student works ahead far enough to take an entire month off from school, she might find herself running afoul of H.B. 410 even though her performance has been exemplary.

This topic is analyzed in depth beginning on Page 81

CHANGES IN THE WAY ATTENDANCE IS MEASURED

To understand the recent changes in the way online community schools are funded, it is necessary to understand the basic funding approaches to community schools, including e-schools, brick-and-mortar community schools, and blended-learning community schools. Blended learning schools are those in which students spend some portion of their time in a brick-and-mortar classroom, but also engage in learning activities that are not classroom based. They are explained more fully below.

Funding takes two forms, depending on the kind of community school:

- Enrollment-based funding depends on the amount of the school year a student maintains enrollment at the school. This method applies to brick-and-mortar style schools.

- Participation-based funding relies on documentation of the number of hours that a student spent participating in learning opportunities. This method applies in full to e-schools and to the non-classroom educational activities of blended-learning schools. (It is important to note that this standard has been enforced by ODE only since the 2015-2016 school year, which will be explained more fully below.)

A brick-and-mortar community school often is indistinguishable from a traditional school. Except for blended learning brick-and-mortar community schools, students spend their entire days at the physical school building learning in front of a teacher, which presumes participation.

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These schools are not required to document the time students spend in learning activities, though they are required to track absences, truancy, and withdrawals. Students are funded based on their enrollment. A student who enrolls the entire school year receives a full FTE. A student who enrolls for half of the school year receives half an FTE. Absences, grades, lack of participation in class, and other metrics do not affect the student's final FTE as long as that student does not withdraw from the school.

Blended-learning schools are brick-and-mortar schools with an online-learning component. Blended schools typically offer an education plan that requires students to attend the school building for part of the day and then allows them to finish their day using non-classroom options, which can include online learning or offline learning that takes place outside the school building, usually at the student's home. Blended brick-and-mortar community schools must provide a majority of their overall learning opportunities in the classroom. ODE interprets this to mean that at least 51% of the learning opportunities must be classroom-based at a school facility. These types of schools are required to document participation only for the portion of a student's learning that is conducted outside the classroom.

For example, a student is required to attend class at the school three hours out of every five-hour school day. The student works either online or offline at home the remaining two hours of each day. The school will be funded automatically for the on-site portion of the student's education. In this case, the student is required to attend on-site 60 percent of the time, which means the school will receive 0.60 FTE for that student, regardless of any off-site education, as long as that student is enrolled the entire school year and does not withdraw. The remaining 40 percent of the student's funding is based on the number of hours the school can document for the student's off-site participation, whether that is logins from a computer system or a log kept by the student detailing offline activities. In this scenario, a school that offers 920 hours of learning opportunities a year must document 368 hours of participation outside the classroom to receive full funding.

The third type of community school, the e-school, is defined by Ohio Rev. Code Section 3314.02(A)(7):

> *"Internet- or computer-based community school means a community school…in which the enrolled students work primarily from their residences on assignments in non-classroom based learning opportunities provided via an internet- or other computer-based instructional method that does not rely on regular classroom instruction..."*

E-schools provide their students with computers and internet access to facilitate their education primarily online. E-schools must document 100 percent of a student's participation in order to receive a full FTE, often meaning 920 hours of documented learning opportunities. Also, it is not enough for an e-school to offer the 920 hours, the student must participate in 920 hours to receive full funding. The recent Ohio Supreme Court ruling in favor of ODE against ECOT stated as much:

> *"We determine that R.C. 3314.08 is unambiguous and authorizes ODE to require an e-school to provide data of the duration of a student's participation to substantiate the school's funding."*

E-schools may document participation in various ways, but participation time is key. If the school can document only 460 hours of student participation, regardless of how much work or what kind of grades and achievement the student has, the school will receive half an FTE of funding for that student. A student who habitually logs into the school's online systems and submits time logs, but receives poor grades and rarely performs any work of consequence, could receive full funding as long as the school can document that the student was "participating" for 920 hours.

As opposed to the brick-and-mortar school, e-school students are given 24/7 access to their learning opportunities. E-schools often use a learning management system, or LMS, in which students can work at any time. It is for this reason that absences, excused or unexcused, and missed homework assignments are not funded for e-schools, as noted in ODE's FTE manuals. Also, contrary to the brick-and-mortar schools, an e-school has no physical classroom where learning activities can be observed. So, instead, to prove that e-school learning is occurring, ODE requires documentation such as spreadsheets and logs that show the minutes and hours spent in learning activities. Every e-school student, whether a senior in high school or a child entering first grade, must produce this durational documentation to be funded by ODE to the school. However, no e-school will be credited for any time a student spends participating in learning opportunities beyond ten hours within any period of twenty-four consecutive hours pursuant to Ohio Rev. Code Section 3314.08(H)(3).

Though brick-and-mortar schools are funded based on enrollment, with participation presumed, many traditional school districts have implemented programs to allow students to learn electronically, just as e-school students do. In recent years, Ohio school districts have received 21st Century Grant funding to allow them to implement digital learning formats. Despite the oncoming digital revolution in Ohio's traditional school districts, these schools are not required to produce documentation of this electronic learning like e-schools and blended learning schools.

Changes since 2015

To determine state funding for community schools, the Ohio Department of Education requires that all community schools undergo a periodic FTE (full-time equivalent) review to verify that schools are accurately reporting enrollment and being properly paid by the state.

Any student who enrolls at a community school for an entire school year and completes the required number of learning opportunity hours (based on the school's calendar and including a minimum of 920 hours) is considered to be a full FTE student and the school is granted one FTE worth of funding. State law and ODE's authority to perform FTE reviews dictate whether schools receive full funding for any given student.

Traditionally, all community schools were funded based on their student enrollment numbers. That is a student was considered one FTE if that student was enrolled the entire school year without withdrawing or reaching 105 consecutive hours of non-attendance. A student who enrolled for half the school year and did not withdraw would be granted half an FTE of funding. These students were considered to have been offered a sufficient number of learning opportunities justifying the amount of funding the school received.

But starting in the 2015-2016 school year, ODE began requiring proof that a student had participated in the at least 920 hours of learning activities in order to count as one FTE, rather than simply confirming that the student had maintained enrollment for the full funding period. For brick-and-mortar community schools, this new requirement had no impact on the way students are funded. Brick-and-mortar students attend an actual classroom with a teacher present. Anyone seeking to verify that the students are engaging in learning activities can visit a classroom and see them doing so.

However, the new participation requirement made a significant impact on the way e-schools and blended-learning community schools were funded. Blended learning community schools are brick-and-mortar schools that require students to spend most of their time in a brick-and-mortar classroom and sometime engaging in non-classroom learning opportunities similar to those used by e-school students.

With the change in ODE policy, e-schools and blended-learning schools now are required to provide documentation of the hours that students participated in learning opportunities outside of a classroom, referred to as non-classroom-based learning opportunities. These learning opportunities can occur either on a computer (online time) or off a computer (offline time). While this report focuses specifically on e-schools, the portion of a blended-learning student's learning opportunities that are not classroom-based are treated the same as an e-school.

Schools that suddenly were required to closely document participation times found themselves scrambling to obtain such proof under short notice.

Proof of participation could theoretically come in many forms. The 2015 FTE Handbook, which was used by ODE's Area Coordinators during the 2015-2016 school year FTE reviews after the 2016 FTE Manual was removed from ODE's website, states the following:

> *"A learning opportunity for an e-school student could be computer learning, reading resource documents, writing papers, taking tests, doing research, field trips, and conferencing with teachers, etc. There must be a login but that cannot be the only proof of attendance."*

As AOS performed fiscal year 2016 audits in e-schools, we learned that the schools were now required to provide documentation to ODE that demonstrated specifically how many hours a student participated in learning activities, such as the login and logout records referenced in the FTE Manual. Schools that could not produce such records, either because the school did not track participation or because the systems and vendors the school used regularly purged such information, faced significant clawbacks of their State foundation funding as a result.

ODE's 2015 FTE Manual implies that alternative proof of participation for an e-school student could be used, however, Area Coordinators did not review assignments, assessments, etc. Additionally, based on input from ODE, AOS included the following guidance with regard to e-schools in its 2016 Ohio Compliance Supplement, a manual AOS publishes annually that summarizes compliance requirements and provides suggested audit procedures for auditors:

> *"Online…schools might also maintain student activity grade books, which document assignments completed, and teacher grades throughout the year to help support participation. Such books should be maintained on a per student, per assignment basis."*

The Ohio Compliance Supplement published by the Auditor's office each year is meant as a tool for financial auditors and to an extent as guidance for schools. The supplement does not equate to the FTE Manual and is not intended to be used by ODE's coordinators for FTE reviews. However, it does incorporate some guidance to auditors that is derived from Ohio statutes, administrative code, and ODE guidance.

This further shows that up until the 2015-2016 school year, both AOS and ODE were in agreement that student participation and funding tied to such activity could be substantiated in a manner not exclusively requiring documentation of minutes or hours from system reports.

ODE traditionally revises its FTE Manual annually to provide the newest guidance for its Area Coordinators and the community schools. The manuals are published on ODE's website. The 2017 FTE Manual was published August 31, 2016 and states the following:

> *"The actual number of hours the student participates in learning opportunities must be tracked and documented as required by this manual… Non-classroom learning opportunities are only credited for actual documented hours; missed days (both excused and unexcused absences) or assignments do not count as hours."*

The Manual continues:

> *"A learning opportunity for an e-school student could be documented computer time for doing homework in any subject, reading resource documents, writing resource papers, taking tests at the school, doing research, conferencing with teachers, etc. If the school's online system is not able to document learning opportunities that take place within the system, the school then must document these learning opportunities per the requirements [in the FTE Manual]."*

The language from the 2017 FTE Manual is substantially the same as the 2015 Manual, referencing that a learning opportunity can consist of a wide array of activities such as computer learning, reading documents, writing papers, taking tests, performing research, etc. The 2015 Manual specifically states that while a login time is required, that cannot be the only proof of attendance. The 2015 Manual clearly encourages the Area Coordinators to review alternative documentation like gradebooks to corroborate the FTEs granted to a student.

Where the 2017 FTE Manual deviates from its 2015 predecessor is that it requires the Area Coordinators to base their determinations on the actual number of hours documented by the schools. The 2017 Manual no longer prohibits Area Coordinators from solely relying on duration documentation and removes the discretionary judgment provided in the 2015 version.

Despite ODE's new documentation requirement, the Department has stated that FTE Manuals as far back as 2010 have included this requirement. In fact, AOS performed an Agreed Upon Procedures (AUP) engagement related to attendance requirements for the Electronic Classroom of Tomorrow (ECOT) for fiscal year 2014.

The purpose of the AUP was to:

> *"assist the Board in evaluating the admission, enrollment, and withdrawal of students and the calculation of full time equivalency (FTE), which is the basis of the School's state foundation funding for the school year July 1, 2013 through June 30, 2014."*

While the AUP was performed under agreement between AOS and ECOT's Board of Directors and management, auditors used guidance from ODE to develop the procedures and evaluate the results. One procedure performed included verifying the total hours offered to students were accurate as certified by students' teachers. This was a long-held practice of ECOT, in which teachers certified at the end of the year that students had been offered the state-mandated number of hours of learning opportunities. For example, if a student was enrolled the entire school year without withdrawing, a teacher verified that 920 hours of learning opportunities were offered to the student, justifying a full FTE. If another student was enrolled for half of the school year without withdrawing, a teacher would have certified that 460 hours of learning opportunities were offered to the student, justifying half an FTE.

Auditors performed this procedure for 60 students selected haphazardly for the 2013-2014 school year and identified no issues. Although other procedures were performed on enrollments, withdrawals, and attendance, this procedure for verifying student hours was the status quo for how an e-school student was funded by ODE prior to fiscal year 2016.

During fiscal year 2016, it became apparent to AOS that even if the Department's guidance in the FTE Manual hadn't changed, the application of such requirements did. AOS became aware of an e-school having a significant portion of its state foundation payments clawed back by ODE as a result of a FTE review ODE performed for fiscal year 2016.

After Provost Academy was informed that its 2015 FTE review would lead to an adjustment costing the school nearly 80 percent of its funding, the AOS Chief Deputy Auditor wrote on March 11, 2016, to ODE's Interim Superintendent of Public Instruction, asking if there had been a shift in funding requirements for e-schools. In the response dated May 4, 2016, ODE responded that it had not changed its policy and that it continued to allow "flexibility" in the ways e-schools could document learning opportunities.

In a deposition for Case No. 2017-0880 before the Supreme Court of Ohio, ECOT v. The Ohio State Board of Education and The Ohio Department of Education filed on June 27, 2017, ODE's Director of the Office of Budget and School Funding answered several questions about the 2015-2016 school year FTE reviews, prior year reviews, the latest version of the FTE Manual, and prior manuals and handbooks. Some points from the depositions follow:

- The Director stated that at least some of ODE's Area Coordinators were confused or unsure of what the requirements were for the 2015-2016 school year FTE reviews. As to whether there was an internal discussion within ODE about new expectations for e-schools, the Director stated there were no conversations he could recall discussing new requirements. Therefore, Area Coordinators entered the 2015-2016 school year FTE review cycle not knowing what information they were to request or review. The 2015 FTE Handbook was the primary source of FTE Review procedures and guidance for Area Coordinators.
- Area Coordinators had not requested participation data prior to the 2015-2016 school year, despite ODE insistence that they could have done so since 2010. The Director also stated that these requirements were not sufficiently clear to Area Coordinators and the 2015 FTE Handbook made no significant changes or clarifications. Therefore, the schools would reasonably have reached the same conclusion as some of the Area Coordinators, that participation data was not something required for these reviews. The Director conceded this point.
- The Director was asked if this lack of clarity meant that there could have been a way of confirming a student's enrollment and actual participation other than a minute-by-minute documentation of what the student did. The Director replied, "Perhaps."

State auditors also shared some of the confusion felt by ODE's coordinators and the community schools due to the lack of clarity in the ODE Manual and lack of clear guidance and training about the changes in its application. As will be discussed later in this report, based on input from ODE, auditors attempted to use alternative ways of measuring a student's participation during the fiscal year 2016 audits. Auditors had not previously attempted to confirm student participation in such detail as it was not a requirement imposed by ODE that could impact an e-school's funding. Ultimately, any measurements of student participation based on completion of homework assignments, assessments, and other metrics that are not specifically defined are subjective in nature. However, subjective determinations, at least in the case of e-school funding, sometimes clash with ODE's new objective participation standard implemented in 2015-2016 school year. (See *Appendix A: Basis For Participation Documentation*)

Learning Management Systems (LMS)

Most Ohio e-schools use educational learning management systems to house their educational content, including educational modules. An LMS can be thought of as a virtual school building: it contains all of the school's educational resources in an electronic format. Modules are analogous to textbooks or workbooks that a student uses to complete assignments.

Learning management systems are designed to deliver educational curriculum to students, but are not designed to track every activity. Access to education materials and student information is controlled by the systems themselves. Systems allow teachers and administrators to communicate with students and their parents, including interactive chats, watching videos, participating in lectures, and discussing assignments. The LMS allows for students to complete the work online or submit work that was completed offline.

These systems allow teachers and school administrators to integrate software from various resources into customized lesson plans to help students learn. They have different capabilities to provide a school or teacher with data analysis indicating which students are struggling to understand lessons. Using these data analyses, teachers can customize lessons to focus on those areas or seek assistance from others in the school. These systems were designed to improve a student's chance for successful education, not to capture participation data at a granular level, particularly since no other state requires this data.

Student Information Systems (SIS)

Student information systems are used to maintain the data required by law to support FTE funding, and e-schools use different systems depending on whether the school developed its own or uses one provided by an Information Technology Center (ITC). Up until 2016, e-schools were not trying to capture participation data within the SIS to support their funding.

An AOS review found traditional student information systems maintained by ITC's are not programmed to allow schools to track all the information ODE now requires – including all daily computer and non-computer activity.

Because LMS and SIS systems don't interface well, the detailed information now required by ODE would need to be manually entered – specifically the detailed activity log for every student for every hour of the school day, from each vendor or application each student uses – which would make such a process impractical, particularly for larger e-schools.

The student information systems, as presently programmed, will have little value to e-schools facing FTE reviews because they are used to track enrollment, not participation. E-schools are faced with two time-consuming and expensive options to provide the department with the information now required:

- Manually track the duration of time each student spends learning online from each vendor to calculate daily hours of participation and manually input offline work each student does daily;
- Invest in the costly development of a system that would allow the various software products to interface with each other, the LMS and SIS, and to track daily participation for online work and develop an infrastructure to capture non-computer time.

Once the school has the daily information, the school would have to develop procedures to adjust each student's FTE percentage to reflect what was documented.

SHORTCOMINGS OF E-SCHOOL DATA-TRACKING TECHNOLOGY

All e-schools expressed concerns about capturing participation data with the technology currently available to them. Some also noted that the time teachers spend ensuring that students are tracking offline time cuts into the time teachers have to help students to learn. E-schools also worry about the additional costs associated with capturing all of the participation data required by ODE.

To understand the impact of these requirements, AOS needed to learn about the technology used by schools to educate students and to track the student's time spent on learning opportunities. In addition, the AOS had to understand the policies and procedures in place to document and report offline participation data.

During the 2016 review, none of the learning management systems reviewed by AOS auditors were capable of tracking minute-by-minute participation by students, in large part because school operators were unaware of the requirement, but also because of weaknesses in the technology. In 2017, there were some improvements in the ability of schools to capture durational data, but there were still many significant problems with the integrity of the data being reported. As opposed to 2016 where school's either had insufficient systems in place, or simply did not track participation data, in 2017 schools at least began collecting and maintaining the data even if there were inherent weaknesses not being addressed. There were not drastic improvements to the underlying technology used to capture durational data in 2017, but schools began attempting to utilize the technology that was available.

To gain an understanding of the technology used by the schools, the AOS staff contacted several of the vendors of educational programs and reviewed their operating manuals. AOS staff learned that just because two schools are using the same system does not mean that participation data is captured in the same manner. Some differences are related to how a school defines "idle" time, whether the school had attempted to integrate systems and whether the school was using a standard software package or had the ability to customize the software. AOS relied upon the schools to explain how each system was configured to capture the participation data.

Furthermore, as discussed in *Appendix D: Meeting with ODE Coordinators*, as part of our 2017 review, we interviewed ODE Area Coordinators, as well as ODE's Chief Legal Counsel, ODE's Director of the Office of Budget and School Funding, and a Financial Manager from the Department to get a better understanding of ODE's FTE review process and discuss some of the issues we were finding during the 2016 and 2017 reviews completed by AOS.

System Technology and Weaknesses

Interviews with a number of e-school's Information Technology departments, administrators, and LMS and module vendors revealed there is no industry standard requiring the various vendors to use the same technology or to provide information in the same format so that data can be tracked. Nor are they designed to prevent problems such as duplication and overlapping of participation data.

Additionally, neither ODE nor state law has established any guidelines or set standards that clearly define participation and what is the true meaning of participation time. The following are just a few of the issues the Auditor of State's staff have identified and how the lack of guidance and standards affect funding.

Duplication and Overlapping

For the purpose of this report, duplication and overlapping is when the school is capturing participation data from one or more systems, or online and offline time, at the same time, resulting in the school overstating a student's FTE. Duplication is a significant risk for overfunding a school for student participation. Duplication happens for three primary reasons:

- Some educational modules are not compatible with the school's LMS, so the time spent participating in an educational module is not recorded by LMS and the schools must rely on the module's ability to capture this data. Some of the modules, or applications, do not record student activity whatsoever, meaning neither e-schools nor ODE reviewers can know for certain how much time was spent participating in learning;

- Because students can open multiple modules simultaneously and move back and forth between them, some systems that *do* track what a student is doing will record the activity in both modules at the same time, meaning login times are duplicated as they are reported as separate duration entries. (See overlap example for PLATO, BrainHoney, and Brightspace below);

- Students are recording offline time that overlaps with time captured by the system (See overlap example for PLATO and Offline Log below);

- Schools use technology that requires a single log-on function or multiple logons. A single log-on function means that an education module embedded in a lesson plan within an LMS is tracked by the LMS; whereas a multiple log in function requires a student to login to another module outside the LMS. In other words, if a school uses a single login function, then when a student clicks on a link to an educational module, while it appears the student is leaving the LMS, the student's durational data is captured by the LMS and not by the educational module. Whereas, if the school uses a multiple login function and the student clicks on a link to an educational module within the lesson plan, then the student has in fact left the LMS and the educational module is now the record for durational data. What happens in the multiple login scenarios is that the LMS is tracking data at the same time the education module is tracking data, resulting in this time being counted twice.

Multiple logins become a major issue when a school uses numerous third-party vendors for education modules. During the fiscal year 2016 audit of ECOT, auditors noted that ECOT was using approximately 50 different vendors to provide education modules. ECOT's LMS, IQuity, did not interface with any of these vendors to allow for single login function. Therefore, ECOT was forced to reach out to individual vendors with the hope the vendors had maintained durational data. But many vendors either did not track participation time or the ones that did, purged the data periodically to free server space.

The following are examples of duplication and/or overlapping of time observed by auditors at various e-schools throughout the state:

Overlap Example (PLATO) – TRECA Digital Academy

Total Session	Active Session	Session Start	Session End
194	11	9/7/2016 12:06	9/7/2016 15:20
199	11	9/7/2016 12:21	9/7/2016 15:40

In the above example from PLATO LMS, a student has two active sessions running concurrently on a particular date. These sessions overlap each other from 12:21PM to 3:20PM, for a total of 179 minutes of overlap. Using the first beginning time and the final ending time gives participation from 12:06PM to 3:40PM, for a total time of 214 minutes. Without removing overlapped time, the school would have reported a total of 393 minutes of participation for this day, overstating the student's participation by 179 minutes. While 179 minutes only represents 0.3 percent of a student's required 920 hours of annual learning opportunities, a student who regularly logs into multiple sessions at a time easily can rack up duplicated participation to account for over 50 percent of his or her final participation total.

Overlap   Example   (BrainHoney)   –   Massillon   Digital   Academy

World History Detail

Wednesday, May 24, 2017	Start Time	Duration
05.04 Modern Science Module 05: The Enlightenment and Revolutions	4:54 PM	57:07
08.04 The Iron Curtain Comes Down Module 08: The Modern Era	4:39 PM	15:00
05.03 The Scientific Revolution Module 05: The Enlightenment and Revolutions	1:15 PM	0:16
05.01 European Geography Module 05: The Enlightenment and Revolutions	1:13 PM	1:41
08.01 The Roots of the Cold War Module 08: The Modern Era	1:13 PM	0:07
08.01 The Roots of the Cold War Module 08: The Modern Era	8:21 AM	7:39
05.04 Modern Science Module 05: The Enlightenment and Revolutions	8:21 AM	0:13

Physical Science Detail

Wednesday, May 24, 2017	Start Time	Duration
05.00 Introduction to Chemical Properties Module 05: Chemical Properties	5:52 PM	0:36
06.06 Nuclear Reactions Module 06: Reactions	5:52 PM	0:15
06.06 Nuclear Reactions Module 06: Reactions	1:08 PM	2:36
06.10 Segment Two Exam Module 06: Reactions	7:10 AM	11:26:39

In the example above from BrainHoney, an entire second session is contained within the first session. Both classes, World History and Physical Science, are detailed for May 24, 2017. The student begins the "Segment Two Exam" at 7:10 a.m., which runs continuously for nearly eleven and a half hours until about 6:36PM. All the while, three separate Physical Science modules, and seven World History modules are being simultaneously counted for participation. No other module has a run time that extends beyond 6:36PM, meaning all other participation occurred within the "Segment Two Exam" duration.

Also of note is that the "Segment Two Exam" alone is greater than 10 hours for the day and per Ohio Rev. Code Section 3314.08(H)(3) no student at an e-school may obtain more than 10 hours in a 24-hour period. Therefore, for May 24, 2017, the student's total time should be 10 hours. For this particular student, auditors found that the school did not attempt to identify and remove overlapping time, nor did the school actively reduce student time to cap it at 10 hours for a 24-hour period.

While it may be possible to automate the identification and removal of overlapped participation times within a single system, it is often not an inherent feature of an LMS and is something that must be configured by the school after exporting LMS information outside the system. Smaller schools that do not have robust IT departments or staff knowledgeable in data analysis may forgo this process altogether. As will be discussed further, overlapping duration is often a larger problem for schools that use multiple LMS systems alongside various third party applications and websites.

The following is another example of duplication:

<u>Duplication Example (Brightspace) – TRECA Digital Academy</u>

Description	Start Date	End Date	Total Minutes	Session ID
Brightspace Activity Report Import	5/1/2017 11:20 PM	5/1/2017 11:45 PM	25.00	1625323
Brightspace Activity Report Import	5/26/2017 8:53 PM	5/27/2017 12:20 AM	207.00	1678676
Brightspace Activity Report Import	5/27/2017 12:07 PM	5/27/2017 3:10 PM	183.00	1679231
Brightspace Activity Report Import	5/27/2017 8:05 PM	5/27/2017 11:10 PM	185.00	1679533
Brightspace Activity Report Import	5/28/2017 6:38 PM	5/28/2017 9:40 PM	182.00	1680971
Brightspace Activity Report Import	5/29/2017 12:30 PM	5/29/2017 3:40 PM	190.00	1681730
Brightspace Activity Report Import	5/30/2017 8:34 PM	5/30/2017 8:37 PM	3.00	1684527
Brightspace Activity Report Import	5/3/2017 8:49 PM	5/3/2017 8:49 PM	0.00	1630729
Brightspace Activity Report Import	5/3/2017 8:49 PM	5/3/2017 11:14 PM	145.00	1630733
Brightspace Activity Report Import	5/4/2017 10:01 PM	5/4/2017 10:03 PM	2.00	1633706
Brightspace Activity Report Import	5/5/2017 9:48 PM	5/6/2017 12:50 AM	182.00	1636163
Brightspace Activity Report Import	5/7/2017 2:53 PM	5/7/2017 6:30 PM	217.00	1637403
Brightspace Activity Report Import	5/25/2017 1:09 PM	5/25/2017 4:30 PM	201.00	1675655
Brightspace Activity Report Import	5/25/2017 6:54 PM	5/25/2017 10:20 PM	206.00	1676359
Brightspace Activity Report Import	5/1/2017 11:20 PM	5/1/2017 11:45 PM	25.00	1625323

In this example, the Brightspace LMS has double counted session number 1625323 (see red highlighted cells) in its entirety. May 1, 2017 from 11:20PM to 11:45PM was accounted for twice in the system and accepted by ODE. Auditors manually identified replicated sessions via Excel inquiry and added highlights as the LMS did not automatically identify this replication. This instance resulted in an extra 25 minutes of reported duration.

Overlapping also can occur when a student is documenting time offline while also tracking time on the LMS or education module. This is even more problematic for blended learning schools. Offline time can occur for various reasons, such as writing an essay using Word or developing a spreadsheet in Excel, reading a book, or watching an educational video on YouTube. While performing offline work the student isn't necessarily logging out of the LMS or educational module, which again overlaps time captured by the system and the time documented by the student.

While this work may be completed on a computer, it is offline for the purposes of being recorded by the school's LMS.

On several occasions we noted that schools were not documenting offline time in a manner that would allow ODE or auditors to determine if overlapping was occurring. As noted on page 19 of the 2017 FTE manual, the school may use the "Alternative Learning Opportunity Documentation Log" (the Log) to document learning activities. Any documentation must include the following elements:

   i.   Student SSID #
   ii.   Brief Description of learning opportunities (Ex. Class or course information)
   iii. Dates and times of actual learning opportunities
   iv. Total of verified learning opportunities time
   v.   School certification of the reported learning opportunities

However, schools were not documenting offline time in this manner. In some cases, schools only documented the date and aggregated daily hours of offline time. While ODE accepted this during its review, the AOS staff would not accept this documentation because the auditors couldn't determine if the offline time was overlapping with the time on the system. Additionally, we are aware of one school that took the online time and added or subtracted from the offline time to document the daily FTE for a student. For example, if the school's system captured six hours of online time and the student documented six hours of offline time, the school would document six hours online and four hours offline (maximum of 10 hours are allowed per the ORC). ODE accepted this method during their FTE Review of this school, although AOS could find no way to test this total for duplication. The AOS only performed a review of this system. ***See further analysis of this topic under Aggregated Time.***

Overlap Example (PLATO and Offline Log)

Offline Log – Massillon Digital Academy

Date: Wed 2-15-17

TIME IN	TIME OUT	Signature
9:03	1:23	

PLATO – Massillon Digital Academy

2/15/2017 (Wednesday)		Number of Logins: 3	Time Logged In: 05:56:51		Time On Activities: 03:35:31
Session 1. Time Logged In: 00:07:24 Start/End Time: 09:08 AM to 09:16 AM					
Activity	Class/Assignment		Progress	Time On Activity	Score
Buying Insurance: Mastery Test	(Inactive) MDA_16 Integrated Math (Erichsen) Sem 1 & 2	First online login (9:08AM)		00:05:42	100%
Post Test: Large Purchases	(Inactive) MDA_16 Integrated Math (Erichsen) Sem 1 & 2			00:00:10	--
Session 2. Time Logged In: 01:01:47 Start/End Time: 09:16 AM to 10:18 AM					
Activity	Class/Assignment		Progress	Time On Activity	Score
Post Test: Large Purchases	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		Completed	00:11:31	63%
Defining Economics: Mastery Test	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		Mastered	00:03:16	80%
Defining Supply and Demand: Mastery Test	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		In Progress	00:04:34	60%
Defining Supply and Demand: Tutorial	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		Completed	00:02:35	--
Defining Supply and Demand: Mastery Test	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		In Progress	00:11:33	60%
Examining the Nation's Economy: Mastery Test	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		Mastered	00:24:01	80%
Understanding the Global Economy: Mastery Test	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		Completed	00:00:16	--
Session 3. Time Logged In: 04:47:40 Start/End Time: 10:18 AM to 03:06 PM					
Activity	Class/Assignment		Progress	Time On Activity	Score
Understanding the Global Economy: Tutorial	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		Completed	00:01:22	--
Understanding the Global Economy: Mastery Test	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		Mastered	00:06:16	100%
Post Test: Economics and Finance	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		Completed	00:28:53	--
Defining Supply and Demand: Tutorial	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		Completed	00:07:30	--
Defining Supply and Demand: Mastery Test	(Inactive) MDA_16 Integrated Math 4 (Erichsen) Sem 1 & 2		In Progress	01:47:52	60%

In this example a student is logged into the PLATO LMS from 9:08 a.m. to 3:06 p.m. on 2/15/2017 for a total of 215 minutes. On the same date, this student reported offline time from 9:03 a.m. to 1:23 p.m. for a total of 260 minutes. In this scenario, the student's online time overlaps with the offline time from 9:08 a.m. to 1:23 p.m., a total overlap of 255 minutes. The true duration for this date would be from 9:03 a.m., the first beginning time, to 3:06 p.m., the final ending time. The actual duration would be 363 minutes, as opposed to the 475 minutes that would be reported if the school did not remove the 112 overlapped minutes. Since these two records are from separate sources, the school would have to manually integrate such data to identify and remove the overlap.

Overlapping can be problematic for blended learning schools that offer learning opportunities outside a classroom. This is because a student will use the LMS while attending class in a brick-and-mortar setting. A blended learning school is funded automatically for the hours the student is required to attend a brick-and-mortar classroom without having to track durational data. If the student accesses the LMS while in a traditional classroom setting, then the school cannot rely solely on the LMS report to show the online time because the school is already being compensated for the time the student is to have spent in the classroom. To adjust for this duplication of time, the school would have to have a control in place to document the time each student was required to be in the brick-and-mortar classroom while also in the LMS, and back out the time spent on the LMS during classroom time. For instance, if a student was required to attend a classroom from 9:00 a.m. to 12:00 p.m. daily, but logged into the LMS from 9:00 a.m. to 12:00 p.m. then those three hours spent on the LMS cannot be counted as online non-classroom time.

While it seems simple in theory, the complexity results when there is no fixed time for the student to attend the brick-and-mortar classroom or a student's required time to attend is subject to change throughout the year. Without a fixed attendance schedule, the student can show up at any time. In that case, auditors and Area Coordinators must rely on sign-in/out sheets, if the school uses them. Based on sign-in/sign-out sheets, auditors and Area Coordinators would have to check to make sure the school was subtracting overlapping times when the student was required to be in attendance at the school building and on the LMS.

As another example, a student could start out attending a brick-and-mortar classroom for the entire day (five hours represents a full day in this example) for four months out of the year. At some point, an event occurs that causes the student to attend in the classroom only five hours a week (instead of five hours a day) for four weeks. The remaining school year the student is only required to spend two hours a day in the classroom.

In this case, the auditors and ODE are not necessarily aware of these changes and would assume the student was required to attend five hours a day in a classroom setting. Thus, the school would not have to provide any participation data and still be funded 100 percent for this student.

Also, note that blended learning isn't necessarily used for the entire school, but is set up to fit the individual student. While it might seem that every student is required to be in attendance in a classroom for the same number of hours per day, blended learning is tailored to the needs of each student.

To truly test the completeness and accuracy of the FTE, ODE and auditors would have to spend a significant amount of time and resources understanding each student's attendance throughout the year before testing could occur.

LMS Integration

There are solutions to the duplication of FTE's from a technology standpoint, but it requires time and resources for the schools to integrate the education modules with the LMS. AOS staff have seen this integration happening in some schools since ODE changed the standard for funding, while others are not aware of the ability to integrate the data.

AOS analysis has shown that the more a school uses one vendor for all education modules, the more likely the school is to avoid issues with integration or duplication. For instance, K-12, a large national educational software developer, is the management company for Ohio Virtual Academy (OHVA). Essentially all of OHVA's education modules are owned by K-12, or provided by vendors partnered with K-12, and OHVA's LMS is a K-12 product as well. Therefore, practically all of the participation data generated is captured by the school's LMS.

Auditors asked K-12 representatives how difficult and time consuming it is for a school and management company to fully integrate an LMS in such a way that the system can reasonably comply with Ohio's participation standards. The K-12 representative, who works closely with Ohio Virtual Academy and Insight School of Ohio, prepared a written response for auditors. It states that K-12 has developed systems and infrastructure that facilitate the collection and management of student data. The online component of this time is captured by both proprietary K-12 systems and partner vendors. The proprietary system applies business logic required by ODE to automatically transform the data to accurately reflect the student's attendance.

K-12 also stated that this service requires a significant commitment in resources and finances, on the part of K-12 and its vendors. Vendors must agree to K-12's data standard operating commitment in order to ensure that when a school uses curriculum from that vendor, the information resulting from the use is accurate and compatible with K-12's data warehouse format requirements.

K-12 also stated that the developing complex data logic to transform participation data into a format required by ODE also is a significant time and resource commitment. This commitment is unique to Ohio and requires updates, maintenance, and technical resources to assure continuing compliance.

One of the reasons a school such as Ohio Virtual Academy is able to comply with complex State requirements is because K-12 acts as an arbitrator between the school and the curriculum vendors. As long as the school solely relies upon K-12 and its LMS, school officials can be assured that any third party vendors providing educational materials will conform to the requirements of K-12's LMS.

Most often schools have to deal with vendors on their own and hope that the vendors have data reporting capabilities in place that will satisfy State requirements. Smaller schools with low operating budgets and small, or sometimes nonexistent, IT departments do not have the negotiating power to make vendors implement standards for State compliance. Many vendors may not be willing to take on the financial and time-consuming burdens required to satisfy a small school client. LMS vendors do not deal just with Ohio and may decide it costs too much to implement software changes just to satisfy a few Ohio schools.

We also have seen where schools have purchased "keys" to allow for the education modules to interface with the LMS. Without the keys activated, the LMS does not interface with third-party vendors and outside education modules in which case schools are at the mercy of the vendors capturing and maintaining durational data. With these keys active, the LMS now is capable of interfacing with the outside curriculum sources and will be able to seamlessly capture durational data removing the uncertainty of having access to duration by depending on a third-party source.

For instance, TRECA Digital Academy uses Brightspace as its LMS. Brightspace uses LTI technology to track all data, including participation data. Some of the educational modules used by TRECA Digital Academy use API technology to track the data. LTI and API do not interface with each other, thus requiring multiple logins. However, TRECA Digital Academy has purchased LTI keys from some of the vendors that use API, which allows these API vendor's modules to communicate with Brightspace. However, not every API vendor has the ability to provide an LTI key to Brightspace, which results in TRECA Digital Academy having to capture the participation data separately for those vendors that cannot provide a key.

While schools can use one vendor or purchase keys to integrate the education modules to allow the participation data to captured in one location, there is still a possibility of duplicating FTE. This can be caused by a student opening the LMS browser multiple times, which will result in the LMS capturing each session that is open.

For instance, a student could open up Brightspace and start a math lesson, and two minutes later open Brightspace in a separate browser to start an English lesson. Brightspace will record both sessions at the same time, resulting in the duplication of FTE.

When asked about testing for duplication and overlapping time, the Area Coordinators replied that they asked the school about its policy for removing such occurrences. If the school indicated it removed duplicate and overlapped FTE, the Area Coordinators did not test for these items and accepted the information. However, in response to our question about the testing of duplication, the Director of the Office of Budget and School Funding, indicated that Area Coordinators work to confirm their understanding of the methodology by reviewing data. *The Director's responses are included in full in Appendix E.*

Problems do arise when this calculation is made. For instance, in e-mails dated July 18, 2017, that were obtained by AOS from ECOT, ODE's Area Coordinator and ECOT were calculating two different FTEs for a particular student. The Area Coordinator had obtained a spreadsheet for the student in which participation was broken down by date, beginning and end time, and total number of seconds. This spreadsheet contained thousands of rows of such data. The Area Coordinator's calculation was eight hours less than the FTE calculated by ECOT because the Area Coordinator's initial method of calculating duration based on spreadsheets did not account for the date that participation occurred, only the difference between the timestamps.

In one instance, the student had logged into the system on 1:48 p.m. on Nov. 9 and logged out at 3:06 p.m. the next day, on Nov. 10. The elapsed time between login and logout is about 25 hours over two days. The Area Coordinator initially accepted 1.6 hours of duration, which was the difference between 1:48 p.m. and 3:06 p.m. even though the times spanned two days. ECOT informed the Area Coordinator that the student should have received a total of 10 hours (state law limits the number of hours an e-school student may participate in a given 24-hour period to 10 hours). Ignoring the validity of a 25-hour login period, ECOT's calculation is correct.

Via email, ECOT provided the Area Coordinator with the Excel formula used by the school in order to calculate the 10 hours. The Area Coordinator responded, "Thanks Mike, this worked great and saved me a step!"

This exchange between ECOT and the Area Coordinator clearly shows there are issues on the part of ODE in determining FTE based on the complex requirements they have imposed. The fact that the Area Coordinator appeared willing and happy to accept and utilize a formula provided by the school they were reviewing is cause for concern.

It is not unreasonable to think there are other situations in which an Area Coordinator is either inappropriately calculating duration, reducing the amount of funding a school is entitled to, or where the Area Coordinator is unwittingly accepting faulty information from a school and allowing the school to be overpaid.

As AOS staff learned in discussions with ODE and its Area Coordinators, in 2017 FTE reviews, ODE accepted school policies and procedures without performing much, if any, testing over the completeness and accuracy of those policies and procedures. This could be attributed to ODE's inability to handle the large amounts of data it was receiving from schools in the 2016-2017 school year, unlike the dearth of data received in the 2015-2016 school year that made it simple to issue review letters resulting in significant funding clawbacks.

While ODE has relied on the schools' invalidated processes for controlling duplication and other issues, AOS' testing and reviews have determined that many issues exist despite assurances offered by the schools. ***This is discussed in detail above and in Appendix C: Community School Narratives.***

In the schools AOS tested and reviewed, ODE's Area Coordinators did not take the time to fully understand each school's system and therefore were not able to make proper assurances that the systems accurately report time. Therefore, it is unclear whether the FTEs reported by schools and accepted by ODE in 2017 are accurate.

Idle Time and Automatic Log Outs

Idle time means the amount of time a student has been inactive within a system. Some systems will perform a "force-out" – logging a student out of the system after a certain period of inactivity. Other systems continue tracking the student's time, but label that time as idle.

Currently, there is no statutory idle time limit in order for e-school students to be funded. Legislation directs ODE to determine the requirements for e-school funding. However, the most recent FTE manual published by ODE for fiscal year 2019 does not specify how much idle time should trigger a force-out. As a result, auditors have noted systems with force-out times ranging from 15 minutes to 180 minutes, and some systems that have no limit. Currently, schools are left to determine when to set the trigger to force a student logout -- and stop earning time for FTE funding. A school that limits itself to 15 minutes before a forced logout will almost always obtain less funding than a school that sets a higher limit. It is acceptable to allow some amount of inactivity and idle times to be reported as learning opportunities because students may be watching educational videos, reading, or performing other education-related activities that do not generate mouse clicks or keyboard strokes.

Some systems do not report idle time clearly. One system auditors encountered provides a "Total Time Logged In" and a "Time on Activities" total. Auditors had to review the LMS' manual to determine how these times were calculated. Total Time Logged In was simply the amount of time that passed between the moment the student logged in and moment the student logged out.

Time on Activities was the time the student was in an education module where work could be performed. The difference between these two time measures could be considered idle time. Again, it is acceptable to have some amount of idle time be counted as participation, but absent a clear policy or rationale, simply counting the larger number is unreasonable. The school that uses this system reported the larger Total Time Logged In, a practice that was not questioned by ODE.

During the 2015-2016 school year when auditors first came across the Total Time Logged In versus Time on Activities, AOS reached out to ODE for guidance as to which time the regulatory agency considered acceptable. ODE indicated that Total Time Logged In was acceptable. In March 2018, in another meeting between AOS and ODE, auditors presented ODE with an example of the above scenario. This time ODE informed auditors that the Time on Activities would be the acceptable amount of time for reporting FTE, a reversal of previous ODE guidance. At no time did ODE reduce this guidance into writing.

Auditors also queried Area Coordinators about idle time. The response again was that the Coordinators rely on the schools' policies or procedures. Auditors have noted that most schools do not have policies in place, at least not policies approved by a Board.

The system in question defines Time in System (Logged In time) and Time on Task (Active Time) as follows:

> *Time in System measures the amount of time between logging in and logging off the platform. If the user becomes inactive for 2 hours, the system will log them out and we use their last known activity in the platform as an end point. For example, if the user is working in a lesson and walks away without exiting or logging out, the end time will reflect the last time they advanced in the lesson.*

> *Time on Task is time spent by a Learner working in online lessons (tutorial, application, mastery test, assessment, etc.). Time on Task calculates activity in our content based on when the user launches a piece of content until they exit that content or become inactive. The end time reflects the last time the user took an action in the content (e.g. completing/exiting the activity, advancing to a new slide or item, or in the case of some of our legacy content, explicitly confirming they're still working). It is usually reported on a particular learning path.*

> *Note: If two learning paths share some of the same activities, the Time on Task will be reflected in both learning paths.*

Based upon how the system defines these matters, AOS believes Active Time reflects the true participation. It is also plainly stated in the above LMS definitions' included that it is possible and likely for time to be duplicated in reports from the system. However, in response to AOS questions about Logged In Time versus Active Time, ODE responded:

> *ODE does not believe it is appropriate for the department to develop a policy since the law outlines funding for classroom and non-classroom learning opportunities. As a result, the department's area coordinators work with the schools to understand how they document participation in learning opportunities.*

Time in System vs. Time on Activities Example – Lorain K-12 Digital Academy

Total Number of Logins	Logins With No Activities Launched	Total Time Logged In	Total Time on Activities	% Time on Activities	Days with a Login
12	3 out of 12	39:49:59	12:46:30	32%	7
2	0 out of 2	03:17:50	03:03:01	93%	2

In the above example, the student spends a total of about 43 hours logged into the system, but only about 16 hours, or about 37 percent of the total system time, is spent within activities. Since ODE does not specify which time should be reported, it is of benefit to the school to report 43 hours which would net more funding than if the school reported 16 hours.

AOS also asked for ODE's guidance how schools are to define force-outs. Again, a force-out is a system function that automatically logs out a student after certain amount of inactivity. An astute student could easily game such systems. If a system forces a student out after 120 minutes of inactivity, the student could simply click within the system every 119 minutes and never be forced out.

ODE's response to AOS inquiries about inactive time follows:

> *"ODE has not defined or established a policy for forced log off times. In discussions with schools, there is an understanding that it is reasonable to claim some time even when a student is not typing, moving a mouse, due to the nature of some learning opportunities. Watching educational videos and listening to a lecture by a teacher may not require typing or moving a mouse. Area Coordinators are asked to understand what systems have forced log-offs, capture different types of time, and how the school has accounted for this time. We would appreciate your office's input regarding such a policy."*

In the following example, the LMS tracks a student's activity by creating a timestamp each time the student takes an action within the system (i.e., a mouse click or other indicator). The LMS does not have an inherent force-out or idle time feature.

Therefore, it is up to the school, lacking any ODE guidance, on how much time between clicks is considered reasonable inactivity. Auditors added the UNIX Time, Time between Clicks, and Total columns through Excel formulas. UNIX Time is a computer time standard and was necessary in order to calculate Time between Clicks. The Total column represents the sum of all Time between Clicks. Note: The report is truncated and does not show all click data.

Duration Variability Based on Idle Time Limits – Buckeye Online School for Success

submission date/hrs	UNIX TIME	Time Between Clicks (Seconds)	Total
2016-01-26T09:16:28-05:00	1516958188.00		Limited to 15 Minutes
2016-01-26T09:20:46-05:00	1516958446.00	258.00	30.58 Hours
2016-01-26T09:32:35-05:00	1516959155.00	709.00	
2016-01-26T09:38:27-05:00	1516959507.00	352.00	Limited to 45 Minutes
2016-01-26T09:45:59-05:00	1516959959.00	452.00	47.36 Hours
2016-01-26T10:04:57-05:00	1516961097.00	1138.00	
2016-01-26T10:13:20-05:00	1516961600.00	503.00	Limited to 180 Minutes
2016-01-26T10:28:25-05:00	1516962505.00	905.00	101.67 Hours
2016-01-26T10:51:17-05:00	1516963877.00	1372.00	
2016-01-27T20:58:29-05:00	1517086709.00	122832.00	No Idle Limit
2016-01-28T09:15:05-05:00	1517130905.00	44196.00	2999.68 Hours

Auditors determined how much duration could be counted for this student based on whether the school counted all time (no limit between the number of clicks) or whether the school limited the allowable time between clicks to either 15, 45, or 180 minutes.

As indicated in the example, the school could report anywhere from 30.58 hours for this student up to 2,999.68 hours (the maximum hours would be reduced to 920 hours to avoid reporting greater than 1.0 FTE). Using this method, the school could theoretically claim as many hours for the student as it wanted, up to 920. Since there is no defined limit for idle time, it is in the schools' best interest to report a time that maximizes the amount of funding they will receive.

Furthermore, at one school we noticed the LMS appeared to have a glitch in the system. As noted in our testing for the school:

> *The Schoology system improperly included idle/overnight duration times in the calculation of hours spent on the computer which were not removed in the calculation of Student Computer Time. This resulted in the overstatement of student hours worked for 4 of the 5 students selected for testing.*

Auditors noted that the Schoology system was capturing excessive amounts of idle time. Four of five students tested by auditors noted excessive idle times ranging from 8.5 to 21.5 hours. These excessive times of inactivity occurred at the end of the school day and often crossed over into the following calendar day.

The Academy did not have policies or procedures in place that would have allowed them to identify, or reduce, excessive idle times. This can result in schools reporting time for funding that may not be representative of the amount of time a student spends participating in educational learning opportunities.

Aggregated Time

During AOS review, auditors noted several schools that used systems that captured online or non-computer time in aggregate; meaning a report generated from the system will show total hours for a specific period. The system will not break down the hours in a way that will allow an ODE reviewer or AOS auditors to determine if the time is overlapping or duplicated.

AOS asked ODE if it could provide guidance on how to treat a situation where online or non-computer time is documented in aggregate only. The Director of the Office of Budget and School Funding, responded as follows:

> *Revised Code 3314.08 (H) requires a student's instruction time in non-classroom learning opportunities be certified by an employee of the community school. OAC 3301-102-02(M) defines learning opportunities.*

> *Since ORC 3314.08 references classroom and non-classroom learning opportunities, ODE believes it is incumbent on the schools to detail when the student is participating in learning opportunities. ODE may recommend that schools add more specificity to learning opportunities, including specific start and end times, to ensure non-classroom hours do not duplicate other documented time.*

The Director's responses are included in full in Appendix E.AOS staff came across these situations and were unable to accept the time reported as accurate because they were unable to determine whether time reported in aggregate overlapped or duplicated time reported elsewhere. If ODE is to allow schools to report participation in aggregate format, it would benefit schools to begin reporting time with far less detail. Often times the more detail a school's system can provide, the more errors tend to present themselves.

<u>Aggregated Offline Time Example – Buckeye Online School for Success</u>

minutes	class_name	assignment_date	input_date
11880	Art History	NULL	6/1/2017 12:24
220	9th English 3	NULL	6/5/2017 10:35
915	Spanish 3	NULL	6/8/2017 10:50
822	3rd Pd PreCalculus	NULL	6/9/2017 9:28
730	Psychology	NULL	6/9/2017 14:25
700	Government	NULL	6/12/2017 10:40
685	sociology	NULL	6/12/2017 14:18

In the above example, teachers documented the total number of minutes they estimated students worked on school items (estimating is not allowed per ODE guidance). The issue with this offline duration support is that students also spent time working within an LMS or other online software for any given date. For example, the above student may have spent four hours working within the LMS on 6/12/17, however since the offline time does not include beginning or ending time, an auditor cannot determine if these two sources of participation (the LMS time and the offline time) overlap with each other.

The log also does not follow the prescribed method outlined by ODE within their FTE Manuals.

Time Zone problems in Participation Data

Auditors found that because there are no consistent standards among software vendors regarding time zones, e-schools face a variety of difficulties in accurately capturing a student's educational participation.

Through review of systems, auditors noted that one system used Greenwich Mean Time (GMS). However, the school administrators had made no mention that the LMS was reporting in a time zone other than EST (Eastern Standard Time), likely because they were unaware. Auditors learned from representatives of the LMS that the LMS reported times based on the time zone of the user, but otherwise raw data reports generated by the LMS were GMT based on the system's servers. E-school management uses these raw data reports to demonstrate compliance with ODE funding requirements.

In certain scenarios it would be possible to have sets of participation data using three or more time zones. The raw participation data generated by these systems would need converted to the same time zone before a school could accurately document student participation.

Per **Appendix E: ODE Response,** *Question 8 ODE Policy or Guidance*, ODE does not have guidance regarding the manner in which a vendor presents participation time. Since vendors are not required to present this information in a specified format, it is imperative that schools understand how their systems and vendors operate in order to avoid problems.

- For example, a student in Ohio may work on a system based in California that reports based on Pacific Standard Time. The system reports that the student worked one day from 11 a.m to 1 p.m. The student also manually reports that he worked offline from 7 a.m. to 10 a.m. EST. If a reviewer is oblivious to the time-zone discrepancy, he or she would accept that the student worked for five hours that day. However, if the reviewer is knowledgeable of the system and knows it must be converted from PST to EST, he or she would conclude that the student really worked from 8 a.m. to 10 a.m. on the system. Now the two hours of online time is already contained within the manually reported offline time. The student really worked for a total of three hours, not five.

- We also learned that each LMS and educational module present data differently. For example, some software captures participation data only in aggregate. In other words, the data is shown in total at year-end, or some other specified period, and there is no daily or hourly tracking of the durational data.

DreamBox Aggregate Time Example – TRECA Digital Academy

Days in Period	Lessons Completed	Total Mins
349	82	485
349	102	684
349	78	723
349	25	250
349	159	1398
349	0	3
349	78	1140
349	34	115
349	19	66
349	32	246

This becomes an issue for the School as well as ODE and auditors. When the amount is shown in aggregate, a reviewer can't determine if the data is duplicated or overlapped with itself or with other sources of participation data.

- At the fundamental level, these systems only truly capture participation by tracking 'clicks' made within the software. A login is the first click made and the logout is the last. Some systems do not track login and logout, but instead timestamp every time a click is made in the software. This prevents overlapping because clicks made by a user can only be sequential. However, this method of presentation provides an added layer of difficulty for the school and any reviewer. In the example below from Canvas, it would be necessary to first convert the timestamps into a usable format, after which the data must be analyzed to find a time between each click to create a total.

  While a total can be reasonably determined through Excel formulas and logic, it requires the creator to implement a restriction for the maximum amount of "idle" time allowed between clicks. With no guidance from ODE setting maximum idle time, the school could feasibly grant itself as much time as it wanted for each student. The higher the difference between clicks allowed, the greater FTE that can be supported.

  Canvas LMS Example – Akron Digital Academy

course name	assignment id	assignment name	submission date/hrs
S16English 12B	446010	U1 - Unit Introduction: Literature	2016-01-26T09:16:28-05:00
S16English 12B	445990	U1L01 - Native American Texts	2016-01-26T09:20:46-05:00
S16English 12B	445988	U1L01J1 - Lesson Journal Entry	2016-01-26T09:32:35-05:00
S16English 12B	445997	U1L02 - North American Essay	2016-01-26T09:38:27-05:00
S16English 12B	445995	U1L02J1 - Lesson Journal Entry	2016-01-26T09:45:59-05:00
S16English 12B	446001	U1L03 - North American Poetry	2016-01-26T10:04:57-05:00
S16English 12B	445999	U1L03J1 - Lesson Journal Entry	2016-01-26T10:13:20-05:00
S16English 12B	446004	U1L04 - The Grapes of Wrath	2016-01-26T10:28:25-05:00
S16English 12B	446003	U1L04J1 - Lesson Journal Entry	2016-01-26T10:51:17-05:00

Auditors came across some educational modules that do not report duration unless the student selects "submit" on the assignment. If the student does not submit his or her work, no participation time is recorded. There is also potential for excessive inactivity or duplication to be recorded for this type of software. If the student realizes much later that he did not submit the assignment and returns to do so, hours could have passed, yet the software reports the amount of participation from the initial login until the delayed submission of the assignment. Another possibility is that the student does not submit his finished assignment, again returning to submit much later, but in the meantime worked on other educational modules that report participation separately. In such a case, significant duplication of time can result.

Auditors became aware of some schools using third-party software installed on school-owned computers designed to track all time spent on that computer, whether logged into the LMS or not. While there does exist software that would allow for schools to capture essentially 100 percent of time spent on a computer by their students, students that waive their right to a school supplied computer and instead use their own would be exempt and still need to track participation other ways. Additionally, some schools have begun supplying students with mobile devices such as tablets to perform supplemental learning when the student is away and unable to participate on a laptop or desktop computer.

ActivTrak

AOS auditors spoke to a representative from ActivTrak, the tracking software used by multiple e-schools, in an attempt to generate the participation data needed to receive full funding. ActivTrak allows a school to capture essentially all time that a student spends on a computer. It continuously logs a user's activity by monitoring the active window on the user's computer. For instance, a student might have both Microsoft Word and Excel running at the same time. The student clicks into Word and that becomes the active window while Excel sits in the background. The student cannot type within Excel because the operating system recognizes Word as being active and having priority. If the student clicks over to Excel, then Excel gains priority in the eyes of the operating system and becomes the user's active window. Every time a new window gains active status on the computer, ActivTrak will begin to track that time.

In our current example, the student clicks into Word and types for two minutes, then clicks into Excel and types for another two minutes. ActivTrak will log each of these clicks as a new and separate event. Reporting data from ActivTrak can show that the student was in Word from 12:00 to 12:02 and that the student was in Excel from 12:02 to 12:04. In fact, per reports reviewed by auditors, ActivTrak can record activity in active windows to the second. This can result in substantial amounts of data being generated by a student who incessantly clicks between a variety of applications, websites, etc.

ActivTrak does not capture a student's every keystroke or mouse click, rather it monitors for new keystrokes and mouse clicks for the purpose of determining whether a user has become idle. By default, the software has a two-minute timeout feature. After any point in which a user does not move or click the mouse, or make a keystroke, ActivTrak begins counting further time as idle time. This two-minute timeout feature is hard-coded into the software and cannot be changed.

ActivTrak also inherently captures many different data fields for reporting purposes. These fields include: name of the user, application name, title of application window, IP address of the user, URL of websites, title of URL/browser window, and measurement

of time user spent within active window. If the student accesses Microsoft Word and is working on a document titled "School Report," it would be reported that the student was active in Word and that they were working on "School Report." If the student accesses Wikipedia and reads an article about Thomas Jefferson, it would report the Wikipedia URL associated with the Thomas Jefferson page and also report that the active window was titled "Thomas Jefferson – Wikipedia." On the other hand, any students who access sports websites, video games, social media, or YouTube videos, this information would also be recorded and available to the school. Certain websites such as YouTube offer a vast array of content, much of which can be educational in nature and much of which is far from educational. While ActivTrak can capture and record the student's web browser title window such as "Science Video – YouTube" or "Music Video – YouTube", from the ActivTrak reports generated by schools that AOS auditors have reviewed, breakdown is typically generalized to just www.youtube.com. As will be discussed, the level of detail a school can produce depends on the level of the software it purchases and the capabilities that exist at that specific school. Many schools will be able to produce only generic reports and have to rely on internet filters to prevent students from accessing inappropriate web content. See example below.

- ActivTrak Website Data Example – TRECA Digital Academy

Website	users(h:mm:ss)
https://brainly.com	0:02:42
https://login.i-ready.com	0:52:51
https://brainly.com	0:01:06
http://contentlaunch.ple.platoweb.com	0:35:00
https://cainc.i-ready.com	2:08:53
https://www.kidsa-z.com	0:51:20
http://pbskids.org	0:01:28

ActivTrak offers two levels of its product: a basic software plan and an advanced plan. These plan levels offer no discernable difference when it comes to the amount or type of data captured by the software. Advanced plans allow administrators to import replicas of the raw data into the administrator's own data system, which allows for the creation of customized reports. However, read-only versions of the raw data continue to exist on the ActivTrak servers, which cannot be altered or manipulated by administrators. The basic plan gives access to a number of stock reports created by the system which are made available to the administrator. For larger clients, data is also stored on a server through Amazon Data Solutions. Read-only data is maintained on the server and cannot be altered.

ActivTrak allows system administrators to define certain applications and websites as "productive" or "unproductive". Reports can be run to separate productive activity from unproductive activity. An advanced plan member can choose which of the data fields to include in a customized report.

Administrators are able to view the top websites and top applications being used by their students. Administrators are provided a list of all websites and all applications that students access. By default, these applications and websites are identified as "undefined" with respect to their productivity. Administrators manually can review applications and websites and deem them productive or unproductive. Administrators also can add unlisted websites or applications. This allows administrators to ensure that only time spent in educational websites and applications is recorded for funding purposes. ActivTrak also allows school staff to more effectively implement disciplinary actions since they have a clear view of inappropriate websites or applications that students access on school computers.

While Ohio Rev. Code Section 3314.21(C)(1) requires e-schools to apply filtering software to any computer provided to a student, the statute specifically states that the filter should block "materials that are obscene or harmful to juveniles." Depending on the type of filtering software an e-school uses, the school may or may not be able to apply additional filters that further reduce a student's ability to access either inappropriate or non-educational websites or applications.

Another limitation of the system is that it can also under-report student participation, both for online and offline activity. At Ohio Connections Academy, for example, the new, in-house LMS designed to comply with the department's new standards requires students or their parents to manually input non-computer time for FTE funding purposes. E-school administrators explained that younger students often type "2" for two hours of work when they should type "120" because the question is asked in minutes, not hours. When reviewing these times, administrators said, teachers are comfortable reducing time claimed because of a concern it is inflated, they are reluctant to increase a student's time for fear it may result in adverse disciplinary action or jeopardize their teaching license. Additionally, the FTE manual prohibits teachers from estimating a student's time, adding to their reluctance to increase time – even if it appears a two-minute submission was for two hours of work.

Non-Classroom, Offline Time

Non-classroom time is the set of learning opportunities for students that takes place outside of the brick-and-mortar building. Non-classroom time can further be broken down into online and offline time. Online time is that time spent by the student on a computer linked to the school's learning management system. This time is tracked by the LMS.

Offline time is time that is not tracked by the school's system and can take place on or off the computer. Offline time may include work study programs, college credit plus classes, time spent with Microsoft Office, or other non-computer activities such as reading, studying, and writing.

ODE's FTE manuals state that e-schools and schools using blended learning must document learning opportunities that are not tracked by the school's learning management system and which do not take place in a brick-and-mortar classroom. As noted in the Duplication and Overlapping section of this report, the FTE manual also dictates that reporting of non-classroom-based learning opportunities, which would include online and offline time, must include five elements. These elements were a student SSID, description of learning opportunities, dates and times of learning opportunities, total learning opportunities time, and teacher certification. The FTE manual also includes an Alternative Learning Opportunity Documentation Log that schools may use. Although schools are not required to use the ODE provided log, any alternatives the schools use must still include the elements described above. The following is the ODE prescribed log:

Alternative Learning Opportunity Documentation Log

School Name:						
IRN:						
SSID:						
Subject/Plan:			Total Time:	0:00		
Month:						

Description of Learning Opportunities	Date	Start Times	End Times	Total Hours of Instruction	Notes

While some schools used the ODE template for documenting non-classroom-based learning opportunities, many do not. However, based on auditor reviews, it was noted that many schools used alternative documentation methods that did not include the required elements, yet ODE accepted them anyway. Some of the methods documented total time only in aggregate without beginning and ending times.

Under ODE rules, teachers are required to certify that the reported number of hours the student spent in learning activities is accurate to the best of the teacher's knowledge. It also includes reference to Ohio Rev. Code Section 1702.54, which states in part that no employees shall knowingly make a false statement and anyone who violates this section shall be held personally liable, jointly and severally, with all other persons participating in the act for any damages suffered as a result. Teachers also are required to include their Ohio Educator License Number.

Many of the school administrators auditors spoke with indicated that their teachers were wary of certifying time that they did not directly witness. Teachers also were apprehensive about accepting time that seemed inflated by the students. For example, a student might submit a manual log that states the student spent 20 hours to complete a book report. However, based on the quality of the report submitted, the teacher believes the student likely did not read the book or spend much time on the report. The teacher believes it's more accurate that the student invested two hours instead of 20.

Teachers might fear that if they certify the 20 hours and ODE determines later that the school's FTE was overstated, the teacher will lose his or her teaching license or otherwise be held liable. Therefore, many schools have begun to allow their teachers to adjust the number of hours submitted by students for non-classroom time. Now the teacher might reduce the 20 hours to a lower amount that the teacher believes is more commensurate with the quality of the assignment the student completed. ODE has allowed this practice, as long as teachers are not increasing reported hours, even though the FTE manual prohibits schools from estimating a student's time.

One school informed auditors that such adjustments by teachers have caused friction between the teachers, students, and parents. A teacher who reduces the number of hours a student claims essentially signals to the student and parents that the school does not believe them. At least one other school informed auditors that teachers were instructed not to adjust student time based on work quality, because the FTE manual prohibits estimates.

From an auditing standpoint, there is little risk associated with a school allowing downward adjustments to student time. An adjustment granting more time than a student originally entered would be a red flag for auditors and unlikely to be considered allowable. Not only has ODE allowed schools to adjust time down, AOS auditors have been told that Area Coordinators informed some schools they must adjust time based on quality of work. Teacher adjustments to student participation time are subjective and may not accurately reflect a student's learning difficulty or disability. Lack of mastery does not always indicate a lack of effort on the student's part. If schools are going to make adjustments based on quality of work, they should have an approved policy that provides objective criteria for adjustments. From an auditor's perspective, adjustments should be documented and the rationale for adjustment should be able to be consistently applied to other students that meet the same criteria. It would be very difficult to implement objective standards for adjusting student time, because every student learns and performs differently and their teacher of record knows their student better than other teachers, auditors, reviewers, or other school staff. Additionally, excessive participation time for a particular assignment could be a valid indicator that the school should be providing interventions to the student.

Adjusting student participation time down could erase the student record and prevent a school, sponsor, or auditor from identifying a student for whom the school has failed to provide necessary interventions.

Any time a teacher makes an adjustment to a student's reported participation, it is a subjective decision. Based on certain situations with proper support provided by the schools these adjustments may be reasonable. AOS was made aware in one case where the e-school offers students printers to use at their residence, because some students learn more effectively through the use of pen and paper. Students could then log in just to print off assignments and worksheets to perform the actual work outside the classroom. If the student performs most or all of their work while logged off the LMS, then signs in just to submit the assignment, the LMS will only capture a very small portion of that student's true participation. If the school is unable to obtain a log from the student that adds these offline hours, the school may feel justified in estimating an increase in hours.

Some schools do not require their students to submit paper logs to document non-classroom learning activity. These schools made electronic non-classroom time logs part of their LMS. Students will be required to enter the previous day's non-classroom time before being allowed to begin working on the current day's assignments. While the schools could provide more information to students and parents about correctly documenting and entering times, it seems likely that schools funding still could be penalized for student mistakes in non-classroom participation time keeping, as noted in the prior example of a student incorrectly entering the number of minutes as hours.

Non-Classroom, Non-Computer Time Tracking Example – Ohio Virtual Academy

While e-schools were significantly unable to capture required duration in the 2015-2016 school year, many began working with their management companies and sponsors to implement solutions for the 2016-2017 school year. However, such upgrades are likely to take much more time to be fully fleshed out. While much of the focus for e-schools has been the implementation of digital solutions surrounding their LMS, other schools have taken unique steps in ensuring that non-classroom time gets counted as well.

Ohio Virtual Academy is one such school with a unique way of documenting participation. Students have an online and offline durational component. Online time is defined as the total amount of system-captured duration. Offline time is defined as the difference between the total online time and parent-entered attendance. Total time is then the sum of the online and offline time components. See example below.

Steven decides to work on an Algebra lesson for today and performs the following tasks, of which the first three are captured by the school's LMS:

- Reads an online lesson for 18 minutes;
- Attends live instruction online for 32 minutes;
- Completes an online quiz in 11 minutes;
- Reads an offline lesson then completes an associated assignment offline in an unknown amount of time.

At the end of the day, Steven's learning coach (typically the student's parent) enters Steven's total Algebra attendance for the entire day, including both online and offline time in aggregate.

Steven receives 104 minutes of total time for the day for Algebra. The LMS captured 61 minutes of online time. It was noted by the school that if Steven was in his online lesson at the same time that he was attending the live instruction online, which would be known according to report timestamps, the attendance reports would void the live instruction time in order to prevent overlapping participation. In this scenario, it is assumed overlap did not occur in the online lesson and instruction. Online time is captured line by line per activity synchronously by the system, as shown below.

Online Time Captured by LMS – Ohio Virtual Academy

COURSE_CODE	COURSE_NAME	LOGIN_DATE	TOTAL_TIME	ACTIVITY_ROLE	UNIT_TITLE	LESSON_TITLE	EXTRA_CREDIT	CORE_COURSE_COMPON	ACTIVITY_START_DAT	ACTIVITY_END_DAT	ASSESSMENT_TITL	SOURCE
MTH122E	Algebra I	10/24/2016	29	STUDEN	Unit 2	Lesson 9: Statistical Graphs			2016-09-	2016-09-13T14:19:		D2L
MTH122E	Algebra I	10/24/2016	32	STUDEN	Unit 2	Lesson 9: Statistical Graphs			2016-09-	2016-09-13T14:52:		ELLUMINATE

As can be seen above, each activity is captured by the LMS with a course name, login date, total time, as well as beginning and ending timestamps. In this example, Steven spent 32 minutes in live instruction and a total of 29 minutes completing a quiz and lesson, totaling 61 minutes. Since Steven's learning coach entered a total of 104 minutes time spent participating in Algebra for the day, Steven must have spent 43 minutes reading and completing his offline assignment which is how the school calculates and documents his offline time as seen below.

Offline Time – Ohio Virtual Academy

CourseCode	CourseName	Date	Online Time	Offline Time	Total Time
MTH122B	Algebra I	10/24/2015	61.00	43.00	104.00

In this scenario, Steven does not complete a log, either manually or electronically, for his offline duration. Offline duration is assumed based on the fact that in order for him to have had 104 total minutes of duration, and the system captured 61minutes, he had to have spent 43 minutes exactly on the offline activities. Since Steven does not keep a log that would include both the beginning and ending times of his offline activity, as required by ODE's FTE Manual, auditors would not reasonably be able to determine whether Steven's offline time was performed separate from the online instruction or overlapped in any manner.

The participation documentation method described above often ensure that students will be provided with essentially 100 percent of their time. Students and their parents are aware of how many hours in any given day the student is required to participate. If Steven and his parent know that Steven must spend six hours participating one day, then at the end of the day when they are to submit a total amount of time spent participating, the student or parent can simply input totals for each class that will add up to six hours. By definition the student's offline time will be sufficient to make up for the amount of time the student needs to participate to supplement the number of online hours captured by the LMS.

ODE's FTE review of the 2016-2017 school year of Ohio Virtual Academy did not note any errors. In speaking with the Director of the school, auditors were informed that the ODE Area Coordinator who performed the review thought the method being used by the Academy to capture participation was exceptional.

The Academy's May 2017 FTEs as reported and recognized by ODE in the FTE review letter were 8,347.75. The Academy's final FTE after adjustments for percent of time were made was 8,137.31, or 97.5 percent of the amount before adjustment. In essence this says that the Academy's students participated, and documented such participation, for 97.5 percent of the total enrollment hours for the whole year. In our experience with other schools this percentage is often not above 80 percent, many times being significantly lower. The above Academy is a statewide e-school meaning it is educating the same demographic of students as other e-schools.

One of the topics auditors discussed with e-schools was the impact that non-classroom time had on their schools. Responses often included several issues:

- Teachers and other staff spending significant amounts of work time chasing down hours and documentation from students that often do not submit time.
- Many students are forgetful when it comes to documenting their time accurately, especially younger students. Parents play a large role in an e-school student's education and must be active in documenting time.

- Documenting hours and manually entering these hours for funding, including cross-checking the non-classroom hours against other durational sources to remove overlap or duplication, takes a significant time commitment, especially from smaller schools that often do not have dedicated staff for such work.
- Some schools have hired dedicated truancy officers or other staff whose sole job is to work with students who do not participate. Schools are required to capture student participation and track students who do not submit time even though the schools do not receive funding for the students who are inactive.

Despite the issues identified by AOS in 2016 and 2017, and ODE's awareness that issues related to duplication, overlapping, and idle time exist, Area Coordinators still do not test for these problems during FTE reviews. Schools that can demonstrate they have a process to account for such problems often have ODE Area Coordinators accept their FTEs at face value. But AOS has found these processes often do not fully account for all issues noted above.

If ODE insists that e-schools provide participation data for the purpose of substantiating FTEs, it is imperative that ODE provide proper guidance to the schools and its own Area Coordinators to address these problems. While ODE's reviews are not audits, they are still the authoritative body that regulates community school funding. Without proper guidance, schools will be unable to comply with legislative requirements and Area Coordinators will be unable to accurately confirm schools' FTEs during their reviews. Similarly, e-school sponsors and auditors may be unable to determine compliance.

While Area Coordinators select a sample -- for example 50 students -- for FTE review, the Coordinators only test a handful of these students to verify their participation hours as reported by the school. It appears that ODE has focused more on ensuring that schools document proper enrollment and withdrawal information than on participation data. Proper enrollment and withdrawal documentation was significant to a school's funding in prior years when funding was based on enrollment. Going forward, enrollment and withdrawal documentation are far less important than documentation of the time students spend participating in learning activities. If participation is the way forward, it would benefit all parties for that to become the focal point for Area Coordinators.

INCONSISTENCY AND GAPS IN ODE OVERSIGHT OF E-SCHOOLS

ODE is the State's authorized grantor for the distribution of school foundation dollars and also performs FTE reviews to ensure community schools are receiving the proper amount of funding.

As noted below in the ECOT FTE Appeals statement, Area Coordinators had been basing their reviews and community schools' FTEs on the enrollment period of a student and not considering the durational records maintained by the schools. ODE had also informed AOS that this was the acceptable method for substantiating FTEs, and therefore auditors had not been performing tests of student participation.

Per Ohio Rev. Code Section 3314.08(K), community schools that receive an FTE review resulting in the school owing funding back to the State have 10 days to appeal the Department's determination to the State Board of Education. The State Board of Education must conduct an informal hearing on the matter within 30 days of receipt of the appeal and shall issue a decision within 15 days of the conclusion of the hearing. Any decision made by the board under these circumstances is final.

The Electronic Classroom of Tomorrow (ECOT) received a final determination regarding its fiscal year 2016 FTE review from ODE on September 26, 2016 stating the school had been overfunded and owed the State nearly $60 million. ECOT appealed this determination and requested a hearing on October 11, 2016. The State Board of Education issued the Decision of the Hearing Officer in May, 2017. As stated in this hearing as part of ECOT's appeal, within the "Summary of the Evidence" from the Hearing Officer's report:

> *"Prior to 2015, despite the language in ODE's own FTE Review Handbooks, ODE's Area Coordinators were not looking at the durational data in doing an FTE review of an e-school. This included a 2011 FTE review of ECOT…Area Coordinators continued to adhere to what they incorrectly believed to be an ongoing standard to ignore durational data…As stated by Area Coordinator John Wilhelm, "I don't know if we were obligated to do it, but we did not do it." The same information was communicated by ODE to the Auditor of State for purposes of school audits conducted by that official."*

"Sometime in the fall of 2015, Mr. Rausch was discussing Provost with Area Coordinator John Wilhelm and the latter advised him that he personally had not been requesting durational data in any of the reviews of community schools, including ECOT, that he had conducted in the past. Mr. Rausch was able to then verify that this practice was systemic by all ODE Area Coordinators. This prompted ODE officials to change this practice and begin including the review of durational data in all future FTE reviews commencing with those conducted in 2016."

"In implementing this new practice, Mr. Rausch was both aware that this would be a significant change from past practice and that Mr. Wilhelm and other Area Coordinators had advised him that they had concerns about the ability of e-schools to produce durational data in order to support their claimed FTEs. Nevertheless he did not perceive that e-schools would not have the data, partly because Provost Academy was able to produce durational data within a few days of the request and partly because the course of House Bill 2, as it made its way through the General Assembly throughout 2015, placed e-schools on additional notice that the creation of durational data would be necessary by at least February of the 2015-2016 school year."

"Consequently ODE did not provide any additional notice to the e-schools prior to January 2016 that it was changing its practices and now integrating the review of durational data in its FTE reviews. This lack of clarification resulted in confusion among both Area Coordinators and e-schools."

As was previously discussed, AOS performed a special AUP on ECOT's attendance records in 2014. This AUP was not designed to test participation and was based on the nature of a whistleblower complaint received from ECOT. The whistleblower cited concerns around enrollment and withdrawal practices, not student participation. The AUP discovered no notable issues related to enrollment and withdrawal practices or FTE.

When AOS began meeting with school administrators as part of this project, many felt like they were in the dark with respect to what ODE was or was not going to accept during the FTE reviews. Most administrators said there was little to no guidance provided by ODE or the Area Coordinators prior to the FTE reviews. Some schools that claimed they did receive guidance from ODE indicated it was later found to beincorrect . Additionally, all of the schools we interviewed indicated that ODE's Area Coordinators would provide verbal guidance only and would not reduce it to writing..

Provost Academy Ohio, which had 80 percent of its funding clawed back in 2015, had not been reporting time spent by students participating in learning opportunities on weekends, holidays, or weekday times when teachers were unavailable. The Academy for the most part was only accepting participation documentation that occurred during typical weekday school hours. The reason for this was because the Area Coordinator had informed the school this was the case, even though this directly contradicts the FTE manuals and the spirit of an e-school. Provost could not provide auditors with written communication from its Area Coordinator spelling out these restrictions.

Furthermore, while ODE FTE manual asks Area Coordinators to review the community school's sponsor contract and attendance policies, auditors have noted that these items have been generic or filled with boilerplate language in the past.

On October 10 and 11, 2017, AOS met with ODE staff and the ODE Area Coordinators who were responsible for conducting e-school FTE reviews. In addition to Area Coordinators, ODE representatives included the Chief Legal Counsel; the Director of Office of Budget and School Funding; and the Financial Manager. The purpose of these meetings was to understand each Area Coordinator's process for conducting an FTE review. This meeting is documented in ***Appendix D: Meeting with ODE Area Coordinators***.

We also held a follow-up meeting with the Chief Legal Counsel, the Director of Office of Budget and School Funding, and the Financial Manager on March 14, 2018, to provide detailed examples of the issues auditors were seeing throughout their reviews and to get an understanding of how ODE was handling these issues, such as duplication, overlapping, excessive idle time, and others. As a result of unanswered questions that arose during this meeting, the AOS sent questions to ODE within a week of the meeting. AOS received ODE's response to those questions on June 29, 2018 – more than three months later, which are in ***Appendix E: ODE Response***.

Over the course of auditors performing FTE compliance testing for the 2016-2017 school year, several common errors were found. Errors often were due to duplication and overlapping of time being reported for students, which resulted in many questions regarding the Area Coordinators who reviewed this information, such as:

- Do Area Coordinators gain a detailed understanding of the system(s) being used by the schools to capture durational data?
- Do Area Coordinators test for such items as duplication or overlapping of FTEs?
- How do Area Coordinators –review idle or inactive time for reasonableness?
- How do Area Coordinators evaluate situations where the system produces reports that show aggregated time or school documented non-computer time in a different format than described in the FTE manual?

None of the ODE representatives indicated that the Area Coordinators had to gain a detailed understanding of the LMS or education modules used by the schools. Based upon this, we asked the Area Coordinators if they were aware that although the LMS is the same for two schools, the LMS could be capturing durational data differently? They indicated they were not aware of this. AOS also asked if ODE was aware that some LMS and educational modules track durational data in a different time zone; again AOS received an answer that ODE was not aware of this.

However, in response to our question about how well an Area Coordinator is required to understand the LMS and educational modules, ODE responded by saying:

Since each school has different data systems, our expectation is that Area Coordinators seek to understand the methodology used by each school in capturing durational data, the types of systems used, and the learning opportunities those systems represent. As part of the FTE review process, the Area Coordinators have support of the office leadership, who participate in the FTE reviews so they can assist with any issues and ensure consistency among the reviews.

While ODE expects the Area Coordinators to understand the methodology used by each school for capturing durational data, our testing results indicate that an understanding is not gained (see **Appendix C: Community School Narratives** for detailed results for each school tested). In most cases, the AOS staff found significant issues related to the FTEs reported by the schools. One of the most common errors was the overlapping of non-computer time and online time as well as duplication of time between LMS and educational modules.

Traditional school districts, which sponsor local community schools, have learned that they may simply absorb a community school as part of the district by labeling it an innovative program in order to avoid certain requirements. Therefore, it is feasible that blended learning community schools could take a similar approach. If a community school knows that it is funded fully for the portion of a student's day that the student is required to attend on-site, regardless of absences, the school could simply require students to attend full-time but provide them the means to perform the work outside the classroom as well. E-schools could give way to blended learning in order to assure more guaranteed funding. Many e-schools have stated to auditors they cannot operate long term while receiving 60 to 80 percent of the funding levels they used to get, especially since these schools already receive less funding per student than their traditional school district counterparts.

We attempted to ask ODE how it would handle scenarios where students are granted full 24/7 access to their learning management systems, while required to attend on-site, but received no guidance or answer. See **Appendix E: ODE Response** under ODE Policy and Guidance Question #12.

Due to the lack of guidance or direction from ODE, we believe there are other scenarios a community school and sponsor could take to avoid the need to document participation.

When auditors interviewed ODE Area Coordinators, we attempted to gain an understanding of how they reviewed and understood the schools they were responsible for. One Area Coordinator who reviewed Akron Digital Academy had indicated he did not believe the Academy was a true e-school but rather a blended learning school.

The Area Coordinator's reason for this was because Akron allowed students to attend on-site tutoring two days every week which, according to the Academy, a majority of the students did. Auditors were familiar with Akron and knew that these tutoring sessions were completely voluntary and not mandatory for students to attend. Therefore, Akron was required to capture participation data for the time these students spent on-site. Had Akron *required* the students to attend these sessions twice a week, the school certainly could be a blended learning community school and those sessions would automatically be funded for every student, regardless of who actually attended and without the need for participation documentation.

An Area Coordinator's lack of clarity about whether a school is actually blended learning or an e-school can have a significant impact on that school's funding. If Akron became a blended-learning school, it no longer could be a statewide e-school, and would only be able to draw in students locally. However, the funding for the enrolled students would drastically change.

LACK OF CLARITY IN STATE LAW AND ODE ADMINISTRATION OF E-SCHOOLS

Guidance and Training

Of the guidance that ODE has issued for these community schools, there are some notable issues leading to confusion amongst the schools and AOS. Some excerpts below will illustrate the guidance issued by ODE that appears to contradict what ODE has accepted over the course of its FTE reviews or contradict the verbal guidance provided to AOS.

Inadequate Training of Area Coordinators

The lack of consistent training and standards was most apparent with regard to how e-schools were being evaluated for funding.

For example, the Department maintains that e-schools have been required to track each student's duration of time since the 2010 FTE manual. However, that standard has never been enforced or clearly communicated to the schools by ODE in the past. Reviews by AOS auditors found inconsistencies in how the FTE handbook was applied by Area Coordinators. In testimony, ODE confirmed that field staff charged with performing the FTE reviews had a difficult time understanding what, if anything, had changed between the fiscal year 2010 FTE manuals and those used for fiscal year 2015.

The Director of ODE's Office of Budget and School Funding has acknowledged that Area Coordinators could have been confused by the language contained in the 2015 FTE manual. When pressed by ECOT's attorney about whether substantive changes occurred to the FTE manual for the fiscal years 2011-2014, the Director responded that they had not. "I don't believe there are any significant differences between what is in the 2010 manual and what ultimately appears in the 2015 manual," the Director stated.

2015 FTE Review Checklist

Step 11 of the FTE Review Checklist contains procedures designed to allow the Area Coordinator to make a determination on whether a community school is a brick-and-mortar school, a blended-learning school, or an e-school. The e-school portion contains procedures for determining whether the FTE reported by the school appears accurate for students. One such procedure asks whether the following documentation exists:

"An attendance record for the student that matches the amount of time reported in EMIS."

The above procedure has a clarification point added which states the following:

"A learning opportunity for an e-school student could be computer learning, reading resource documents, writing papers, taking tests, doing research, field trips, and conferencing with teachers, etc. There must be a login but that cannot be the only proof of attendance."

Despite there not being "any significant differences" in the manuals, Area Coordinators responsible for providing technical assistance to the schools during that period – and for conducting the FTE reviews – were confused over what constituted adequate documentation for FTE funding. These Area Coordinators who had informed e-schools that "enrollment" was an acceptable way to support FTE funding for years became confused in the 2015-2016 school year when they were conducting the reviews.

Other steps in the Checklist ask that the Area Coordinator review documentation supporting when the student's first login was made.

Furthermore, Step 11 of the Checklist asks that a reviewer check the following documentation:

"If the student has non-computer learning opportunities, were such opportunities documented and approved in writing by a teacher, supervisor or school administrator?"

The above procedure for Area Coordinators contradicts earlier portions of the FTE Handbook which asks that schools certify all non-classroom-based learning opportunities (see Certification of Non-Classroom Time). As noted previously, non-classroom learning opportunities includes any and all learning opportunities which take place outside a physical classroom, regardless of whether they occur on a computer. However, this procedure clearly asks the Area Coordinator to review certification of non-computer time, not non-classroom time.

Another noteworthy item includes the language "approved in writing by a teacher, supervisor or school administrator." As we have noted previously, ODE has disallowed certain non-computer logs, especially in the case of Virtual Community School of Ohio, because the logs were not signed by a certified teacher. ODE's own checklist to Area Coordinators has explicitly stated these logs may be signed by school employees other than a certified teacher.

Finally, Step 11 of the Checklist asks that the Area Coordinator review documentation showing that there was "hourly/daily/weekly accounting of hours in which the student accessed learning opportunities." In combination with the previous procedure steps, which ask the coordinators to review homework, tests, initial logins, and other items, it is not surprising that the coordinators were confused.

For there to be confusion among Area Coordinators over something as critical as defining how e-schools are funded and what Area Coordinators were to require during FTE reviews speaks to the lack of consistent, documented standards and training in the Department.

2019 FTE Manual

E-School and Blended School FTE Review Guiding Questions

This is a new addition to the FTE Manual that was not in previous versions. The purpose of this new section is to outline specific questions and criteria for Area Coordinators to consider when performing an FTE review of either a blended community school or an e-school.

Definitions

The first section asks the Coordinator to determine how the school defines participation, attendance, online time, classroom time, and non-classroom-based learning opportunities. These items are already to be defined in the school's Sponsor Contract as required by Ohio Rev. Code Section 3314.03. One major item missing from this section is the subject of idle time or inactivity spent on a digital platform. Schools should implement reasonable policy and procedure for detection and reduction of excessive idle time. Area Coordinators should be aware of how idle time is addressed by the schools receiving the FTE review.

Senate Bill 216 as passed by the 132nd General Assembly establishes Ohio Rev. Code Section 3314.231 which requires the Superintendent of Public Instruction to recommend to the Joint Education Oversight Committee definitions related to e-schools for inclusion in ODE's FTE Manuals.

These definitions include:

Documentation of online learning;
Idle time;
Educational;
Noneducational;
Participation;
Classroom.

Therefore, rather than Area Coordinators relying on how pertinent items are defined from school to school, Area Coordinators will be enforcing the Department's own definitions. These definitions are to be recommended by ODE no later than November 30, 2018. ODE should amend the 2019 FTE Manual to include these definitions.

Systems and Vendors

The Guide continues by instructing Area Coordinators to determine how schools determine durational time via learning management systems and/or vendors from the following sources:

Computer;
Classroom;
Non-classroom-based learning opportunities.

From AOS experience of visiting e-schools across the State and interviewing ODE employees, Area Coordinators thus far have not gained an adequate understanding of how specific LMS work or how durational data is derived from third party vendors and the integration of data between these various sources. From our interviews we were informed by Area Coordinators that they did not spend a significant amount of time to fully understand the capabilities of schools' systems, rather they obtained a general overview of how system reports looked. Essentially, Area Coordinators reported to us that they relied on the schools themselves to have sufficient knowledge and control regarding systems and data.

Online Hours, Non-Classroom-Based Hours, and Classroom Time

This is the only section of the FTE Manual that addresses the issue of idle time. For the online hours section it states:

"Does the school have "forced" log out times? In other words, how does the school or vendor handle a student who doesn't show any activity? How long does the school allow, 15 minutes, 30 minutes? How did the school determine the forced log out time? Is the forced log out time included in the durational interval?"

Previously, Area Coordinators relied on schools to reasonably address forced log outs, or idle time. Auditors have reviewed several systems and vendors all who handle this topic differently. Some systems have built in forced logouts, while some do not. Some system reports show idle time and others will show something such as Time on Activities separately from Total Time Logged In. Auditors have seen other system reports that have to be configured by the school to show whether a student was forced out, while the default reports will not include such information.

The Guide continues to address the idea of identifying overlap and duplication with regard to combining durations from different sources (two online systems, online and non-classroom-based time, and online and classroom time). This section does raise some important questions that Area Coordinators did not previously address in their reviews, such as:

"For vendors that submit only aggregate annual time, how does the school ensure there is no duplication or time does not exceed 10-hours per day?

If a family has two or more siblings that share a computer, how does the school differentiate duration between the multiple students?"

Auditors have found schools often do not have strong controls in place that would allow a reviewer to differentiate between the time a student spends on an LMS inside a classroom versus the time that same student spends on the LMS at his or her residence. Adding multiple students in a single residence to this scenario creates additional difficulties.

FTE Review Survey – E-School and Blended School

This section of the FTE Manual acts as a checklist for the Area Coordinator as he/she performs the review. Similar to when AOS performs audits, auditors are provided Suggested Audit Procedures which are designed to ensure enough assurance is gained from testing to reduce audit risk to acceptable levels. AOS reviewed the FTE Manual checklist to determine whether it provides enough assurance for reviewers to reasonably conclude a low risk of the community school over reporting FTEs based on student durational data.

The FTE Review Survey is split into multiple sections with each section containing multiple questions. The sections are as follows:

School Information

This section contains two questions that address the type of school being reviewed and whether there are any special issues with the school to be considered.

Policies and Contract

This section asks the reviewer to review the community school's sponsor contract and the school's policies and procedures related to enrollment, attendance, and other items. Rather than containing specific information that the reviewer should consider or verify exists within the contract or various policies, each question simply states the reviewer should review the items and add comment if any issues are identified.

Calendar Information

This section contains a single question asking the reviewer to compare the school's calendar as reported in EMIS to the calendar officially adopted by the school board. The question asks the reviewer to ensure these two versions of the calendar match. The section does not contain additional considerations such as whether the school is accurately using the adopted calendar to calculate student FTEs, the calendar offers the appropriate number of learning opportunities, etc.

Again, this section contains a single question which asks the reviewer to determine the number of student records in the FTE detail report, number of special education students, and whether additional students were selected for a potential second sample. So far, checklist items appear substantially the same as in the 2018 FTE Manual. The 2017 FTE Manual contained further clarification regarding how many records were necessary based on student populations. The 2018 and 2019 Manuals only ask the reviewer to note amounts.

This section contains three questions that address how the reviewer actually performs review over individual students and the related durational support. Reviewers are required to document that each student has the required enrollment and withdrawal, if necessary, documentation. Reviewers are also required to note whether documentation exists for e-school students either receiving a computer or waiving the right to a computer supplied by the school.

Reviewers also must determine whether attendance documents support a student's start and end FTE dates. The checklist does not offer additional detail about what constitutes sufficient documentation. For example, the start date for FTE of an e-school student is the latter of the student's first login date or the date the computer was received.

Re-Enrolling Students

Many e-school administrators interviewed by AOS staff said they cannot turn students away, even those who have been removed from their e-schools for failing to participate or for truancy issues. When AOS auditors asked one e-school why it would re-enroll a student who had been removed for truancy, officials said the law requires it. Another e-school, however, Ohio Connections Academy, said it uses a stricter approach related to admission of students who do not participate in learning opportunities. The Academy had previously applied a stricter 105-hour cumulative withdrawal policy, but later reverted to the 105-hours of consecutive missed hours as stated in Ohio law. Many e-school administrators said they believe Ohio Rev. Code Section 3314.06 requires them to enroll the student unless the school had met the exceptions within 3314.06, which state that a student who has not participated in state testing for two consecutive years may not attend an e-school.

Correspondence Courses

Put in the simplest terms, a correspondence course can be defined as a course in which students participate in learning opportunities and communicate with their teachers through the mail. This often takes the form of students who do not attend a brick-and-mortar facility and also do not participate through an online system, rather the students use hard copy textbooks and assignments that are completed at the student's residence then mailed to the school for grading.

ODE's House Bill 2 guidance for blended learning community schools, which has been updated regularly and most recently as of April 1, 2018, states the following:

> *"Can correspondence courses by mail be part of the instructional delivery for students in community schools using blended learning models?*
>
> *No. Correspondence courses are not a recognized blended learning model as they do not provide opportunities for both in-person and online learning; therefore, correspondence courses do not meet the definition of blended learning."*

There are e-schools that do not require many of their younger students, often kindergarten up to about third grade, to participate on the computer. These younger students are offered physical textbooks from which the students perform their work. While a student's proficiency at using computers and the internet progresses quickly as they get older, one school was allowing kindergarten students to perform up to 95 percent of their workload via hard copy textbooks. The school had actually contracted with a vendor that specializes in homeschooling to provide the curriculum for these younger students. The school in question, Quaker Digital Academy, is an e-school and therefore is unallowed by law to offer its students a blended-learning curriculum.

Despite e-schools not being allowed to offer blended-learning or correspondence courses, AOS has identified this occurring and have issued citations within schools' audit reports for their use of correspondence courses. However, when ODE performed its FTE reviews for the same schools that AOS had cited based on ODE's own guidance, ODE did not take issue with these schools' use of correspondence courses and allowed the time resulting from such courses to be counted toward the schools' FTE.

London Academy

AOS released the *Second Report on Community School Student Attendance Counts* dated May 23, 2016. In this report, auditors note that London Academy was issued a letter by ODE dated February 21, 2008, that notified the Academy it was operating under a mistaken belief that it could have some students work as e-school students and others work as brick-and-mortar students. ODE indicated that the Academy and its sponsor were to take aggressive action to comply with State law. Subsequently, the Academy transitioned from an e-school to a brick-and-mortar school.

Even though ODE performed several FTE reviews at London Academy between 2008 and 2016, it was not until February 9, 2016, that ODE issued another letter that indicated the Academy's learning model did not comply with the definition of blended learning because it did not allow students to receive both classroom-based and non-classroom-based learning. The Academy was again informed to update its educational model to comply with State law.

The Academy operated by allowing the majority of students to participate through the paper-based American School correspondence program. London Academy would close at the end of the 2017 fiscal year and be absorbed by the London City School District as an innovative program.

Townsend Community School

ODE performed an FTE review at a similar school in 2013, Townsend Community School. Townsend operates similarly to London Academy. Townsend's students primarily complete weekly exams at their residence which they then submit for grading. Students were not required to attend classroom-based instruction and were not provided computers for online learning. Townsend's curriculum was also provided through the American School correspondence program used by London Academy.

AOS was on-site at Townsend in the first half of calendar year 2017 to perform the school's fiscal year 2016 financial audit and noted that operations of the Academy were unchanged. ODE performed an FTE review of Townsend in July of 2017. ODE's review noted no issues and made no mention of the use of correspondence courses.

Townsend had a 2013 FTE review performed in which ODE attempted to clawback 100 percent of Townsend's funding because of the education model being used by the school. Townsend appealed the 2013 decision, later reaching an agreement to repay ODE for 35 percent of its 2013 State funding. Also as a part of this agreement, ODE made the following concessions:

"Representatives of ODE, at least one of which has decision-making authority with regard to FTE reviews, will meet with Townsend official(s) and counsel during the 2014-2015 school year to discuss:

a.   Any and all ODE-proposed legislative or regulatory changes relating in any way to FTE funding for community schools since June of 2013 – particularly regarding blended learning, credit flexibility, schools using correspondence curricula, and non-classroom, non-computer based learning opportunities. Such ODE-proposed legislative or regulatory changes may take the form of draft amendments to documents, emails, notes, or any other written forms of information or discussions relating to any changes to FTE funding. ODE will provide drafts of any documents, including draft amendments to statute, rule, or other ODE policy, to the School prior to the date of the meeting. The Parties understand that ODE can only authoritatively describe legislative and regulatory changes it has proposed and that it cannot speak for other policy makers. The Parties understand that although ODE will be forthcoming in those discussions, its discretion to pursue different or additional legislative or regulatory changes is not limited by the discussions at this meeting.

b.   The documentation Townsend will need to provide to ensure full FTE payments. The Parties shall reduce these FTE requirements to a writing ("Revision to the FTE Review Handbook") that establishes the different pathways for Townsend to document its learning opportunities – through (a) blended learning, (b) credit flexibility, (c) via "correspondence" curricula, and any other possible avenues for recording attendance and student participation. The Revision to the FTE Review Handbook shall govern all future ODE fiscal year FTE reviews of Townsend, unless superseded."

AOS spoke with the Superintendent of Townsend regarding this agreement entered into with ODE. The Superintendent informed us that no meeting between Townsend and ODE ever took place, despite Townsend repeatedly attempting to contact ODE.

ODE also did not perform another FTE review of Townsend until the 2016-2017 school year, where no issues were identified, despite the issues noted by auditors during the 2015-2016 school year audit. Had ODE followed through on its promise to clarify what kind of education models were acceptable, especially with correspondence courses, and how exactly schools should document their students' learning opportunities, there could have been a far-reaching, positive impact on the schools, their students, and the taxpayers of Ohio.

As noted, London Academy was forced to change its educational models more than once and eventually closed down, Townsend still is in operation today. Other e-schools and blended learning schools could also have greatly benefited from ODE following through with timely explaining the exact documentation needed to substantiate funding, many of which have since closed, mainly because they were unable to appropriately document participation to ODE's satisfaction.

Certification of Non-Classroom Time

In the 2017 FTE Manual, ODE states: "Any student's instruction time in non-classroom-based learning opportunities shall be certified by an employee of the community school." This was later changed in the 2018 FTE Manual to state: "All non-classroom-based learning hours must be documented and certified by a teacher."

Virtual Community School had its FTEs reduced in the 2016-2017 school year from 666.80 to 326.78 due to the manner in which the school certified offline time. ODE's FTE review letter of Virtual Community School, dated September 28, 2017, states "Based on the Department's understanding that non-computer based time was not certified by teachers, the Department excluded this time." ODE informed auditors that this determination was made because the school's Superintendent was certifying student's offline time rather than the students' teachers of record. When auditors asked why this was the case, ODE indicated that the Ohio Administrative Code (OAC) provided teachers must certify offline time. Auditors pointed out that the 2017 FTE Manual states otherwise, but were informed that OAC trumps the FTE Manual. This was corrected in the 2018 Manual as noted above, but would not have been clear to any school in 2017 relying on ODE's own published guidance.

Based on AOS review and knowledge, e-schools are only certifying non-classroom, non-computer learning opportunities. That is, e-schools are only certifying the time students spend offline. Not only is this the common practice of e-schools, it has been accepted by ODE's Area Coordinators, despite ODE's own response to auditors (see *Appendix E: ODE Response*) that "non-classroom" time includes time that is spent online for education for an e-school. ODE's FTE manuals state that schools are to certify all non-classroom learning opportunities.

Taken at face value from the FTE manuals, e-schools would have to certify all learning opportunities whether occurring on a computer or not. This is simply another requirement outlined by the FTE manual that is both unclear to the reader and likely misunderstood and therefore not applied consistently by the Area Coordinators. E-schools that currently do not certify all learning opportunities may potentially find themselves in a position in the future where participation times previously accepted by the Area Coordinators are denied due to a lack of certification, despite current accepted practices.

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BUDGETING DIFFICULTIES

Funding 100 percent on documentation of participation makes it difficult for e-schools to budget and operate a school. Student Information Systems (SIS) are developed to account for students based on enrollment. Therefore, e-schools will have to perform a trend analysis to determine what percent of time they believe they can capture for each student. In both the 2015-2016 and 2016-2017 school years, it would have been difficult for schools to do so because participation data had not previously been required. So schools were still entering the student's FTE based on enrollment in the SIS. This resulted in the schools making large adjustments at year end which resulted in the schools being overpaid in both years as noted in the *Field Reviews* section.

There are many expenses a school incurs beyond educating a student in the classroom and funding a school based 100 percent on anything other than enrollment will make it difficult for a school to remain in operation. For instance, an e-school has the fixed expense of the computer and internet service for each student enrolled. In addition, every school is responsible for making sure the students are engaged and attending or participating. There is a cost associated with this, as a teacher or other employee of the school must remain in contact with the student and parents to ensure the student participates and enters participation data. AOS reviewed some of the Case Management Systems used by the schools to show the communication with the students. In many cases, auditors could see the efforts the schools were making to encourage students to participate. Yet ODE did not consider this record to be acceptable evidence of participation during its FTE Reviews.

Additionally, schools have to monitor participation and attendance. If the student is not attending or participating, the school is required to make contact with the student and parent. If truant, the school must document a plan for the student and meet with the parent and student to discuss the plan. The school cannot withdraw the student until 60 days after the plan is in place. This effort has a cost associated with it, and the school receives no compensation for it. Many of these schools indicated to AOS that they already operate on strict budgets with little flexibility for additional compliance measures; however, auditors did not attempt to test these assertions from school management.

During our research, we found that most states fund community schools based on a combination of enrollment and performance. By funding community schools this way, schools are able to control their budget more effectively.

Providing a guaranteed amount of funding based on a student enrolling at the school allows the school to cover the fixed costs associated with providing that student required amenities such as computers and internet access. Providing the remaining amount of funding based on performance creates an incentive for the school to spur student participation.

Funding in Other States

California
There are more than 1,200 community schools in California, serving more than 600,000 students. Community schools that provide at least 80% of their students with digital instruction are deemed to be "non-classroom based." These schools are allowed to operate by either offering only non-classroom programs, including digital learning, synchronous real-time online learning, or independent study, but schools may also offer classroom based instruction up to 20% of total instruction.

Community schools are required to offer both a specified number of days of instruction and a specified number of hours for any day to be considered an instructional day. Any California community school that offers non-classroom based learning opportunities is required to apply for a "determination of funding." This determination is made by the State's Board of Education to decide the amount of funding the schools are eligible to receive for a given period. Determinations are for terms of at least two years, but not more than five.

These schools are automatically eligible to receive 70% of their funding based on an average daily attendance for students. This is essentially the same as the State of Ohio's Average Daily Membership (ADM) used for traditional public schools. ADM is determined by counting the number of students in attendance at a school in a given period, usually one week in October. This ADM is used to determine the school's funding for the year. ADM is not all that different from funding a school based on student enrollment.

California community schools are required to present time logs or other documentation for both classroom and non-classroom student participation. The State Board uses this information along with the reported average daily attendance to determine funding. Both brick-and-mortar community schools and virtual community schools are required to keep the same manner of attendance and participation documentation.

Finally, the State of California considers the community school's cost of instruction when making determination for how much funding a community school will receive. Schools that report employee compensation exceeding 40% of total spending and total instruction costs exceeding 80% of total eligible funding are eligible to receive 100% of funding. Lower calculations, such as 40% employee cost and 70% total instruction cost, would make the school eligible for 85% of funding.

This system allows schools to maintain a certain level of operation regardless if students participate 100% or not. The schools are able to reasonably meet required obligations and cover certain fixed costs that occur whether students are active or not.

Texas

Texas uses a system that allows funding to be based on both competency and course instruction time. The Texas Education Agency (TEA) and the Commissioner of Education have the authority to conduct audits of Texas Virtual School Network (TxVSN), though audits are not routinely performed as in Ohio. TEA performs audits typically only in cases where suspicion has been raised by either citizens or elected officials. However, every school receives financial audits, as in Ohio.

TEA defines a full-time enrollment (FTE) as a student being enrolled in five or more TxVSN courses. A student's daily attendance is considered to be at least 240 minutes of instruction per day, with each course being 55 minutes. If a student attends one day for less than two hours, the school receives no funding for that student for that day. A student who attends between two hours and four hours receives half funding for the day. Students who attend for more than four hours receive full funding for the day.

Students may receive instruction in and out of class. A student who receives 185 minutes of classroom instruction in a day and is also enrolled in one online course (55 minutes) receives full funding for the day. Students are not required to perform the 55-minute online class in the same day, however students who do not successfully complete the online course would receive half a day's funding. Students must receive at least a 70% passing grade in online courses to receive full funding for those courses.

Texas also utilizes an Average Daily Attendance (ADA) standard, similar to Ohio's ADM. ADA is the average attendance of students for the school year which is calculated by dividing up the number of days present per six-week reporting period, by days taught in that period. At the end of the year, all six reporting periods are totaled and divided by six. This generates either a 0, 1, or 2 ADA code which determines funding. Code 0 grants no funding, 1 grants full funding, and 2 grants half funding. Student's course completion is also a determining factor.

TEA also does not track student duration as a metric for determining whether a student is participating in a course and eligible for funding. TEA focuses on a student's course completion regardless of the number of hours spent completing that course.

Schools submit their attendance data through an online system. TEA does not check the schools' policies for compliance and accepts the data as presented, unless an attendance audit is triggered because of raised suspicions.

This system allows for schools to offer both brick-and-mortar and online courses. Online courses are not scrutinized for duration, rather students are determined to be participating and funded based on whether or not they complete the course adequately. Schools are incentivized to ensure students are being taught and actively participating in online courses, because if the student is not learning and does not pass the course, the school will not be funded for that time.

Florida
Florida operates the Florida Virtual School (FLVS) which educates over 400,000 students. While FLVS is the largest online school in Florida, individual school districts are also allowed to provide their students with online learning opportunities. FLVS uses a performance-based funding model. FLVS had previously received half of its funding based on student enrollment and the remaining half based on course completion. Because of recent changes in Florida law, FLVS now receives all of its funding based on students completing their courses with a passing grade (A through D). The new course-completion funding model only applies to Florida's online schools, while the traditional brick-and-mortar counterparts are awarded funding based on student attendance and enrollment.

Minnesota
Minnesota also uses the performance-based funding model for students that learn at online schools or blended learning schools. Students are funded based on course completion as well as the competency shown by their grades. Funding method varies based on the education provider, whether it's a Minnesota public school, an online community school, or online independent district.

Utah
Utah's performance-based funding is split depending on the type of course a student takes. A student can enroll in courses that are worth a full credit or a half credit. In the case of a half-credit course, the school receives 50% of funding once the withdrawal period of the course has passed and the remaining 50% of funding based upon course completion.

A student who takes a full credit course is granted 25% of the funding after the withdrawal period of the course, another 25% of funding on a designated date for the second half of the course, and the remaining 50% of funding based on course completion. The school still receives half the funding as long as the student does not withdraw. Full credit courses are worth more funding dollars per student and have a longer distribution period associated with them.

New Hampshire

New Hampshire has only one online school which operates as a statewide virtual school. The State created the Virtual Learning Academy (VLA) which can act as a supplement to traditional schools. Students may take brick-and-mortar classes but also elect to take one or more courses through VLA. VLA's funding model is based solely on competency. Students are funded based on exactly how much of the course they complete. VLA is incentivized to see its students complete courses to the end to receive more funding for those students.

All of New Hampshire's brick-and-mortar schools are funded based on enrollment.

BLURRED LINES AND BLENDED LEARNING

As noted earlier, e-schools are funded differently from brick-and-mortar schools because e-school students are not required to attend a brick-and-mortar classroom. This difference persists despite the fact that most traditional schools and brick-and-mortar community schools are offering the same kind of computer and internet learning technology used by e-schools.

Some of the e-schools auditors visited offered virtual classrooms that ran on a bell schedule similar to that of a traditional brick-and-mortar school. Students would log into their LMS and enter a chatroom populated by fellow students with a live video of their teacher lecturing. Often these live lectures are stored for students to view later. Students are able to participate by 'raising their hand' in the chatroom and interact in real time.

However, this sort of virtual classroom does not meet the definition of 'classroom' proposed by ODE for an e-school, because the class is not held inside a school building. Yet, teachers can regularly take attendance and monitor students in the chatroom. Virtual classrooms avoid problems that drive many students from traditional brick-and-mortar schools -- disruption, bullying and other distractions.

The virtual classrooms can be thought of similarly to other online chatrooms such as Yahoo Messenger, where a list of active participants is maintained. Active communication occurs through chat, video, and audio.

Despite having the fundamental properties of any normal classroom, e-schools are still required to capture participation time for students in these sessions because the virtual classroom doesn't meet the ODE definition of a classroom. Students who wish to view the sessions later likely would have to create a manual log for their time if the system they use to view the sessions does not automatically capture their time.

Meanwhile, Ohio law allows traditional school districts to implement their own innovative programs. These innovative programs allow the districts to offer online learning and technology-assisted education.   Like blended learning and e-schools, a traditional school must submit a plan to the State Board of Education outlining the innovation program the traditional school will use. Ohio Rev. Code Section 3302.062 states, in part:

> *"(A) If a school district board of education approves an application under division (B)(1) of section 3302.061 of the Revised Code or designates an innovation school or innovation school zone under division (D) of that section, the district board shall apply to the state board of education for designation as a school district of innovation by submitting to the state board the innovation plan included in the approved application or created by the district board…….. Within sixty days after receipt of the application, the state board shall designate the district as a school district of innovation, unless the state board determines that the submitted innovation plan is not financially feasible or will likely result in decreased academic achievement."*

Despite ODE's claim that community schools receive great flexibility in their ability to provide innovative, online education, traditional school districts that implement similar measures are not held to the same standards. ODE may close a community school that is deemed to be unsuccessful according to certain metrics. ODE also may impose clawbacks to community schools that do not successfully pass an FTE review, or the schools simply must adjust their FTEs to a point that many have deemed unsustainable because the school is not able to capture the appropriate number of student participation hours. Traditional school districts are not held to these standards. A district's Board of Education determines whether its innovative programs are a success and should continue. The districts also are not required to produce student participation data, whether their innovative programs allow the students to learn inside the classroom or outside the classroom.

Ohio Rev. Code Section 3302.065 states:

"Not later than three years after obtaining designation as a school district of innovation under section 3302.062 of the Revised Code, and every three years thereafter, the district board of education shall review the performance of the innovation school or innovation school zone and determine if it is achieving, or making sufficient progress toward achieving, the improvements in student academic performance that were described in its innovation plan. If the board finds that an innovation school is not achieving, or not making sufficient progress toward achieving, those improvements in student academic performance, the board may revoke the designation as an innovation school. If the board finds that a school participating in an innovation school zone is not achieving, or not making sufficient progress toward achieving, those improvements in student academic performance, the board may remove that school from the innovation school zone or may revoke the designation of all participating schools as an innovation school zone."

Through the use of such grants as Straight A and other revenue sources, many traditional and community schools (not considered innovation programs but labeled as blended learning or e-schools) had plans approved by the State Board of Education. The following are just a few examples of those plans:

- Clay LSD, Scioto County, The P-SCETI is focused on eliminating barriers in student achievement through increased classroom availability by giving students access to technology that they can take with them each day and weekend through the school year. P-SCETI will accomplish this by implementing a 1 to 1 student to technology ratio and migrating to a blended learning environment. P-SCETI will also enable students to access classes that may not otherwise be available from their home school through shared blended learning class development within the consortium.

- Mentor EV, Online and in-person learning opportunities to high school students through distance learning. Learning centers and classrooms are being renovated to accommodate the new learning strategy. Students will be equipped with a MacBook Air and teachers will be receiving professional development on how to use the new devices and the learning tool Schoology.

Also, Dayton Public Schools has begun to offer a Virtual Academy. According to the Academy's website:

"Dayton Innovation Virtual Academy (DIVA), an online instructional program for grades nine through 12 that leads students on a structured pathway to graduation from Dayton Public Schools (DPS). The academy offers an online alternative to traditional classroom instruction. It is designed for DPS resident students who are not currently enrolled at Dayton Public Schools. While the academy is free of charge, students must be a Dayton resident to enroll."

Students will have:

- *Access to a free laptop and Wi-Fi*
- *Flexible schedule*
- *Personal learning advocate to provide support and monitor progress*
- *Certified teachers are a phone call or email away*
- *Opportunity to catch up with course work and push ahead*
- *Sports eligibility*
- *Online path to becoming college and career ready*

Since June 30, 2017, several blended-learning community schools and e-schools have closed because of poor performance or loss of funding because of difficulty meeting requirements for the documentation of student participation. These schools have signed agreements with ODE that allow the community school's local traditional school district or ESC to absorb the community school as a program under the umbrella of the district or ESC. These new programs will functionally be the same as a community school, but follow the rules and requirements of a traditional school district.

Auditors spoke with community school superintendents where this occurred. The superintendent of one traditional school district confirmed that the district was happy to absorb the community school because it could be implemented as part of the district without the added scrutiny and requirements imposed upon community schools. The district also would no longer have to worry about compliance of their three percent sponsorship fee, the maximum amount sponsors are allowed to receive by law for performing their oversight duties. Also, the alternative program under the district does not receive a separate State report card unless the school creates an alternative school where the program is housed in its own school building. This allows the smaller subset of students who may have been performing below standard to be absorbed into the overall report card of the district.

Since the inception of community schools, technology has come a long way and the law has changed in many ways to allow all schools to have the flexibility and innovation to educate students in the best way possible. Blended learning and distance learning have become the norm for most schools. However, legislation has not changed to hold these innovative programs to the same accountability and funding methods as some blended learning and e-schools.

Blended learning schools can be funded 100 percent on enrollment if the school is offering all learning opportunities in a brick-and-mortar classroom, but if the blended learning school offers learning opportunities outside the classroom, then the school would be funded based on a combination of both enrollment and participation data.

The Sponsor Agreement for blended-learning schools is required to document attendance requirements, which includes how the school will document participation in learning opportunities.[1] This requirement mandates that the sponsor and school agree on the education model the school will offer and how the school will document participation in learning opportunities, especially durational data for non-classroom learning opportunities.

However, we have observed schools are offering learning opportunities tailored individually to the student's needs, resulting in widely varying attendance requirements from one student to the next. Another complication is that a student's attendance requirement might change in the course of the school year. This creates a major issue when reviewing or auditing the compliance requirements related to the documentation of learning opportunities and attendance.

For example, auditors learned that one student had three different attendance requirements throughout the year. The student started off the year having an attendance requirement of 100 percent in a brick-and-mortar setting; meaning the school would have been funded based on enrollment for this student at this time. At some point the same student gave birth and the school allowed the student to work 100 percent online for 12 weeks, meaning the school was required to document participation. After 12 weeks, the student returned to attend a brick-and-mortar setting for three hours, with the remainder of the school day spent in learning opportunities outside the classroom. In the last scenario the school would have been funded automatically for the three hours the student was required to be in the classroom, with the remaining time paid for based on documentation of the non-classroom learning activity.

From a compliance standpoint, this scenario is very difficult. For the school, auditors, and ODE, it would be tedious and potentially fraught with error when attempting to determine the appropriate number of hours the student participated in for the entire school year. If the same school wanted to offer the same sort of flexibility to the rest of its students, it could become nearly impossible to accurately track and report FTEs.

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[1] Ohio Rev. Code Section 3314.03 (29) (d)

Auditors also encountered a school that required a certain subset of students to attend the brick-and-mortar setting for a specified number of hours each day or week, while permitting these students to complete the remainder of their time in non-classroom learning opportunities. Meanwhile other students were permitted to complete 100 percent of their learning opportunities outside the classroom. However, ODE provided guidance in April 2018 that not all blended-learning models are acceptable if the school does not require students to attend a 'majority' of their school year on-site at the school's facility. This again reduces the flexibility that schools have to tailor education to the individual student. While ODE has stated this, AOS found cases in which ODE has allowed this to occur at various schools.

E-school funding is still essentially based upon the enrollment period of students. Regardless of how many hours a student participates, the school can receive no more funding than is allowed for the period of the school year the student was enrolled. If a student was enrolled for the first half of the school year at a traditional school district then transferred to an e-school for the second half of the school year, the maximum funding the e-school could receive for the student is 0.50 FTE.

While both traditional schools and community schools are treated equally with respect to enrollment period driving potential max funding per student, if that student significantly underperformed at the traditional school district and attended only enough classes to avoid truancy, the district receives 0.50 FTE for that student. If the student transfers to an e-school halfway through the school year and works hard to make up for missed time -- perhaps even logging 920 hours of learning, a full year's worth -- the e-school is still capped and limited to 0.50 FTE.

Participation data certainly matters for obtaining funding, but only to the extent that it doesn't exceed the number of offered learning opportunities based on the student's enrollment period. This creates a disincentive for an e-school to cater to that student beyond the number of hours for which the school might receive funding. This system guarantees a traditional school a certain level of funding (half an FTE in this case) regardless of participation levels, assuming the student does not become withdrawn due to truancy issues, but requires a level of burden on the e-school to prove participation down to the minute, which many of the e-schools have struggled to achieve. The e-school is not guaranteed 0.50 FTE for the half-year enrolled student unless they can prove 460 hours of participation (based on a 920 hour school year).

This also creates a disincentive for e-schools to create school calendars tailored to individual students. It makes much more financial sense for the school to create a blanket school calendar requiring the minimum 920 hours for all students, because this presents the best opportunity for the school to obtain the most funding.

A student who is able to exceed the minimum requirements and go further will not get a tailored education to the extent that if the school creates an individual calendar exceeding 920 hours, it might receive less funding for the gifted student if the school can't prove more than 920 hours of participation. For example, the gifted student has a calendar of 1,200 hours while the rest of the students are on a 920-hour calendar. If the gifted student continues to thrive and succeed, but the school's systems are capable of only capturing 1,000 hours of participation, then the school would receive payment for only 0.83 FTE for the gifted student.

The presumption is that participation data requirements will make schools more accountable to their students, ensuring the public that students are actually participating in their education. However, the notion that participation documentation alone can ensure complete accountability is flawed because there are other metrics that may be better suited to providing such assurances.

Issues with blended learning

Blended learning is intended to allow schools to design education plans specifically tailored to students. Since every student learns at a different pace, blended learning offers schools a way to enhance each student's learning experience.

However, for the State's funding purposes, ODE only places an emphasis on the location, the "where", for blended-learning schools. Any part of a student's education that is performed outside a brick-and-mortar building, the non-classroom-based learning opportunities, requires participation data to ensure funding. Schools are required to describe the blended-learning models used in their sponsor contracts. Schools also are required to notify ODE of their intention to adopt blended learning and ODE must approve. From AOS conversations with ODE, the Department relies on the schools to contact ODE to declare themselves blended-learning schools. However, per the Director of Office of Budget and School Funding, the Department has not been able to dedicate sufficient resources to ensuring schools were properly declaring themselves blended in accordance with the required disclosures to be made within the schools' sponsor agreements. The Director stated the Department would be working toward ensuring proper disclosures are made more appropriately.

ODE's Office of Community Schools provided AOS with a 2017-2018 school year listing that indicated only 17 community schools that reported themselves as blended learning. This does not include the numerous traditional school districts which have implemented digital platforms into their curriculum.

In regards to blended learning, Ohio Rev. Code Section 3302.41, in part states:

"As used in this section, "blended learning" has the same meaning as in section 3301.079 of the Revised Code.

(A) Any local, city, exempted village, or joint vocational school district, community school established under Chapter 3314. of the Revised Code, STEM school established under Chapter 3326. of the Revised Code, college-preparatory boarding school established under Chapter 3328. of the Revised Code, or chartered nonpublic school may operate all or part of a school using a blended learning model. If a school is operated using a blended learning model or is to cease operating using a blended learning model, the superintendent of the school or district or director of the school shall notify the department of education of that fact not later than the first day of July of the school year for which the change is effective. If any school district school, community school, or STEM school is already operated using a blended learning model on the effective date of this section, the superintendent of the school or district may notify the department within ninety days after the effective date of this section of that fact and request that the school be classified as a blended learning school."

Through auditor knowledge gained from experience auditing and visiting schools across Ohio, many, if not most, schools utilize some form of blended learning educational opportunities for their students. This includes community schools and traditional schools.

From prior conversation with the Director of the Office of Budget and School Funding, ODE has relied on schools to independently report their use of blended learning models to the Department. Based on auditor knowledge of the extent of blended learning use through the state, ODE's list of community schools offering blended learning opportunities may be significantly understated. To understand why this might be occurring let's focus on the various blended learning models and where the educational activity takes place.

In accordance to ODE's **House Bill 2 Guidance for Blended Learning for Community Schools**,

"*not all blended learning models meet requirements included in state law. Blended learning models used by Ohio community schools must require that students spend the majority of their school year on site at their school facility.*"[2]

The term "majority" is undefined in Chapter 3314, the Community Schools chapter, of the Ohio Revised Code and it is undefined in ODE's House Bill 2 Guidance.

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[2] House Bill 2 Guidance for Blended Learning for Community Schools, Question 6

Certain blended-learning models will effectively become disallowed, such as Enriched Virtual learning, because they typically do not require students to attend the on-site school a majority of the time. While it would be sensible to assume that "majority of time" means greater than 50 percent, that is open to interpretation.

It should be noted that this language was not documented in the original ***House Bill 2 Guidance for Blended Learning for Community Schools*** but rather the information was added as part of the April 1, 2018 revision. Furthermore, blended learning is not only a community-school learning model as noted in ORC 3302.41, but is available to all schools in Ohio. Therefore, if certain blended learning models are not acceptable under law, ODE should inform all schools of this and monitor the education models being used.

Most, if not all, schools have begun using blended-learning models, including traditional school districts, in some fashion. As technology becomes more pervasive, it will become an integral part of our schools. However, only community schools that offer non-classroom-based learning, including online and offline learning opportunities, are required to track this time as part of their funding requirements. This would seem to reduce the 'flexibility' that ODE says is given to community schools. It could be argued that this provides less flexibility as the more stringent requirements placed on these schools may lead to the schools offering fewer choices to students if those choices tend to be more difficult to document.

As noted previously, e-schools must provide documented proof of participation for 100 percent of their funding. These schools must have policies and procedures in place that allow them to capture non-classroom-based learning opportunities, online and offline. While ODE's FTE manuals provide some guidance for the rules e-schools must follow, ODE has not provided clear guidance for how these schools' learning management systems must function, report time, integrate with other technologies, and account for issues that can lead to over reporting FTE.

105-HOUR RULE AND TRUANCY

Ohio Rev. Code Section 3314.03(A)(6)(b) states, in part that the contract between a Sponsor and a community school establish:

> *"A requirement that the governing authority adopt an attendance policy that includes a procedure for automatically withdrawing a student from the school if the student without a legitimate excuse fails to participate in one hundred five consecutive hours of the learning opportunities offered to the student."*

This law is separate from truancy laws, which require schools to implement procedures for encouraging active participation by students who have missed certain numbers of hours or days in a time period. The 105-hour rule mandates that the community school withdraw any student who misses 105 consecutive hours. This is an easily gamed rule when it comes to e-schools. Students are able to access learning materials at any time and therefore can very easily log into the school's LMS just before their 105th consecutive hour of non-participation.

Through conversation with e-school administrators it was indicated to auditors that the schools were under the impression they are required to enroll any student who applies and does not otherwise meet the limited criteria for not being allowed to enroll at an e-school, such as failing to take state mandated tests. Auditors inquired about the enrollment of students as we became aware of students that were being withdrawn and re-enrolled as soon as the following day. Auditors also noted instances where students were absent from the online system at a school for 20 consecutive days, but logged in for an hour on the 21st school day in order to avoid triggering the automatic withdrawal required by state law. Some schools expressed an interest in being able to apply a stricter standard for withdrawing students, such as 105 cumulative hours of missed attendance instead of the current 105 consecutive hours standard.

Senate Bill 216, which became effective November 2, 2018, amends Ohio Rev. Code Section 3314.03(A)(6)(b) to replace 105 consecutive hours with 72 consecutive missed hours to trigger automatic withdrawal. For e-schools the main effect of this change may become that a clever student who wants to avoid being withdrawn will now simply log into the system on the 71st hour. If schools are still not allowed to withdraw such students, no appreciable improvement has been made.

Also, beginning with the 2017-2018 school year, traditional and community schools must implement policies and procedures to comply with House Bill 410. This new requirement includes a set of guidelines schools must follow to deal with students who are habitually truant. Habitual truancy and excessive absences are redefined based on the number of hours missed either consecutively, in one month, or for the school year.

House Bill 410's requirements clash with the way e-schools operate. House Bill 410 implements truancy requirements that would apply to the amount of missed time in a given period; however e-school students are supposed to have the flexibility to miss time here or there and make it up at their own pace. For the same reason ODE does not fund excused absences for an e-school student, it makes little sense to hold them to restrictive monthly or yearly cumulative absence totals. A student who can work ahead may end up with a month in the school year when he does not need to work every day to complete his requirements.

E-school students are required to participate in 920 hours in the school year, but are not required to participate 100 hours each month. While it is important that e-school students are held accountable and have standards applied to them that disallow excessive absences and truancy, these standards should incorporate the flexibility that is inherent and encouraged toward e-schools and their students.

RECOMMENDATIONS TO GENERAL ASSEMBLY AND ODE

During the AOS review of e-schools, auditors noted some issues worthy of further review by ODE and the General Assembly.

The Auditor of State has stated publicly that funding schools based on enrollment alone is not the best practice, a reason why the office aggressively pushed for passage of House Bill 2 in 2015 requiring higher standards of proof of engagement. This current review of e-schools prompts the renewed call for Ohio leaders to consider whether funding should be determined based solely on a student's login and documented time outside the system. At a minimum, this review has identified weaknesses in both statute and the Department of Education's FTE manual that merit further study.

To have greater confidence that Ohio taxpayers are getting the education they are paying for, and to treat operators of e-schools fairly, state legislators and the Department's administrators should consider clarifying how e-schools are reviewed and funded.

Explore best practices for how e-schools are funded

From the inception of virtual e-schools in Ohio, the state has used an enrollment-based model for funding, with the student's start and end dates determining what percentage of funding the e-school would receive. In the 2015-2016 school year, the Department shifted to a documented participation-based system for select schools.

Both the enrollment-based and participation-based models are flawed in that both require students to track their time offline. Currently, vendors do not provide the level of detail for tracking student participation that Ohio demands in its emerging funding model. Lawmakers should explore whether it is realistic to expect parents and students – who range in age from 5 to 22 – to track every minute of their learning activities, and for Ohio school sponsors to build a business model around their ability and willingness to do so. Parents and students will be required to estimate what time they spent on learning, which will result in teachers and school administrators having to question a parent's or student's documentation of learning opportunities and put their credentials at risk if they fail to do so.

The legislature should consider exploring methods of e-school funding other than enrollment- or participation-based funding. Other options to consider:

- Performance-based funding. Under this model, schools are funded solely on a student's competency or mastery of a subject. The state of New Hampshire employs this funding model for its statewide community e-school.
- A hybrid funding model. Some states, such as Florida, Louisiana and Minnesota, fund between 50 and 80 percent based on enrollment and the remainder based on the student passing exit exams administered by a third party. The hybrid method is used to compensate schools for expenditures regardless of whether the student decides to complete the school year. This would help compensate e-schools that spend hours chasing down absent students, attempting to convince them to participate. The participation-based funding model does not provide any type of compensation to the e-school for those efforts.

Define how e-schools will be evaluated for funding under current model

Historically, e-school funding was based on enrollment, just as it is in brick-and-mortar community schools and traditional schools. The change by ODE now requires e-schools to track all student participation, online and offline. The standard that will be applied to e-schools for funding and how to comply with that standard should be made clear to all e-schools and their sponsors.

The Legislature should consider clearly defining the terms being used related to school funding. Specifically, ODE and/or the General Assembly should better define the word *participation*. As noted above, participation can be defined many ways. In order for the vendors of learning management systems and the educational modules to program their systems to properly capture data, they must know what level of data is required. Under the current structure, ODE is granted wide latitude in both the writing and enforcement of the FTE manual, a situation that impairs consistency of enforcement and predictability for e-schools. Without a clear, well-established definition of participation, vendors will use their judgment to determine what participation means and, as a result, there will be multiple and possibly contradictory ways of measurement – causing problems for the department, e-school operators and state auditors who must evaluate whether the data meets the standards.

The legislature should review the subjectivity in the department's FTE manual, which allows Area Coordinators to consider participation data and other relevant information in determining funding. We recommend ODE's Area Coordinators include both types of information in their calculations to provide a clearer picture of student participation.

In defining *participation*, legislators and ODE should require ODE to determine rules for LMS systems and certify LMS systems that comply with Ohio's standards. Regulators should consider whether LMS must have a forced "time out" after a pre-determined period of inactivity. Currently, systems reviewed by AOS auditors are inconsistent regarding forced time-outs, meaning those who automatically log out students for inactivity get less funding than their peers who allow students to remain logged in with the same levels of activity. Vendors with forced logouts due to inactivity must deduct the hours claimed for funding while those without the mechanism will be allowed to capture all of the time the system has recorded the student as being logged in, whether they were participating or not.

Additionally, ODE or the General Assembly should define *classroom* as it pertains to school funding. Ohio funds traditional schools differently from e-schools because the students are physically present in a classroom. However, some e-schools have virtual "classrooms" that function nearly identically to traditional brick-and-mortar classrooms, except that students are not physically present. Two e-schools, Ohio Virtual Academy and Buckeye Online School for Success, both employ a bell schedule similar to traditional schools that require students to switch between classes every 45 minutes and to receive live instruction. Depending on the definition of a "classroom," these e-schools could be funded the same way traditional schools are funded.

Establish a reasonable, documented period for e-school operators to come into compliance with changes in FTE funding requirements.

In order to comply with changes to the application of ODE guidance, such as the FTE manual, schools should be given adequate notice of these changes. Historically, ODE has given e-schools and their sponsors up to six months to prepare for changes in the FTE manual.

However, during fiscal year 2016 schools were unprepared for the changes ODE made to applying the FTE manual guidance. In January 2016 ODE released a 2016 FTE manual that included significant changes.

The 2016 FTE manual was later removed by ODE and schools were informed that the FTE reviews would proceed with the same application as in the past and the 2015 FTE manual would be utilized to guide the Area Coordinators.

This resulted in schools being unprepared for what was required to support the FTE that was reported to ODE. As we have stated, many schools were unable to provide support for durational data due to the fact the vendors had purged the information, as well as certain systems being unable to capture data, maintain data, or provide useful information.

We recommend the General Assembly establish legislation that requires a frame work for rules, application and timeframe in which ODE is required to inform all schools of changes to the rules and application of guidance.

Review whether ODE's duties should be divided or restructured

Under current law, ODE and the State Board of Education have enormous power and responsibilities. As part of these responsibilities, ODE is tasked with setting rules to guide schools as well as providing training and consulting with schools on technical matters. This means ODE is setting policy, training on the policy and enforcing the policy – creating an independence issue as it reviews its own work. ODE even controls the appeals process, because it assigns the appeals officer. This entire structure should be reviewed by the General Assembly. The ongoing confusion over e-school funding provides ample evidence that the current structure merits legislative attention.

Establish standards for consistently training ODE's Area Coordinators

Interviews and field work by AOS auditors cast doubt on the consistency of training given to the department's area coordinators. The lack of consistent training and standards was most apparent with regard to how e-schools were being evaluated for funding.

For example, the department maintains that e-schools have been required to track each student's duration of time since the 2010 FTE manual. However, that standard has never been enforced by ODE in the past. Reviews by AOS auditors found inconsistencies in how the FTE handbook was applied by area coordinators. In testimony, ODE confirmed that field staff charged with performing the FTE reviews had a difficult time understanding what, if anything, had changed between the fiscal year 2010 FTE manuals and those used for fiscal year 2015.

Aaron Rausch, director of ODE's Office of Budget and School Funding, has acknowledged area coordinators could have been confused by the language contained in the 2015 FTE manual. When pressed by ECOT's attorney whether substantive changes occurred to the FTE manual for the fiscal years 2011-14, Rausch responded that they had not. "I don't believe there are any significant differences between what is in the 2010 manual and what ultimately appears in the 2015 manual," Rausch stated.

Despite there not being "any significant differences" in the manuals, area coordinators responsible for providing technical assistance to the schools during that period – and for conducting the FTE reviews – were confused over what constituted adequate documentation for FTE funding. These area coordinators who had informed e-schools that "enrollment" was an acceptable way to support FTE funding for years became confused in 2016 when they were conducting the all-important reviews.

For there to be confusion among area coordinators over something as critical as defining how e-schools are funded and what coordinators were to require during FTE reviews speaks to the lack of consistent, documented standards and training in the department.

We recommend that ODE develop internal standards that all Area Coordinators must be trained to and adhere to during their reviews in order to provide consistent treatment of all schools during review.

Clarify whether e-schools must accept all students

The General Assembly should adopt a law or direct ODE to adopt rules to clearly define when a school can determine a student is not capable of attending an e-school, establish guidelines that would limit the students from re-enrolling in the same e-school, and limit the number of e-schools a student can attend before no longer being eligible to attend.

Review how all schools are funded generally to identify unintended inconsistencies

Our audits and reviews of schools show that many traditional schools today use online learning as part of their curriculum. However, the funding model for traditional schools does not include any requirement that time students spend online is calculated into the student's FTE for funding.

However, durational data is a key component to funding for e-schools and blended learning schools. Under ODE's FTE manual, the key consideration for funding when it involves blended learning schools is the location where the student is being educated.

In addition, some traditional school district brick-and-mortar schools have implemented innovation plans for some students that function similar to e-schools in terms of curriculum and student flexibility. For instance, traditional brick-and-mortar Clay Local Schools (Scioto County) has an innovation plan that uses technology to allow students to study away from school on nights and weekends and attend classes they normally would not have access to via blended learning, and in Mentor Exempted Village School District, online and in-person learning opportunities are provided through distance learning.

However, students being educated through these innovation plans are not subject to the same participation requirements as e-school students.

We recommend the General Assembly establish laws that apply consistent treatment to all schools, traditional or community, that offer non-classroom learning opportunities.

Require that ODE's FTE Manual be approved by JCARR

The FTE manual is being used as if it were law, even though it is a guide book for ODE's Area Coordinators to assist in conducting FTE reviews. In fact, up until a year ago, the manual was called a "handbook." Given that the manual guides funding for schools, it merits legislative review, or at the very least, rule review.

We recommend the General Assembly require ODE's FTE manuals undergo independent review before being disseminated to Area Coordinators and community schools.

Provide E-school Operators with a List of ODE-Approved LMS Vendors and Modules

Ohio Rev. Code Section 3329.01 in pertinent part states

"Any publisher of textbooks or electronic textbooks in the United States desiring to offer such textbooks or electronic textbooks for use by pupils in the public schools of Ohio, before such textbooks or electronic textbooks may be adopted and purchased by any school board, must, on or before the first day of January of each year, file in the office of the superintendent of public instruction, a statement that the list wholesale price to school districts in Ohio will be no more than the lowest list wholesale price available to school districts in any other state"

ODE and the Legislature should consider evaluating and approving textbook (module) vendors, to ensure that they can meet documentation of participation requirements as well as price requirements. E-schools would be certain the systems they employ would meet ODE's standards and would give ODE confidence that the durational data being captured is reliable for auditing and funding purposes. Moreover, ODE is charged with approving all books used by students in Ohio. For virtual schools, that includes the educational modules. As part of that compliance process, the General Assembly or ODE should review the ability of those programs to adequately and accurately track student participation.

ODE Should Clarify Guidance to Schools on the Allowability of Correspondence Courses

Per the "House Bill 2 Guidance for Blended Learning for Community Schools" on ODE's website, last updated on April 1, 2018:

"Can correspondence courses by mail be part of the instructional delivery for students in community schools utilizing blended learning models?

No. Correspondence courses are not a recognized blended learning model as they do not provide opportunities for both in-person and online learning; therefore, correspondence courses do not meet the definition of blended learning."

As discussed in the "Correspondence Courses" section of this report, ODE has been inconsistent with the way they have treated schools who utilize correspondence style curricula, especially in the case of London Academy and Townsend Academy.

ODE should update the House Bill 2 Blended Learning Guidance on its website to clarify whether correspondence courses are allowable or not in the State of Ohio. ODE should also clarify what type of learning qualifies as correspondence and for those learning opportunities that do qualify as allowable, how schools are to document duration to achieve full funding. Finally, ODE should hold all schools to the same standard.

APPENDICES

APPENDIX A: BASIS FOR PARTICIPATION DOCUMENTATION

ODE requires blended-learning community schools that offer non-classroom based learning opportunities and e-schools to track duration of time for funding based on Ohio Rev. Code Section 3314.08(H), which states in part:

"(H) The department of education shall adjust the amounts subtracted and paid under division (C) of this section to reflect any enrollment of students in community schools for less than the equivalent of a full school year. The state board of education within ninety days after April 8, 2003, shall adopt in accordance with Chapter 119. of the Revised Code rules governing the payments to community schools under this section including initial payments in a school year and adjustments and reductions made in subsequent periodic payments to community schools and corresponding deductions from school district accounts as provided under division (C) of this section. For purposes of this section:

(3) The department shall determine each community school student's percentage of full-time equivalency based on the percentage of learning opportunities offered by the community school to that student, reported either as number of hours or number of days, is of the total learning opportunities offered by the community school to a student who attends for the school's entire school year. However, no internet- or computer-based community school shall be credited for any time a student spends participating in learning opportunities beyond 10 hours within any period of twenty-four consecutive hours.

Whether it reports hours or days of learning opportunities, each community school shall offer not less than nine hundred twenty hours of learning opportunities during the school year.

(4) With respect to the calculation of full-time equivalency under division (H)(3) of this section, the department shall waive the number of hours or days of learning opportunities not offered to a student because the community school was closed during the school year due to disease epidemic, hazardous weather conditions, law enforcement emergencies, inoperability of school buses or other equipment necessary to the school's operation, damage to a school building, or other temporary circumstances due to utility failure rendering the school building unfit for school use, so long as the school was actually open for instruction with students in attendance during that school year for not less than the minimum number of hours required by this chapter. The department shall treat the school as if it were open for instruction with students in attendance during the hours or days waived under this division."

The above statutes represent both the argument made by ECOT that ODE was overstepping its duty in requiring participation data, as well as the Supreme Court of Ohio's decision to allow ODE to request such data. That case, Electronic Classroom of Tomorrow v. Ohio Department of Education, was decided by the high court in February 2018.

ECOT argued that the law explicitly states that community schools are funded based on the number of learning opportunities offered to the students. However, the Court ruled in part that the law clearly imposes limitations to funding based on the number of hours a student participates, not the number of hours offered to the student.

Previous courts had ruled that ODE was entitled to consider durational data in reaching funding decisions, but the Supreme Court declared that Ohio Rev. Code Section 3314.08 authorizes ODE to require durational data. This statute therefore has always allowed ODE to require such information during FTE reviews.

However, prior to 2016, ODE never required community schools to provide durational data. In fact, previous FTE manuals had indicated that participation could be proved in ways other than duration, such as homework assignments completed, assessments, gradebooks, and other metrics.

"Participation" is a subjective term that is not defined by the law or by ODE. A student who logs into a system twice as long as another student does not necessarily learn twice as much, but may simply take twice as long to digest the same information as the other student. Schools have traditionally been in the business of educating students and preparing them for life.

Strict requirements for documenting every minute a student spends on a computer or at home reading a book may put some community schools in the business of monitoring the student's time instead of his progress.

When the fiscal year 2016 ECOT audit began, there was still some uncertainty as to whether or not durational data was needed for the e-schools to be compliant with the laws and rules. As noted above, prior to fiscal year 2016, ODE had been performing FTE reviews based upon enrollment and in the reply to our March 11th letter, ODE stated:

> *"As you point out, there can be variety in the manner in which schools document learning opportunities, and the department continues to allow that flexibility. However, there is an exception that documentation, be it computer log-ons or tracking of non-computer work be available during our reviews."*

Furthermore, when the ECOT audit began, the courts had yet to decide if ODE was allowed to strictly use durational data to fund e-schools and other schools offering non-classroom educational activities. Based on this, AOS performed two separate tests of FTE; one based on the direction of the Ohio Compliance Supplement and one based on reviews of the same durational data that was submitted and accepted by ODE to support the final FTE. See **Appendix C: Community School Narratives**, *page 107*, for further details of the ECOT testing results.

The purpose of AOS' first review was to determine whether ECOT would have satisfactorily met previously issued guidance, such as the 2016 OCS; particularly based on the review of students' assignment and assessment completion, progress reports, gradebooks, and other materials as evidence of participation. Our office previously offered audit compliance training to community schools, similar to the way ODE Area Coordinators discuss FTE Manual requirements with community schools before their FTE reviews. At this AOS training, it was emphasized that schools can substantiate FTEs to auditors using documentation of completed assignments, communication between teachers and students, and other reasonable evidence.

As the OCS mentions, determining a student's level of participation as being comparable to their reported FTE is an admittedly difficult test to perform. The difficulty arises from the fact that "participation" is not defined by the Ohio Revised Code, the Ohio Administrative Code, or ODE. Therefore, it was up to auditors to make a subjective determination as to whether information provided by schools represented a reasonable connection between reported FTEs and supported participation in learning opportunities.

The following is a sample of an analysis the AOS performed to determine how the FTE accepted by ODE, based upon duration data alone, compared to the completed assignments in math and English.

Note: Auditors performed their review similar to the manner prescribed to ODE's Area Coordinators in the 2015 FTE Handbook, which was in effect for ECOT's 2016 FTE review.

As stated in the Handbook: "A learning opportunity for an e-school student could be computer learning, reading resource documents, writing papers, taking tests, doing research, field trips, and conferencing with teachers, etc. There must be a login but that cannot be the only proof of attendance."

The ECOT FTE column represents the student's FTE based on their enrollment period. The fiscal year 2016 school calendar for ECOT contained 921.29 hours. An ECOT FTE of 1.00 for Student 9 means that student was enrolled for 100 percent of the school year, or 921.29 hours. For that same student, the ODE FTE means that ODE determined ECOT could document only 60 percent, or 557.01 hours, of participation in learning opportunities. Accepted documentation would include specific login and logout times and other durational data.

Auditors met with an ECOT employee periodically over a span of several weeks in which the ECOT employee logged into the school's learning management system, IQity. IQity serves as a portal for students, parents, teachers, and administrators to access curriculum, homework, assessments, messages, school announcements and other materials and information. For each of the 90 students selected by auditors, an ECOT employee navigated the system, allowing auditors to review completion of assignments, assessments, and gradebooks. Auditors also were able to review students' school e-mails to determine whether there was regular communication between students, parents, and teachers.

While auditors did not take time to review every course taken by each student selected for review, auditors did review one math and one English course for each student since these are required courses for every student. Math courses could represent algebra, geometry, calculus, etc., while English courses were usually titled as a level of English or Reading (e.g. English II). The following table is for 20 of the students reviewed by auditors.

Student	ECOT FTE	ODE FTE	Difference	ECOT Hours	ODE Hours	Difference	# of Classes	% of Math Completed	% of English Completed
1	1	0.1	0.9	921.29	96.63	824.66	7	70%	58%
2	1	0.12	0.88	921.29	114.06	807.23	5	67%	83%
3	1	0.13	0.87	921.29	119.05	802.24	7	61%	64%
4	1	0.15	0.85	921.29	139.9	781.39	5	90%	41%
5	0.55	0.05	0.5	503.91	42.02	461.89	9	100%	100%
6	0.5	0.25	0.25	458.1	232.08	226.02	4	92%	98%
7	1	0.37	0.63	921.29	337.07	584.22	7	59%	76%
8	1	0.41	0.59	921.29	376.05	545.24	12	77%	44%
9	1	0.6	0.4	921.29	557.01	364.28	7	100%	87%
10	1	0.45	0.55	921.29	418.55	502.74	7	73%	49%
11	1	0.09	0.91	921.29	86.96	834.33	5	1%	0%
12	1	0.24	0.76	921.29	222.01	699.28	7	0%	0%
13	1	0.28	0.72	921.29	254.24	667.05	9	0%	37%
14	0.72	0.001	0.719	697.33	1.15	696.18	6	0%	25%
15	0.85	0.13	0.72	783.86	124.07	659.79	5	42%	35%
16	0.88	0.25	0.63	809.31	231.07	578.24	6	24%	11%
17	0.5	0.03	0.47	458.1	25.37	432.73	8	0%	5%
18	0.63	0.18	0.45	580.26	164.57	415.69	8	27%	3%
19	1	0.67	0.33	921.29	613.25	308.04	6	28%	25%
20	0.56	0.23	0.33	514.09	213.89	300.2	14	8%	16%

The percentage of math or English courses completed was determined by counting the number of graded items within the student's gradebook divided by the number of total available assignments, including assignments marked as optional for completion. Auditors also sporadically checked individual assignments to ensure accuracy of items being marked as completed. Occasionally there were students selected who did not take math or English and auditors replaced those core subjects with another, such as science or history. Zero percent completion of either math or English in the above table represents students who were enrolled in those courses but did not have any evidence of participation.

Auditors also did a cursory review of each student's inbox and outbox in the message center. Auditors did not read individual messages, but rather made a judgment about whether this demonstrated regular interaction between the student or parent and the student's teacher. It is reasonable to assume all students receive messages from their teachers, therefore more weight was granted for students responding to teacher messages or initiating conversations and questions. However, it was noted that messages in a student's inbox would be markedly different if the message had been opened, indicating the student read the message.

While it is not noted within the above table due to size restraints, auditors noted that all 20 students included were reasonably actively participating with teachers. This means that students were reading received messages (messages would be marked as read in the system) and students were at least periodically communicating with teachers (observed as outgoing messages from the student, often marked as a reply to a message received from the teacher).

Auditors were able to determine that many students actively participated throughout their enrollment period, with the opposite being true for many others. Student 1 in the table was enrolled the entire school year, completed 70 percent of the math assignments and over half of the English assignments, and regularly messaged teachers. However, the FTE for that student was reduced by ODE from 1.00 to 0.10, a 90 percent reduction. While it could be argued that this student might not have participated fully in the courses, he or she participated in more than just 10 percent of learning opportunities offered. ODE credited this student for 96.63 hours of the 921.29 that was claimed by ECOT. ODE reached this determination by adding up the minutes and seconds that the school could show through systems reports that indicated the amount of time spent online within the system. ODE did not consider the large amount of documentation the school could have supplied, such as the assignments, gradebook, and messaging information auditors reviewed.

Conversely, auditors noted that student 19 was credited with about 67 percent of the school's claimed FTE. Student 20 completed about 28 percent of math assignments and 25 percent of English assignments. The student enrolled in more courses than any other student on the list, but completed roughly a quarter of two main courses. Again, ODE did not reach this determination by reviewing the breadth of the student's participation in courses or interaction with teachers. ODE's determination was based solely on ECOT's ability to prove more time logged into the computer for this student compared to Student 1.

As discussed throughout this report, relying solely on durational data does not present the true picture of a student's participation. There are too many flaws in ODE's FTE review process, in addition the laws, rules, and the guidance provided by ODE does not define such things as participation well enough, and the systems used by the schools to provide students with lesson plans were not designed to capture duration of participation.

Additionally, auditors spent about 225 hours to parse through the voluminous amount of additional detail available at ECOT to gain better understanding of student participation. At the AOS billing rate of $41 an hour, this added up to $9,225 dollars. If auditors across the State, both AOS and IPA, were required to gain as much of an understanding as is required to truly know how a school and its systems work, it would be a great financial burden to the schools and to taxpayers. It is in the interest of the State to simplify or streamline the process for determining whether students are participating enough to be eligible for funding.

APPENDIX B: FIELD REVIEWS

One of the e-schools reviewed by AOS was Provost Academy Ohio. Provost received FTE reviews from ODE in fiscal years 2014 and 2015. In the 2014 review, ODE determined that Provost's method of determining a student's attendance hours was incorrect and required substantial updating prior to the review to be held in 2015. In the fiscal year 2015 review performed by ODE, several issues were noted including a few major ones:

- The Academy was reporting FTEs based on enrollment period of students and not the amount of documented duration for students participating in learning opportunities;
- If students logged into the online system for at least an hour, they were credited with five hours of attendance for the day.

Provost's 2014 and 2015 FTE reviews both noted that students were receiving a full day's worth of attendance as long as they logged in for at least one hour. ODE FTE review also notes the Academy did not maintain documentation of participation. It did not mention the fact the Academy was not reducing FTE based on duration. ODE accepted the Academy's submitted FTEs anyway.

Provost claimed 165.65 FTEs in June of 2015, while ODE determined the Academy was due only 34.77 FTEs. This resulted in the roughly 80 percent clawback of $799,492 to be repaid via future foundation settlement reductions for 19 months. The Auditor of State's fiscal year 2015 audit of Provost included a Noncompliance Material Weakness for student attendance records. The audit determined that for a sample of 60 students tested by auditors, the Academy could not produce student logs that documented the number of hours submitted by the Academy. Auditors noted that his could affect the Academy's ability to properly track truant students, in addition to raising the risk of a large clawback.

ODE performed a subsequent FTE review of Provost's records in fiscal year 2016. ODE's final review letter to Provost, dated June 1, 2016, stated:

"The reviewer found that the original source documentation examined to be in order; and that all recommendations made by the reviewer in the first visit review were followed and implemented… This letter is being sent to advise you that the final information entered into EMIS by the school will be accepted as filed and your final payment will be calculated using that information."

The AOS fiscal year 2016 audit of Provost, dated April 13, 2017, contained a Noncompliance Material Weakness related to FTE reporting. The finding noted the following:

"Upon our initial testing of 30 student files, we realized that while the School was capturing computer and non-computer learning opportunities, the FTE being reported for each student was based on the number of days the student was enrolled. If a student was enrolled for the entire school year, the School reported in EMIS an FTE of one for the student. Similarly, if a student was enrolled for a portion of the year, the student's FTE was adjusted accordingly. The School did not adjust FTE for actual learning duration for each student in EMIS, which could result in the School over-reporting FTE in EMIS."

The AOS fiscal year 2016 audit also included further detailed testing of an additional four students. The purpose of this additional testing was to determine whether the durational data maintained by the Academy was reliable and accurate. The finding continued further:

"[T]he School's procedures to track non-computer time did not require students to log the start and end times related to the non-computer learning opportunities, meaning we were unable to determine if any of this time was duplicated within the time captured by the School's computer system. Furthermore, due to the significance of non-computer time, we decided we would be unable to accurately recalculate any of the selected students' FTEs. The lack of substantiated non-computer learning opportunities combined with the School's practice of reporting FTE based on enrollment period, reasonably concludes the School's likelihood of over-reporting FTEs."

ODE's FTE review letter and AOS' audit findings for fiscal year 2016 showed two very different conclusions. ODE determined Provost's documentation and methodology to be rectified from the issues noted in the previous year, and ODE accepted Provost's reported FTEs. AOS determined that Provost did not maintain durational documentation in such a way that it could be relied upon for calculating an FTE. Provost did not adjust its FTEs based on durational data, which was one of the major issues identified by ODE in its 2015 review.

The issues identified by AOS and the discrepancies between AOS' and ODE's reviews, prompted the AOS to begin a deeper look into both how e-schools were handling their data and how ODE was determining compliance during its reviews.

ODE's May 4, 2016, response letter to the AOS, noted earlier, stated ODE was still allowing flexibility of documenting learning opportunities for e-schools in accordance with newer FTE manuals. Prior to 2015 and 2016, e-schools indeed had great flexibility in providing learning opportunities to students in manners that did not require the schools or the students to meticulously document learning opportunity durations down to the minute. Furthermore, ODE granted Provost a bit of a reprieve when it discovered substantial issues during the 2014 FTE review, but did not initiate a clawback for 2014. As the same issues identified in 2014 were cited again in 2015, ODE had granted Provost a year to fix the issues ahead of the 2015 FTE review.

ODE did not grant other e-schools the same latitude provided to Provost in 2014. As will be discussed, many of the e-schools that received FTE reviews during 2016 did not have sufficient durational support, largely because of the uncertainty around such requirements. The same schools that received substantial clawbacks in 2016 had no issues related to duration prior to the 2016 reviews. The schools also did not get a warning from ODE with a chance to fix the issues identified before they were reviewed again in the following year. These schools received detrimental final determinations resulting in significant clawbacks of funding, leading several of the schools to close.

Most e-schools reported to AOS that the requirements being imposed by ODE to document student participation are unfeasible. Audits performed by AOS, including review of learning management systems (LMS) in use by e-schools, corroborated these statements. In order to get a clearer picture as to what data the schools are currently capturing to support the new FTE requirements, as well as determine the ability to capture information required by ODE, auditors visited e-schools in different parts of the state. See *Appendix C: Community School Narratives* for detailed narratives and issues identified at each school.

The purpose of the visits was to review the learning management systems that each school was utilizing as well as the policies and procedures that would enable the e-schools to comply with the Department's requirements. If the school was audited by AOS, these reviews were part of an audit engagement and designed to provide an opinion on compliance or on the systems, policies, or procedures of each school. However, if the audit was performed by an Independent Auditor (an IPA), the AOS staff did not statistically sample information for testing. These reviews were not designed to provide an opinion on compliance or on systems, policies or procedures for schools audited by an IPA.

The visits consisted of audit staff meeting with e-school administrators and conducting walk-through reviews of the schools' systems, policies and procedures. For a list of the schools visited see **Appendix C: Community School Narratives**.

Auditors noted similar issues at all of the e-schools they visited. Many of the e-schools that had FTE reviews performed in 2016 were given little time to pull together information to document student participation. Because their LMS were not programmed to capture exact durational data and they did not have an adequate system in place to capture offline time, many schools were unable to meet ODE's requests for durational data. While gathering information to meet ODE's new standards, the e-schools learned that some learning management systems, as well as some third-party education vendors, purge data after 90 days or at end of the school year to relieve server space issues and because the vendors were not contractually obligated to retain it for a specific amount of time.

Additionally, some e-schools learned that some of the vendors either were unable to provide durational data in a format that met ODE's requirements or were unable to track durational data at all.

As indicated in the table below, the AOS reviewed e-schools for fiscal year 2017 to determine if the school's ability to capture durational data had changed and if ODE's FTE review process had improved. One item noted during the 2017 reviews was that there were limited "clawbacks" in fiscal year 2017 and some school captured more durational data than AOS would have anticipated.

In 2016, there was abundant news coverage about the schools being hit with funding clawbacks from ODE, but in 2017 there was little news about clawbacks. Clawbacks still occurred in 2017, but they were handled in a way that didn't show up in FTE reports or lead to appeals, and therefore didn't generate headlines.

In 2017, when ODE found that a school had over-reported its FTE total, the school was given five days in which to decide whether to lower its FTE count to match ODE's count, or to appeal ODE's FTE count.

If the school decided to lower its FTE count to match ODE's count, then ODE's final report made no mention of any discrepancy or clawback.

However, a clawback was still imposed, albeit not in name, because the school already had been overpaid based its original, inaccurate FTE claim. But by accepting ODE's lowered FTE count, the school gave up the right to appeal ODE's count. Since no appeal was filed, the review attracted little attention.

While the 2017 amounts owed were not called clawbacks, they would appear on the school's financial statements as a liability, intergovernmental payable, and be paid via a reduction of future foundation payments from ODE. Unless the school closed, clawbacks are repaid via future reductions as well.

Because a number of schools took this route, there were fewer appeals filed in 2017 than in 2016.

As indicated in the following table, some e-schools were capturing as high as 100 percent durational data:

Note:

# indicates the school received a 2015-2016 school year FTE review by ODE.

indicates this school received a Desk Audit, not a full FTE review by ODE.

@ indicates the school received a 2016-2017 school year FTE review by ODE.

School	June 15 FTE	June 16 FTE	Final 2016 FTE	Percent Change	June 17 FTE	Final FTE	Percent Change
Akron Digital Academy #	435.5	374.4	72.8	-80.6%	318.9	226.2	-29.1%
Alternative Education Academy	1814.5	1612.0	1623.3	0.7%	1374.8	1088.7	-20.8%
Auglaize County Educational Academy	69.5	45.7	46.9	2.7%	63.4	65.1	2.7%
Buckeye Online School for Success #	974.0	897.5	0.0	-100%	782.4	742.1	-5.2%
ECOT #@	15087.5	15239.5	6312.6	-58.6%	14216.1	11575.5	-18.6%
Fairborn Digital Academy	173.8	174.1	181.2	4.1%	196.6	194.8	-1.0%
Findlay Digital Academy #@	146.2	155.3	21.2	-86.4%	162.1	141.6	-12.6%
GOAL Digital Academy @	382.7	419.1	424.4	1.3%	456.0	428.76	-6.0%
Greater Ohio Virtual School @	472.3	459.8	461.2	0.3%	515.6	212.0	-58.9%
Insight School of	992.4	1182.8	1200.6	1.5%	1299.7	1202.0	-7.5%

Ohio @							
Lorain K-12 Digital Academy ##	138.49	120.57	117.83	-2.27%	86.33	85.99	-0.4%
Mahoning Unlimited Classroom #@	134.7	146.6	148.8	1.5%	65.5	61.6	-6.0%
Marion City Digital Academy @	107.1	152.4	153.0	0.4%	149.6	41.1	-72.5%
Massillon Digital Academy #@	71.3	66.2	53.4	-19.4%	25.1	27.9	11.3%
Newark Digital Academy @	335.5	423.4	422.9	-0.1%	384.7	308.2	-19.9%
Ohio Connections Academy @	3202.9	3325.2	3342.9	0.5%	3368.3	3269.8	-2.9%
Ohio Virtual Academy @	10783.3	9157.2	9176.8	0.2%	8350.1	8136.4	-2.6%
Quaker Digital Academy #@	688.5	664.0	0.0	-100%	738.8	562.0	-23.9%
TRECA Digital Academy #@	2012.3	1948.6	1213.7	-37.7%	1956.5	1500.6	-23.3%
West Central Learning Academy II @	59.9	76.5	66.0	-13.7%	79.4	79.3	-0.1%

In the above table, many schools report their FTEs as of June of the current fiscal year based on the number of enrolled students. They must "true-up" FTEs, that is reduce them based on percent of time and durational information, by the end of July of the same fiscal year. Prior to fiscal year 2016, most schools' June FTEs would roughly equal their finalized FTE for the year, with little true-up in July.

Of the schools above that received a 2016 FTE, all but one had a significant reduction in their FTEs between June and July. These reductions ranged from about 19 percent to 100 percent. The only school with a 2016 FTE review that did not have this significant reduction was Lorain, which received a desk review. A desk review is significantly smaller in its scope, does not require the same production of support, and consists of only a single meeting.

Almost every school that did not receive a 2016 FTE review had little to no reduction in FTEs. West Central had around a 14 percent reduction with the next highest being only about 4 percent. These schools, all technically held to the same requirement for reducing FTE, either did not reduce FTE from enrollment amounts, or would have had duration for students indicating participation rates of nearly 100 percent; the latter being a significant feat based on auditor knowledge.

As schools became aware of what was expected, many of the schools implemented systems and procedures that allowed them to capture large amounts of durational data. In fact, the schools captured so much data, that ODE took a control style approach to their reviews in which an Area Coordinator would rely on the school's own internal controls for identifying and reducing items such as overlapped time, duplication of time, and excessive idle time. While schools may have attempted to control these issues in certain cases with ODE accepting that, AOS often found these controls were either insufficient or not working properly, as can be seen in *Appendix C: Community School Narratives* of this report.

Based upon our current understanding of the complexities of capturing durational data on the LMS and other education modules, as well as our understanding of the difficulty of obtaining accurately documented offline time from students, we believe this table reflects the inconsistencies in ODE's reviews. As discussed further in the Shortcomings of E-school Data Tracking Technology section of the report, we found many issues with duplication and overlapping of durational data and various other issues that ODE incorrectly accepted during their FTE reviews.

APPENDIX C: COMMUNITY SCHOOL NARRATIVES

The following reports, presented in alphabetical order by school, summarize AOS staff observations about the ability of e-schools to comply with ODE's duration-of-time requirements.

Akron Digital Academy (Summit County)
Fiscal Year 2016

AOS did not perform a detailed review of Akron's fiscal year 2016 information. However, upon meeting with staff and administrators, issues identified by ODE in 2016 were discussed briefly. In 2016 Akron utilized the Canvas LMS, which auditors tested and reviewed at another school (Buckeye Online School for Success, or BOSS, discussed below). Akron told auditors that ODE's 2016 FTE review did not accept any of the online learning presented as Canvas reports. Indeed ODE's review letter stated that "Akron Digital Academy only provided records of student participation in non-classroom, non-computer learning opportunities."

Akron provided auditors with 2016 Canvas reports and we noted that the information was presented in the same manner as Canvas reports obtained from BOSS. While auditors did not attempt to determine an accurate FTE based on the information provided, it should be noted that a duration totals could be determined in Excel after ordering data in a sequential manner, since the LMS reports student activity as individual timestamps.

The review also indicated that students may attend classroom on-site sessions two days a week for 3.25 hours each. Students who attended classroom instruction were credited for a full five hour day even though documentation for the remaining 1.75 hours per day did not exist. Akron indicated to us that the system did not capture time unless students submitted their assignment for grading. This means that if a student spent five hours working online but never submitted an assignment for that time, no time would have been reported, resulting in underreporting of duration. Classroom logs also lacked beginning and ending times for students.

For fiscal year 2016 Akron reported FTE based on enrollment. The school's fiscal year 2016 financial audit included a Noncompliance/Significant Deficiency comment related to the software's ability to track and document each student's time logged into online learning opportunities. Akron responded to the comment that it would update its systems to better comply with requirements of ODE. This audit was performed by Charles E. Harris & Associates, not AOS.

Ultimately, ODE determined that Akron's 2016 reported FTEs were 72.75, or 80.4 percent fewer than the 371.50 FTEs reported by Akron. After an unsuccessful FTE appeal, Akron agreed to repay $2,819,852.71 over six years as monthly reductions of foundation payments.

Fiscal Year 2017

Akron had its fiscal year 2017 financial audit performed by Charles E. Harris & Associates. Akron also received an FTE Review from ODE in fiscal year 2017 because of the issues identified by ODE in 2016. This review indicated there were no issues and that all adjustments were properly made within EMIS. Also noted was that the Area Coordinator discussed with the school about becoming a blended-learning school rather than an e-school. It was indicated that the school should work with its sponsor and ODE on properly identifying the school's appropriate learning model. The reasoning for this is because Akron highly encourages students to attend voluntary tutoring sessions at a physical location, but does not mandate they attend.

Many students attend these (reportedly 68 percent of students attended every day in fiscal year 2017) but if the school mandated that all students attend daily, it automatically would be granted FTE based on the amount of time students are required to attend sessions, whether the students attended or not.

Akron reported 318.90 FTEs for June 2017. The Academy adjusted these amounts in EMIS (as noted in the FTE review letter) to 226.19 FTEs based on the Final #2 funding report on ODE's website. This is a reduction of 92.71 FTEs, indicating the school reported duration of 70.1 percent compared to enrollment.

In 2017 Akron began using the Odysseyware software, after ODE refused to accept Canvas data in 2016. This software is fully-inclusive, meaning that students do not have to leave Odysseyware in order to work on other assignments. Therefore, theoretically, any and all time spent online should be captured within Odysseyware. However, Akron did offer supplemental curriculum, mostly for special education. Supplemental software included Achieve 3000 (for reading), Aleks (Math software not used until 2018), and others.

Odysseyware has a built-in 25 minute force out. If a student is logged into the software but idles (no mouse clicking or typing) for 25 minutes, he will be timed out and no more duration will be tracked.

Akron indicated that it does not adjust a student's reported time, because it does not want to estimate times. The school also is aware that time in Odysseyware may overlap hours.

Akron was reviewing the requirements to become a blended-learning school. Doing so would allow the school to automatically receive FTE credit for times a student is required to attend at a physical location. Instead of allowing students to voluntarily attend sessions and being required to track all that time, the school could mandate students attend a certain number of session hours a week and that mandated time would count without the need for durational proof.

Akron closed at the end of fiscal year 2018 and did not operate during the 2018-2019 school year.

Auglaize Educational Academy (Auglaize County)

Auglaize Educational Academy was audited by the AOS office for fiscal year 2016. The Academy uses Schoology as its learning management system. It also uses Compass and Blackboard (Collaborate) as subsystems for providing learning opportunities. Students are required to log into the main LMS which provides links to other educational programs. Schoology is able to track duration of time for learning opportunities that are housed within the system, however, if a student clicks to something outside the system, it no longer can track duration, only that the student clicked out. Therefore, if a student participates in learning opportunities outside the LMS, the student must manually track the time spent or the Academy would have to rely on that third-party vendor to provide durational information, which is not always possible. If work is completed within Compass, the Academy is able to access that durational information.

During our audit, we noted that Schoology does not have an automatic timeout feature implemented, while Compass has a 100-minute automatic timeout feature implemented. Therefore, a student who spends time in Schoology without participating in actual learning will have his duration counted until he logs out. A student who spends time in Compass will have durational time recorded up until 100 minutes, even without actual learning opportunities taking place.

Students are required to manually track non-computer-based learning opportunities such as reading, researching, note taking, and other activities. This time is then to be certified by the student's parent and then by their teacher.

The Academy did not receive an FTE review from ODE for fiscal year 2016. However, during the AOS audit, we noted issues that resulted in the Academy receiving a Noncompliance Material Weakness within the Schedule of Findings for the fiscal year 2016 financial audit. We noted that even though the Academy was capturing durational data, the FTE being reported by the Academy was based on student enrollment period and not being adjusted for the time spent in learning opportunities. We selected four students to determine if the duration times captured by the Academy accounted for the FTE reported to ODE. However, per correspondence with Schoology, this data is purged every 90 days. Therefore, we could not obtain sufficient durational documentation to support reported FTEs.

Fiscal Year 2017

The Academy is audited biennially and the most recent audit period covered fiscal years 2015 and 2016. Therefore, the fiscal year 2017 audit has not been performed. However, AOS did obtain fiscal year 2017 information for student duration and FTEs. The Academy also received a fiscal year 2017 FTE review performed by ODE. ODE's review was clean and found no issues or required correctives.

Auditors selected five students, each with a specific date, and tested that the students' reported durations were substantiated by the Academy's support. Auditors found that for the five specific dates reviewed, students participated for 20 hours while the Academy reported 47 hours of duration, a 27-hour variance. The auditor's total deducted overlapped and duplicated duration. Overlap of time occurred within the Schoology LMS and also occurred between Schoology and Compass. Auditors also flagged instances where students were credited with large amounts of idle time, ranging from eight hours to 21 hours. None of these issues were identified by ODE during the Academy's FTE review.

Buckeye Online School for Success (BOSS) (Columbiana County)
Fiscal Year 2016

AOS met with the Executive Director to discuss and observe the school's ability to track and report duration for FTE.

BOSS is unique in that it has implemented a bell schedule similar to that of a traditional school. Students are required to "attend" classes on a set schedule and teachers take attendance for each class, however students may log in after the fact to review missed lessons. These classes are online classrooms that include chat rooms that students may participate in live.

For fiscal year 2016, BOSS used an LMS called AMVONET. This LMS tracked duration solely via mouse clicks made by a student and did not show aggregate time by day, week or year. According to the school, roughly 1,250 students generated over 50,000,000 clicks which made it extremely difficult to track and compile duration time. Furthermore, the system did not have a forced logout implemented to prevent excessive idle time.

Students were able to perform work within the LMS, however any time spent outside of the LMS (such as clicking on a link to an outside source) was not tracked. Students also were able to watch teacher-led classroom instruction via Adobe Connect. During classroom lectures, students generally did not generate clicks.

The school calculated durational time by taking the time captured between clicks and aggregating these it. To prevent excessive idle time and to capture time for the live lessons mentioned, the school would discard any time that was generated for gaps between clicks exceeding 45 minutes.

For offline time, the school reported time for physical education, state testing, and IEP services.

The fiscal year 2016 ODE FTE review indicated that BOSS would be funded for none of the 906 FTEs reported. The reason for the 100 percent reduction was because BOSS did not provide any records to show online or offline duration. When further information was requested, BOSS submitted ODE a spreadsheet that showed the total hours for each student as reported in EMIS. At the time of this writing, this review was under appeal with ODE.

Auditors received fiscal year 2016 AMVONET reports for five students. We ordered each student's duration sequentially by click timestamps and calculated the duration between clicks. We also applied a maximum allowance of 45 minutes between clicks. For instance, if two timestamps had a difference of 100 minutes, auditors applied an Excel formula that would reduce this amount to 45 minutes. Based upon our recalculations, we were able to reasonably confirm the online hours reported by the school. However, the system was not capable of producing aggregated times by day, week, month, or year for reporting purposes.

The school also used additional online resources for providing learning opportunities. These included one application called iReady which did not include beginning or ending times and showed start and completion dates that spanned more than one day. Auditors could not ensure these times did not overlap other already counted duration. This source comprised roughly two percent of total online duration.

Auditors received offline times for the students in the form of an e-mail from the school's Technology Coordinator, which did not include times or dates.

Overall, auditors noted one student with a variance of reported and supported hours.

Fiscal Year 2017

BOSS received another FTE Review from ODE for fiscal year 2017. In a letter dated August 25, 2017, ODE indicated that BOSS used an LMS that could not track durational hours by day, week, or month, only by yearly total. It also states the school limited hours applied to each student to 3 hours a day for the LMS. The letter also states that BOSS was funded for 782.4 FTEs on its June School Foundation Payment Report (SFPR). According to the Final #1 SFPR, BOSS claimed 742.13 FTEs, a reduction of 40.27 FTEs, or about 5 percent. This would indicate that the school was able to capture 95 percent of duration hours required for each enrolled student, despite the issues indicated above. In the Issues and Corrective Actions section, ODE states there were none.

In 2017, BOSS switched LMS from AMVONET to Canvas. Canvas is only able to track aggregated time for the entire year. Per the school, the LMS tracks clicks throughout the day. As opposed to the 45 minute between clicks standard used in 2016, the school now only accepts clicks where the time between does not exceed 15 minutes. Any times exceeding 15 minutes are automatically reduced to 15 minutes.

Homework is performed off the computer and submitted. This homework is maintained in databases by the student's teacher. Teachers create an estimated amount of time each assignment should take and enter this time as offline time for the student. Therefore, an assignment estimated to take 30 minutes to complete will generate 30 minutes of duration for a student who completes that assignment. This is for homework done outside the Adobe Connect classroom.

Per the school, Adobe Connect does track duration – how much time a student was in 'class' and how much time she additionally spent watching recorded lectures. Adobe shows a student's Total Session Time and Total Recording Time. Total Session Time is the amount of time spent in the class watching live lessons. Further detail can be generated to show a student's in and out time with an associated duration. A student is not able to log into Adobe Connect unless a teacher is present and has initiated a live classroom. Students who click off of Adobe Connect to another website (such as YouTube) appear grayed out for within the live classroom's roster which allows the teacher to know the student is not actively within the classroom anymore. Furthermore, Adobe Connect only maintains durational data for two week periods at a time.

Per the School, due to Adobe collecting time, they only need to analyze 30 million clicks in Canvas as opposed to 50 million from AMVONET in 2016 since Adobe takes place separately from Canvas.

It was indicated by the Executive Director that ODE requested Adobe exported data for a few students during their 2017 FTE review. On September 8, 2017, ODE requested from BOSS additional FTE support for a few students. This is well beyond the June 28 and July 25 dates for which ODE conducted its on-site review and the August 25 FTE Review letter, indicating a further final determination may still be made.

Additionally, it was noted that both Canvas and Adobe utilize LTI technology, meaning they are able to interface directly and a student would only require a single login between applications that use LTI. It was also stated that both Canvas and Adobe are able to interface directly to the School's SIS, PowerSchool, which is used to report data through EMIS.

AOS received Canvas and other duration data for five selected students for 2017. Auditors attempted to perform the same testing to Canvas click timestamp data as performed with AMVONET for 2016, including reducing the cap between clicks to 15 minutes as indicated was performed by the School. Offline hours provided were in the same e-mail, non-detailed format as 2016. Three of the five students tested had variances between reported and supported hours of duration.

Electronic Classroom of Tomorrow (Franklin County)
Fiscal Year 2016

The Electronic Classroom of Tomorrow (ECOT) provides an all-in-one desktop style computer, or the student can use his or her own home computer. Students also are provided with an Android-based tablet. The school uses the IQity system as its main operating system to educate students. IQity is a learning management software, which is owned by the school's management company that enables the school and teachers to interact directly with students. The system provides reading materials (textbook-style learning), online tests, homework, discussion boards, a messaging system, and can send announcements to students, among other things.

The school has approximately 175 vendors that are used to provide learning software and material to students. During the 2015-2016 academic year, the school used approximately 50 vendors to provide curriculum resources to students. These are vendors that a student will see in their assignments within IQity. They range from reading textbooks per grade level to math textbooks for each grade level. During fiscal year 2016, the student would click on a link within IQity to be sent to the curriculum resources to be used to complete the assignment. Once they click on the link, the students leave the IQity system and the time spent in these curriculum resources are no longer tracked by the IQity system. Instead, to obtain the duration of time spent in each of these individual resources, the school must rely on the vendor of these resources to track the duration.

It is important to note that students are not required to log in to IQity in order to enter any subsystem including third-party vendors. In July 2016, the school administration reached out to each of the vendors to determine what data was captured by each of them in order to determine if the duration of time, such as log in and log out times, was captured and could be used to support the time each student was participating. The school learned that many of the vendors, approximately 21, purge the data because of the cost of storage. Approximately 29 of the vendors responded that data was still available through storage or was not purged. However, only a few of these vendors were able to provide data to support the time spent each day or annually for each student.

The IQity system currently only shows a log in, or click, each time the student enters into the system, but does not show a log out time; except for limited functions within IQity; such as when a student enters certain sessions, such as LIFT, special-education learning system.

As noted above, the school distributes tablets using an Android operating system to students, in addition to the computers. This is in response to the school's transient student population and allows for students to participate in learning opportunities while away from their desktop computer. Students can log into IQity as if they were on their desktop to watch live sessions, communicate with the teachers, get assignments, and other learning opportunities.

Furthermore, on both the desktop and tablet, students can download apps to use as learning aids. The school provides a list, which includes approximately 125 apps, of free resources to the students and parents that are recommended to assist the students. In addition, the student and parent can use any app from the Google Play store that they believe would be beneficial for learning. These apps include over 500,000 related to news, finance, education, and other educational areas, but also over 300,000 games. The school has limited capabilities to stop a student from downloading whatever app he or she wants. So a student could download an app that would show them logged in on the tablet, if such an app were available.

During fiscal year 2016, the activity the students engaged in on the tablet outside of IQity cannot be tracked. The school administration didn't attempt to contact the several thousand app vendors to determine if they could provide support for the duration of time each student spent in these apps. But if a student uses a tablet to access a vendor that is required on the desktop computer, that vendor will capture that data just as if the student were on a desktop computer.

One of the most important resources the school uses is a system called Collaborate, which allows teachers to hold live sessions with students. Live sessions are similar to lectures a student would receive from a teacher inside a brick-and-mortar classroom. The student logs in to watch the session and interact directly with the teacher. The students communicate with the teacher via webcam, voice (through microphone) and typing. The first two methods are controlled by the teacher, to prevent students from talking over each other. The student can interact by typing at any time and can be seen by every student participating in the session. Every student in the session can see or hear the interaction each student has with the teacher.

Collaborate isn't able to capture the attendance of each session. However, some teachers keep track of those who attend, though they are not required to.

Another method of engaging with students is through phone and e-mail. Prior to February 2016, while phone logs were maintained, the duration of time the teacher spent with the student was not documented. In February of 2016, ECOT implemented a policy requiring the teacher to log the time for every phone call made to the student. No duration of time was kept regarding interaction between teachers and students through e-mails.

The teachers also maintain notes for each student within a system called CRM, in which teachers note interactions with students. Entries can be as simple as noting that an e-mail was sent to all students reminding them of events or as detailed as documenting a student's struggle with attendance or subject matter. Entries appear to be made daily in most instances, but this is not a source accepted by ODE to support FTE, because this is information tracked by the teacher and not the student.

While there are several other methods that show the teachers and students are engaged in learning; including roster verification, assignments turned in for grades, parent portal activity, and proctoring reports, not all of the resources that show engagement between the teacher and student are acceptable when determining FTE for the student.

In the past, ECOT supported the FTE amount assigned to each student by having teachers certify the hours for which a student had an opportunity to learn and not the documented time the student was participating in learning. ODE sent a letter to ECOT's Superintendent, dated September 1, 2016, stating that this certification no longer would be accepted. As a result, auditors no longer will rely solely on the certification letter and initial login date to determine FTE.

At the onset of ODE's FTE review for 2016, ECOT was informed that ODE would be looking at durational data. As noted above ECOT contacted each vendor the school used to provide learning opportunities to determine if the vendor could provide information showing duration of time each student used the vendor's software. Some were able to provide this information, but others were not.

ECOT is currently working with the vendors to determine if they can provide duration data going forward. This will require ECOT to modify the contract for each vendor; which could result in additional cost to the school.

Starting in the summer of 2016, ECOT entered into a contract with a vendor to provide software called ActivTrak. This software is similar to spyware and will capture every keystroke a student makes. ECOT realizes there are various problems with this software, including:

- ActivTrak can be loaded only on computers owned by the school.
    - ECOT can't load the software on personal computers used by students
    - Currently there is no such software available to capture the data on tablets; so if a student logs into IQity through the tablet, the time is not captured.
- The time and effort needed to determine if a website a student visits is related to education or is personal is enormous.
    - Since the software captures every keystroke, ECOT personnel must filter out the non-education information. They are required to put the education activity in a format that is acceptable for ODE to accept for FTE review.

Because of the issues noted above, ECOT also began requiring students to track time spent on activities that are not captured by the ActivTrak and non-computer activities such as physical education, reading books and taking notes. This process is electronic and conducted within the IQity system. Students must enter the subject matter and the time spent on it in 15-minute increments. There was no filter to capture duplication of time captured by ActivTrak and the time the student enters as non-computer time. ECOT has to manually determine the duplication of time and subtract any duplication.

Field trips and other class gatherings that provide education require a sign-in sheet to be signed by each student. ECOT personnel will enter the time spent on these activities into the system.

Furthermore, ECOT has requested that teachers document duration of time for activity the teacher and students engage outside the system. So every phone call and conference between a student and teacher are logged into CRM.

AOS staff obtained ODE's spreadsheet showing how ODE captured ECOT's FTEs during the department's review. Approximately 750 students were chosen for review by ODE. The Auditor of State's staff chose 60 students from the list ODE tested to determine if there were any problems in ODE's review process. We also noted ODE found some errors when the review was performed that would have resulted in approximately a 1 percent error rate and ODE would accept that error rate and not perform any additional testing.

First, the AOS staff asked ECOT to get information from the software vendors about how student duration of time was captured by each vendor.

During this step we noted concerns that made our testing difficult to perform. One of the concerns was that the special education software, LIFT, was showing a consistent time of 30 minutes for every session a student attended. But another tracking system, called Response to Intervention (RTI), which collected durational data for these same LIFT sessions, was reporting times different from those in the LIFT report. Upon investigation, ECOT staff discovered the LIFT report was capturing the wrong fields in the system to track duration of time. Instead of recording the actual time the student spent in the session, the LIFT report simply was reporting the amount of time scheduled for the session, regardless of whether the student had participated for that entire time. For example, LIFT could report that a student had attended a scheduled 30-minute session even if the student missed the session altogether.

We also noted that some vendors indicated that duration is not captured until a student submits the work. This means a student can work on an assignment for several hours but if he doesn't submit the work at the end, no time is captured by the system. This leaves the AOS with a few concerns: (1) the schools would not get credit unless students submit the work, (2) the system might not capture the true time it took a student to perform the work. For instance, if a student completed the work in 2 hours and forgot to hit the submit button, the system would keep tracking the time as if the student was in the system. If remembers to submit the work 3 hours later, the system will show a duration of 5 hours, which overstates the true time the student spent on the assignment.

ECOT uses a system called Study Island. During the inquiry with the vendor, it was learned that the log in/out times were recorded in Central Standard Time and not Eastern Standard Time. This makes it more difficult for auditors to find duplication, because most systems are reported on Eastern Standard Time. The Central Standard Time would require both ECOT and the AOS to take an additional step by converting the CST to EST.

After the AOS staff reviewed all the vendor information noted above the next step was to tie ODE's work back to the support that was submitted by ECOT. As noted above, AOS initially intended to test 60 student files from the 750 selected by ODE to assure that ODE's calculation was complete and accurate. However, during the testing of the first 5 student files we noted several errors and concerns. At that time, AOS staff decided there was no need to test any more student files because these errors constituted a material control failure and testing additional students would not gain us any additional assurance.

During the testing, AOS staff reviewed the ODE spreadsheet to determine the following:

- Was a student logged in to multiple systems at the same time
- Did the ODE information match the information ECOT submitted to support FTE.
- Were dates on ODE spreadsheet within the fiscal year 2016 audit period
- Was the information submitted by ECOT related to educating students

The testing of the 5 files noted the following:

- Although ODE accepted time of duration for some vendors, the AOS was unable to determine if the times captured in these systems were duplicated in other modules. There were some vendors that provided duration of time only in aggregate for the entire year. AOS staff couldn't see the daily activity to compare to other systems; thus there was no assurance that time wasn't duplicated in another system.

- As noted above, LIFT and RTI reports essentially report the same information, yet ODE was adding them all together to document FTE. The ODE spreadsheet would show data from LIFT, RTI session data and RTI intervention data. LIFT data was the scheduled time period for the sessions, RTI session data showed each date a session was to take place and the time of duration the student and teacher spent on the session, while RTI intervention data showed only dates and time of duration for the actual dates the student attended the sessions. For example, suppose a student was scheduled to attend a 30-minute session but did not attend. The LIFT report would have shown the 30 minutes this student was scheduled to attend on that day, while the RTI session would show zero minutes and sometimes a note to explain why the student missed the session. The RTI intervention report would not have shown an entry for the student since no session was completed. For another example, suppose another session is scheduled for 30 minutes, but the student and teacher actually work together for just 20 minutes. Again, the LIFT report would report the scheduled time of duration for this student as 30 minutes. The RTI session report would show the actual time the student and teacher spent in the session, 20 minutes. The RTI intervention report also would show the 20 minutes. In the ODE spreadsheet, these times (30 + 20 + 20) would be combined for a total of 1 hour and 10 minutes. However, AOS would accept only the 20 minutes actually spent on the session.

  - Also, it was noted that in some case that the RTI session took place at the same time the student was receiving credit in another system, such as IQity. When this occurred the AOS would have not accepted any time in RTI/LIFT up to the amount of time they were spending in another system.

- o There could be various reasons why the time was overlapping in this case; the student opened another browser to sign into RTI or the field used for the time in RTI was not the actual time the session took place but the scheduled time. Because AOS cannot make a determination of what actually occurred, none of that that reported time could be used to support FTE.
- AOS noted that ODE didn't always count durational information provided by ECOT. The AOS agreed that if the information doesn't support a time of duration, it shouldn't be accepted. However, there were some systems that did in fact show support, but ODE did not count this time toward FTE. AOS is not certain why ODE did not count the time for these activities.
- Numerous errors were found in ODE's spreadsheet. While some of the errors had no impact on the FTE total, other errors did affect the FTE total ODE documented. The most common error for this was the log in or log out time was entered incorrectly, which resulted in time of duration being overstated or understated.

Overall, because of the nature of the issues detailed above, AOS was unable to fully substantiate the complete and accurate FTE count reported to ODE by ECOT. AOS also was unable to fully accept the FTE count that ODE recalculated because of cumulative errors.

Fiscal Year 2016 – Detailed Review of Participation by AOS

Since auditors knew they would be unable to substantiate all durational hours by ECOT, additional testing procedures were performed. Auditors spent considerable time reviewing homework, messaging systems, assessments, gradebooks, and other information for 90 students. Of the 90 students, AOS selected 60 from the sample ODE had reviewed during its 2016 FTE review and an additional 30 students at random.

The purpose of AOS' additional review was to determine whether ECOT would have satisfactorily met previously issued guidance, such as the 2015 OCS. In particular, auditors were attempting to determine whether the various documentation and evidence maintained by ECOT, besides just pure durational data, would have supported FTEs for student reported by the school. Alternative sources of participation could include assignments submitted, assessments taken, progress reports, gradebooks, message systems, and other items that could show that a student was participating in learning opportunities. Our office had also provided training to community schools previously on audit requirements, similar to how ODE Area Coordinators discuss FTE Manual requirements with community schools before their FTE reviews.

At this AOS training, it was emphasized that schools may substantiate FTEs to auditors through the documentation of completed assignments, communication between teachers and students, and other reasonable metrics.

As the OCS mentions, this is a difficult test to perform. The difficulty arises from the fact that participation is not defined by the Ohio Revised Code, the Ohio Administrative Code, or ODE. Therefore, it was up to auditors to make a subjective determination as to whether information provided by schools represented a reasonable connection between reported FTEs and supported participation in learning opportunities. AOS had never made a previous determination that duration alone was the metric to be used for determining compliance with FTE law. It was not until the 2016 FTE reviews that ODE began equating participation with duration.

Note: Auditors performed their review in a manner similar to that prescribed to ODE's Area Coordinators in the 2015 FTE Handbook, which was in effect for ECOT's 2016 FTE review.

As stated in the Handbook: *"A learning opportunity for an e-school student could be computer learning, reading resource documents, writing papers, taking tests, doing research, field trips, and conferencing with teachers, etc. There must be a login but that cannot be the only proof of attendance."*

Student	ECOT FTE	ODE FTE	Difference	ECOT Hours	ODE Hours	Difference	# of Classes	% of Math Completed	% of English Completed
1	1	0.1	0.9	921.29	96.63	824.66	7	70%	58%
2	1	0.12	0.88	921.29	114.06	807.23	5	67%	83%
3	1	0.13	0.87	921.29	119.05	802.24	7	61%	64%
4	1	0.15	0.85	921.29	139.9	781.39	5	90%	41%
5	0.55	0.05	0.5	503.91	42.02	461.89	9	100%	100%
6	0.5	0.25	0.25	458.1	232.08	226.02	4	92%	98%
7	1	0.37	0.63	921.29	337.07	584.22	7	59%	76%
8	1	0.41	0.59	921.29	376.05	545.24	12	77%	44%
9	1	0.6	0.4	921.29	557.01	364.28	7	100%	87%
10	1	0.45	0.55	921.29	418.55	502.74	7	73%	49%
11	1	0.09	0.91	921.29	86.96	834.33	5	1%	0%
12	1	0.24	0.76	921.29	222.01	699.28	7	0%	0%
13	1	0.28	0.72	921.29	254.24	667.05	9	0%	37%
14	0.72	0.001	0.719	697.33	1.15	696.18	6	0%	25%
15	0.85	0.13	0.72	783.86	124.07	659.79	5	42%	35%
16	0.88	0.25	0.63	809.31	231.07	578.24	6	24%	11%
17	0.5	0.03	0.47	458.1	25.37	432.73	8	0%	5%
18	0.63	0.18	0.45	580.26	164.57	415.69	8	27%	3%
19	1	0.67	0.33	921.29	613.25	308.04	6	28%	25%
20	0.56	0.23	0.33	514.09	213.89	300.2	14	8%	16%

The above chart was put together by auditors during review of ECOT students. The chart shows how ECOT measured the FTE for 20 students compared to ODE's determination of FTE for those same students. Auditors independently included information about the number of classes a student took for the school year as well as reviewing the percentage of assignments completed in math and English, two major subjects that all students are required to take. Number of classes taken and percentage of those classes' assignments and assessments completed were not factors included in determining FTE by either ECOT or ODE. AOS also did not attempt to calculate an FTE based off of this information, rather auditors included this information to provide some insight as to whether the student was participating at a level indicated by ECOT or ODE.

The ECOT FTE column represents the student's FTE based on their enrollment period. The fiscal year 2016 school calendar for ECOT contained 921.29 hours. An ECOT FTE of 1.00 for Student 9 means that student was enrolled for 100 percent of the school year and was thus offered 100 percent, or 921.29 hours, of learning opportunities by the school. For that same student, the ODE FTE means that ODE determined ECOT could only substantiate 60 percent, or 557.01 hours, of documented participation in learning opportunities. Accepted documentation would include specific log in and log out times or other durational data.

Auditors met with an ECOT employee periodically over a span of several weeks in which the ECOT employee logged into the school's Learning Management System IQity. IQity serves as a portal for students, parents, teachers, and administrators to access curriculum, homework, assessments, messages, school announcements and other materials and information. For each of the 90 students selected by auditors, we were able to log into IQity with administrator and teacher rights in order to review completion of assignments, assessments, and gradebooks. Auditors were able to review message inboxes and outboxes to determine whether there was regular communication between students, parents, and teachers.

While auditors did not take time to review each and every course taken by each student selected for review, auditors did review one math and one English course for each student since these are core courses required to be taken by every student. Math courses could represent algebra, geometry, calculus, etc., while English courses were usually titled as a varying level of English or Reading (e.g. English II).

The percentage of math or English courses completed was determined by counting the number of graded items within the student's gradebook divided by the number of total available assignments, though some assignments were marked as optional for completion. Auditors also sporadically checked individual assignments to ensure accuracy of items marked as completed.

Occasionally there were students selected who did not take math or English and auditors replaced those core subjects with another such as science or history. Zero percent completion of either math or English in the above table represents students who were enrolled in those courses but did not have any evidence of participation. Auditors also did a cursory review of each student's inbox and outbox in the message center. Auditors did not read individual messages, but rather made a judgment in whether students engaged in regular interaction with a parent and the student's teacher. It is reasonable to assume all students receive messages from their teachers, therefore more weight was granted for students responding to teacher messages or initiating conversations and questions. However, it was noted that messages in a student's inbox would be markedly differently if the message had been opened, indicating the student read the message. While not objectively proof that a student was participating in learning opportunities, students that read and respond to teachers' messages could be inferred to have been more active than those students who did not.

From this information, auditors were able to reasonably determine that many students actively participated throughout their enrollment period, while many others didn't. Student 1 in the table completed 70 percent of his or her math assignments and over half of English assignments. Auditors also noted that this student was very active in reading and responding to messages from teachers. While it could be argued that this student may not have participated fully in the courses, the student almost certainly participated in more than just 10 percent of learning opportunities offered by ECOT. ODE credited this student for 96.63 hours of the 921.29 that was claimed by ECOT. ODE reached this determination by adding up the number of minutes and seconds that the school could document with duration reports. ODE did not consider the large amount of documentation the school could have provided, such as the information auditors reviewed.

Conversely, auditors noted that student 20 was credited with about 60 percent of the school's claimed FTE. Student 20 completed about 8 percent of math assignments and 15 percent of English assignments. Auditors also noted that the student was not active in responding to messages from teachers. In fact, the student enrolled in more courses than any other student on the list, but was rarely active in them. ODE credited student 20 with 213.89 hours of the 514.09 claimed by ECOT. Again, ODE did not reach this determination by reviewing the breadth of the student's participation in courses or interaction with teachers. ODE's determination was solely due to ECOT's ability to prove more time logged into the computer for this student compared to Student 1. A subjective comparison between Students 1 and 20 would give a reasonable conclusion that student 1 participated far more than student 20 and would be more deserving of the hours claimed.

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However, when demanding that a school produce durational records and focusing on numbers alone, a full picture of that student's year cannot be accurately realized.

Fiscal Year 2017

In fiscal year 2017, ECOT began capturing duration from many of the sources which they were unable to in 2016. However, the single largest change for 2017 was the substantial use of ActivTrak. As explained earlier in this report, ActivTrak is a program placed on a student's computer that actively tracks information about the active window currently recognized by the computer's operating system. This essentially allows the program to capture the amount of time for all activities performed on that computer. ECOT began collecting ActivTrak data and collected nearly 200 million record counts for ActivTrak alone. In 2016, ECOT only managed to gather 6.5 million record counts amongst all sources of data. In 2017, ActivTrak records accounted for about 94 percent of all record counts.

Also for 2017, ECOT reported FTEs based on student enrollment period, rather than adjusting for duration.

Due to ActivTrak comprising the vast majority of all durational data, auditors spent most of their time reviewing this data. Ultimately, auditors determined that the data presented was significantly deficient in presenting any sort of meaningful information for the purpose of documenting student participation in learning opportunities. For further detailed information, please refer to the financial audit's Schedule of Findings available on the AOS website.

Fairborn Digital Academy Community School (Greene County)
Fiscal Year 2016

Auditors did not visit Fairborn Digital Academy during fiscal year 2016 since the school is audited biennially and was scheduled for an audit of fiscal years 2016 and 2017. Based on auditors' visit in fiscal year 2017, the school was using the same curriculum vendors in fiscal year 2016 and would have had similar difficulties and issues.

The Academy did not receive an FTE review from ODE in either fiscal year 2016 or 2017.

Fiscal Year 2017

On April 7, 2017, AOS visited the Fairborn Digital Academy. During this visit, AOS met with the FAST Coordinator, Executive Director, and two other employees of the school. The purpose of this meeting was to obtain firsthand knowledge and observation of the school's education systems and their ability to capture and report students' duration times as required by ODE for FTE reporting. This is a detailed walkthrough of how the school obtains information for its FTE reporting. This walkthrough included observing school employees logging onto school systems, visiting vendor websites, and running reports that showed an example of a student's participation in learning opportunities.

The school is a K-12 e-school that does not use a centralized learning management system. The school's curriculum is provided by a variety of vendors such as GradPoint, Write2Learn, Study Island, and others. The School relies on these vendors to provide reports and information needed. However, according to the school, it reports FTE's based on a student's enrollment period and not documentation of participation.

Each vendor's system captures duration and other information in varying formats. Traditionally, a central LMS would integrate all information into uniform reports that are more readily accessible to school staff.

GradPoint is able to capture duration on specific dates based on activity beginning time and ending time. GradPoint is able to produce both summary level and detailed reports, however the School noted that these reports don't always agree. A forced time out is set at 15 minutes for this system. During our limited review of the system, we were able to observe clear signs of duplication.

School staff informed us that they do not have students or their parents maintain manual logs for non-computer based time because of the nature of the students the school serves. While the school does not maintain non-computer logs, it does maintain attendance sheets for students who come to the school's physical location, where the school offers on-site learning opportunities for students who need tutoring or other in-person help.

The school offers four learning models to meet different students' needs. These models include FAST, Dual Credit Program, FIRST, and FIRST Special Education.

The FAST program is intended for high-school dropouts or students 18-21 who are considering dropping out. Students complete two years of high school in one year. These students are assigned an accountability coach, but are not required to physically show up to the school. Students complete their studies via the online vendors noted above.

The Dual Credit program offers highly motivated students the option to earn college credits for free while also earning their high school diploma. The school works with Kent State University and Sinclair Community College to offer online courses. The ability to track duration for these courses is subject to the same restrictions as the school's other vendors.

The FIRST program is for students who are interested in an alternative to a traditional high-school. Students receive personal instruction and assistance in a small-school environment. Students are required to attend on-site at the school two or three days a week, while working online from home the remainder of time. The school maintains login attendance sheets for students who attend on-site. However, these sheets do not detail beginning and ending times.

The FIRST Special Education program is similar to the FIRST program, but intended for students with special needs. These students are required to attend on-site at the school on Tuesday, Thursday, and Friday each week, while working online from home the remaining time. Attendance sheets are maintained in the same fashion as above.

Auditors obtained durational support for five students in fiscal year 2017 for our audit. Support included GradPoint online hours, physical education, State testing, and MAPs testing.

GradPoint duration was presented by date and included Time in Course and Idle Time both as aggregate counts with no further detail. We noted that in instances where the cumulative time per date (Time in Course plus Idle Time) exceeded 10 hours, the Academy correctly reduced the time to a maximum of 10 hours.

For two of the five students reviewed, auditors noted that the Academy did not include GradPoint idle time in the total hours reported for funding, while for the three remaining students, the Academy did include idle time in their reporting.

State testing was granted at three hours per test taken, but test dates were not listed and could not be compared to online time recorded by GradPoint.

For one student, 67 hours of PEAK learning opportunities were reported by the Academy, but no support was provided to auditors.

Overall, auditors noted variances between the number of reported hours by the Academy compared to the number of substantiated hours for all five students. Variances ranged from less than one hour to over 67 hours.

GOAL Digital Academy (Richland County)
Fiscal Year 2016

We did not review fiscal year 2016 information for inclusion in this report. GOAL had no reported findings in the fiscal year 2016 financial audit performed by an outside IPA. GOAL also did not receive an FTE review by ODE in 2016.

Fiscal Year 2017

The AOS met with representatives of GOAL Digital Academy on Wednesday, October 25, 2017.

The Director notified the AOS that ODE gave GOAL five days to put its fiscal year 2017 FTE report together. She stated that the Area Coordinator came in on June 26, 2017 and no issues were found with the files reviewed. She questioned that the sample ODE pulled was not "random" as 22 out of the 60 students selected were 105-hour rule students, that is students who should have been automatically withdrawn by the school for missing 105 consecutive hours. All administrators and support staff spent all of June getting the data together for 827 students.

ODE's review noted that students tended to exceed the documented minimum hours of work required for full FTE funding. The review listed no Issues or Corrective Actions required in relation to duration or records.

The Director stated that several teachers at the school were apprehensive about signing off/certifying student offline logs because of the chance of teachers losing their licenses if these certifications were later called into question. The Director is certified for Special Ed and K-12. The Technology Director, is certified to sign off on student logs that have more advanced math courses. If a teacher does not certify a log, the Director and Technology Director will certify student logs as needed.

The Director stated that Federal law trumps State law that Special Ed students have to do five hours of work at each site. She stated most documentation is in an IEP and was estimated for what they were supposed to do. Special Ed students were one FTE because they worked and took other classes. GOAL purchases textbooks for Special Ed students.

Correspondence courses do not count towards FTE funding. Summer school does not count toward FTE funding. Flex credit was counted for students with correspondence courses. Hours were documented by the entity and, provided students met with the school, the hours could be counted as an elective. GOAL also counts Flex credit for soccer, gymnastics, etc. if coaches document the hours as Physical Education. Flex hours are considered

"Other Learning Opportunity" time. GOAL also has a 23+ program, that is students who are 23 years of age or older and looking to potentially take the GED as an alternative to graduating, and it does not receive funding for those students because they are outside of the age requirement.

AOS asked the Director how many total students had at least some FTE impact on the school, which would mean any student who had enrolled at the school at any point of the school year. The Director stated that they had 455 FTE for 827 students, meaning 827 students attended GOAL at some point during the school year, but only gathered the equivalent of 455 FTE.

Parents are required to meet five or six times with administrators prior to the start of school, where it is explained that the parents act as teachers and it is important for them to be fully engaged in their child's education. Elementary classes are offered at the school's locations, for a couple of hours a few times a week. Per the Director, GOAL is a K-12 school where 90 percent of the students are in grades 7-12 and 78 percent of the students are 16+ years old. She also stated that 60-70 percent of the students are credit deficient and do not have the number of credits a student in their grade should have to be on track for graduation. The AOS asked the Director if she would say most of her students are "at-risk". She agreed and commented that "at-risk" needs to be better defined. She believes most students at GOAL are "at risk" due to mental health issues, having parents with drug convictions, living in poverty, and other issues.

Per the Director, 90 percent of school districts send students to GOAL if they are already 18 years of age even though it is illegal to deny enrollment to a student. The Director stated that school districts will try to prevent the students from returning to the districts to enroll, so the students apply to GOAL, and in many cases the school districts will refer the students to GOAL.

There are many small districts in the area that GOAL serves, so the small number of students with the risk of failure can affect the traditional school's graduation rate adversely and can lower a district's state grade card. Students who move into the area towards the end of the school year are also referred to GOAL by the districts. Because of funding rules and age-out requirements, the School may not get complete funding for a student even though continued "productive time" is occurring throughout the year to educate a student. For example, the Director indicated that the school can't claim graduation rates for 5th and 6th year high school students because of age-out requirements. Students who are 22 years or older are not reported in the school's graduation rate and the school is unable to take credit for these students graduating. She stated that there is a disconnect with ODE because the school still wants the student's graduation rates to be reported, but with the age-out requirement the school cannot receive funding for them.

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She also stated that traditional schools flag students who have been sent to GOAL and other community schools to prevent loss of funding. A school district can "flag" a student by claiming that the student is enrolled at that district while another school, in this case GOAL, is also claiming that same student as enrolled in order to gain funding for the student. A representative at ODE has to review the flag and lift it. She stated that traditional schools (specifically Galion) contract with K12 Consultants to ensure the traditional school is granted the funding for a flagged student, whether the student is attending a community school or not. She stated that K12 Consultants receive $1,000-$1,200 for every student that they can show is not attending the community school. ODE reviews flagged students in the system and makes a determination if the conflicting schools, both claiming funding for a student, cannot resolve the issue themselves.

The Director referred to students using a "revolving door of community schools" and that students will jump from school to school in between truancies.

Canvas is the LMS for GOAL. GOAL also utilizes Chromebook, A+ System, Reflux Math, Study Island, Gizmos, GoGuardian (in fiscal year 2017) and Securly (in fiscal year 2018) as supplemental vendors. Auditors also were familiar with Canvas from other community schools in Ohio.

In the prior years, the school used a curriculum known as Florida Virtual, and this system is used in tandem with CANVAS. GOAL would take the curriculum and place it in CANVAS so the hours would be captured in the CANVAS system. The School has multiple platforms, some of them the School does not capture via CANVAS. However the School stated that regardless of the platform, CANVAS tracks that the student is online.

The Canvas LMS did not have a forced logout in place to log out an inactive student. In fiscal year 2017, GOAL used Chromebook to force a logout daily, but this would still accumulate inaccurate data if time was being tracked while a student was inactive.

GoGuardian tracked every single click on a student's computer, but only retained data and reports for three months until they are purged. In 2018, GOAL switched from GoGuardian to Securly which retained the data indefinitely and did not purge data or reports. GOAL stated that these systems were not put in place for the tracking of durational data, but more for content filtering for students. This software tracked where students navigated on their computers.

When asked by auditors if the school offered credit recovery, which allows a student to use alternative courses to make up for credits they lack, the Director stated the school did have a credit recovery program in place. Credit recovery hours are tracked by the "A Plus" system (now owned by FuelEd) which allows the school to track all the hours that student is entitled to for funding purposes.

The AOS asked the representatives from GOAL about FTE reporting. 2016's reported FTE were based on enrollment. In 2017, GOAL adjusted FTE's based on a student's documented duration.

"Canvas" and "A Plus" are the systems that track Computer Learning Time reported for FTE. GOAL also uses "OnBase" to track online and offline activity, but it does not have an alert within the system to remind students to enter time from previous days and it also does not allow students to enter future time. If no supporting documentation for logged time is available, the school does not take credit for the hours reported. She also indicated that the younger students have difficulties with the computerized logs.

The School uses Chromebooks to track all activities on the device regardless of the portal used; however, if the student uses his home device, it can't be tracked. The school asserted it was impossible to track and capture 100 percent of the hours. Because students fail to track and submit their offline time each day, GOAL just "takes the hit" on funding.

Teachers will also estimate students reported offline time and the teacher may adjust the time down if the teacher feels the student did not actually spend that amount of time on an assignment. In fiscal year 2018, teachers are not reducing student's time in OnBase for their reported offline time. AOS suggested that GOAL consult with its Area Coordinator about reducing time and using estimates for offline time. Additional offline time could be earned through community service, flex credit, work study, mandatory state testing, and labs. Work study can make up 50 percent of a student's FTE, but the school still requires students to take a minimum of five classes.

GOAL urges the local Courts, to which students have been sent for truancy, to order students to report to their learning lab and also requires failing students to participate in learning labs. GOAL tracks attendance with sign in/sign out logs and enters the times into On Base. Per the Director, the system will not duplicate hours if a student was online while at a learning lab. Sign in/sign out logs are kept for on-site labs for kids who are required by court order to come in for required face time. All off-site locations at which students participate in educational activities, service clubs, field trips, etc., are kept as part of the offline time. The problem is if they are signed into the CANVAS system on site with a tutor, then the possibility of duplicated time exists. In this case, the student file is required to be reviewed so that duplication doesn't occur.

It was stated the school did not capture all the offline hours, however. Teachers do not adjust the time the student inputs as the time assignment has taken them.

There is still a question as to whether GOAL should be classified as an e-school or blended learning. GOAL justifies its e-school status by noting that all classes are offered online, so a student does not have to attend the learning labs. Also, no formal lunch is provided in the learning labs, but healthy food is provided to students throughout the day. The Director stated that all courses are offered online. But there is an opportunity for students to come in and do lab work.

Testing

AOS received student FTE detail and durational support for the 2017 audit. A total of 10 students were selected for testing. Of these students all 10 were granted three hours of duration for orientation, which is explicitly not allowed in the FTE Manual.

The school's LMS, Canvas, generated a report that showed the timestamp for the last time a student viewed a course. The school ordered these timestamps sequentially and applied a formula which granted three hours of duration for timestamps on which the preceding timestamp was not the same date. If the two sequential timestamps were from the same date, the formula looked to see the difference between times. If the time difference was at least three hours and 25 minutes, the student received three hours of duration. If the time difference was less than three hours and 25 minutes, the student received zero hours of duration.

This method does not accurately report the actual amount of a student's participation in learning opportunities. Students receive either three hours or zero. A student could have logged in once a day for only one minute and received three hours each time.

Auditors also noted that the school inaccurately reported non-classroom offline hours for career-based intervention and developmental disabilities as online hours. Non-classroom offline hours were reported in aggregate without beginning and ending times.

Auditors noted several instances of overlap between online time and non-classroom offline activity, as well as instances where combined reported hours between the LMS and non-classroom offline hours exceeded the 10 hour maximum allowed within a twenty four hour period.

The above issues resulted in a Material Noncompliance Significant Deficiency being reported.

Greater Ohio Virtual School (Warren County)
Fiscal Year 2016

Auditors did not visit Greater Ohio Virtual School (GOVS) during fiscal year 2016. The school is audited by an independent public accountant firm. AOS staff visited the school in late calendar year 2017.

Fiscal Year 2017

Auditors first met the GOVS Director and a sponsor representative from the Warren County ESC in early November 2017 during a presentation given by the school to a member of the General Assembly on how the school's system for capturing duration functioned, as well as other features the school implemented in an effort to comply with the changing FTE requirements. Auditors also visited the school itself in early December 2017 for a more in depth conversation.

GOVS uses the Virtual Learning Academy (VLA) as their LMS. VLA is run by the Jefferson County ESC out of Steubenville. The system has a full suite of features such as an internal e-mail system, video streaming capabilities, audio features, and forum functionality.

AOS staff requested support that GOVS had gathered as part of their most recent FTE review which was for the 2016-2017 school year. The school did not receive an FTE review over the 2015-2016 school year. Their FTE review letter indicated no issues identified by ODE with regard to the school's systems or ability to capture duration. However, the school had reduced its FTEs for the 2016-2017 school year from about 515 to 212, nearly 59%. This is after virtually no decrease in the prior school year. This is a result of the school taking a proactive effort to properly reduce student FTE based on the new requirements.

AOS staff did not attempt to test GOVS student FTE information in detail since it was not an audit performed by our office. In reviewing the information presented by the Director, auditors did note that the school's systems faced many of the same limitations noted at other schools, despite the great effort the school had taken in order to capture and record duration as best as possible.

The school received another FTE review in the 2017-2018 school year from ODE. This review specifically notes that the school has developed and implemented procedures halfway into the school year that allows the school to combine duration from all learning opportunities (online time and non-classroom, non-computer time). These procedures include excluding identified overlap and hours exceeding 10 per day. It is also noted that the VLA system has a 45 minute forced logout function and that the school does not claim these 45 minutes for funding purposes. Since there is no restriction on a

school counting or not counting idle time leading up to a forced logout, it is detrimental to the school's overall funding to not count these minutes.

For the 2017-2018 school year, GOVS had about 405 FTEs as year-end that was adjusted down to 343 for a final funding amount.

Lorain K-12 Digital Academy (Lorain County)
Fiscal Year 2016

Lorain K-12 Digital Academy was audited by the AOS office for fiscal year 2016. The Academy uses Brightspace as its learning management system as well as third-party vendors that offer educational material for students. These vendors include PLATO, MyOn Reader, Study Island, Brain Pop and Jigsaw. The Academy contracts through META and TRECA Digital Academy to handle its LMS. The Academy's LMS does not interface with subsystems or vendors in such a way that a student's durational activity can be tracked and reported. When a student completes an assignment or test within Brightspace, that duration is tracked, but if that student completes an assignment or test outside of Brightspace, that duration is not tracked.

For time spent outside of Brightspace, or for non-computer-based learning opportunities, students would have to manually track this time, however this was not required by the Academy. The LMS also has an automatic logout feature that occurs after 120 minutes of activity. Interactions between students and teachers are to be logged by the teacher.

The Academy received an FTE review by ODE for fiscal year 2016. ODE chose to perform a Desk Review rather than a full FTE review. A Desk Review is performed at the discretion of ODE when a school has no preliminary FTE review issues, no fatal errors in the June School Options Enrollment System (SOES) payment report generated by ODE, and the school is not suspended, closed, or closing. In a letter dated June 15, 2016, ODE told the Academy that the ODE reviewer "found that the original source documentation for attendance and its office record folders for each child to be in order" indicating there were no issues discovered.

During our office's audit of the Academy, we discovered several issues leading to a Noncompliance Material Weakness being reported in the Schedule of Findings of the Academy's fiscal year 2016 financial audit report. We noted that the Academy was reporting FTEs to ODE based on a student's enrollment period rather than adjusting FTE based on documentation of a student's participation in learning opportunities. Since the Academy does not maintain its own LMS, reports generated for ODE were produced by TRECA Digital Academy. Upon inquiry with TRECA, we noted that student durational time was not requested as support to be submitted to ODE for the FTE review.

We also noted that non-computer time was not submitted. Based on our compliance testing, we concluded that the Academy did not maintain sufficient support to substantiate the FTEs reported to ODE.

Fiscal Year 2017

AOS also conducted the fiscal year 2017 financial audit of the Academy. However, because of ODE's clean FTE desk review in the prior year, the Academy did not receive an FTE review for 2017.

The Academy began implementing student logs, online and offline, that tracked student duration by day, week, month, and yearly total. Auditors found that 10 of the 10 students reviewed did not have their durational data properly reconciled to the State ODDEX system. ODDEX is the Ohio District Data Exchange that compiles information related to student records, calendars, and other information for administrators to view.

Auditors noted that 10 of the students tested also had FTEs reported to the State based on an enrollment period rather than being adjusted based on durational data, though the Academy did maintain such durational data. Absences were also included as part of a student's reported FTE. Therefore, auditors were unable to determine the completeness and accuracy of FTEs reported for 2017.

Mahoning Unlimited Classroom (Mahoning County)
Fiscal Year 2016

Mahoning Unlimited Classroom was audited by the AOS for fiscal year 2016. During our audit, we noted that the school uses a learning management system called Fuel Ed to provide educational software to its students. The school also uses other vendors to provide learning opportunities, such as Blackboard, Peak, Learnbop and others. The LMS is limited in its abilities to collect time students spend in learning activities. AOS staff noted that the LMS is able to capture login and logouts based on mouse clicks, but the software does not capture how long a student spends in each assignment or task. One reason the LMS is unable to capture accurate time is because it automatically logs out a student every 30 minutes, even if the student is still active within the assignment.

The LMS is unable to track a student's non-computer time. Teachers are able to enter assignment or test grades but do not have information regarding the time a student spent on these. Students are not required to maintain manual logs that would document the time they spend participating in non-computer learning opportunities. Instead, teachers track time manually on a spreadsheet. By having teachers track a student's offline hours rather requiring the student to report these hours, the school is effectively estimating the duration of time a student is participating, which is not allowed by ODE's FTE Manuals.

The school did not receive an FTE review for fiscal year 2016 from ODE. However, from our audit of the school, we noted several issues that resulted in a Noncompliance Material Weakness being reported within the Schedule of Findings in the school's fiscal year 2016 financial audit report. We noted that the school was calculating a student's FTE based on the enrollment period, as has been practice of schools in the past, rather than adjusting the FTE based on the number of hours the student participated in learning opportunities. The school did not manually track offline hours. These issues along with the LMS limitations described above prevented AOS auditors from verifying the accuracy or reliability of FTE reported by the school. Notably, FTE reported by the school to ODE was drastically higher than could be supported by durational documentation. The school is scheduled to receive an FTE review from ODE for fiscal year 2017.

Fiscal Year 2017

Mahoning Unlimited became a biennial audit and is scheduled as a fiscal year 2017-2018 audit. Therefore, we did not review fiscal year 2017 information for inclusion in this report. However, the school did receive a 2017 FTE review from ODE. ODE's review notes that "low student participation equated to a low percent of time factor," but noted no issues or corrective actions required as part of the review.

Massillon Digital Academy (Stark County)

Fiscal Year 2016

Massillon received an FTE review from ODE for 2016 in which it was noted that the number of actual learning opportunities documented by the Academy did not match to what was submitted to EMIS. ODE issued a final determination stating that Massillon's FTE was 53.39, 20.4 percent less than the 67.08 FTEs reported. The Academy appealed this determination and later agreed to a settlement with ODE to repay a total of $12,630.

The fiscal year 2016 AOS audit included a Noncompliance Material Weakness which concluded that the Academy may have over reported FTEs. Auditors noted that for five students tested, a total of 145 hours greater than what could be substantiated by the Academy's documentation was reported to ODE for funding.

Systems Overview

Massillon switched over from Dazzle to SunGard. SunGard has its own student information system. PowerSchool bought SunGard.

The systems used to educate students were Google Docs, SunGard, Florida Virtual School, PLATO (just for credit recovery), and Acellus for Special education. Florida Virtual School is directed through the school's LMS, BrainHoney.

Acellus is video based, student friendly, and helpful for slow readers. Teachers record video lessons that can be modified to meet the students' IEP Goals.

AOS inquired about BrainHoney and asked if two classes are open at the same time, would it be double counted. Per the Academy, time would not be double counted. Time is continuous and tracked only once. If a student opens another browser for a different subject, time stops for the first subject and begins for the new subject.

It is possible to be logged into Plato and BrainHoney at the same time. Duplicate times are not tracked and removed. Time could be double counted if both programs were open.

It is possible to be logged into Plato and Acellus at the same time. Duplicate times are not tracked and removed. Time could be double counted if both programs were open.

YouTube links are embedded into the LMS in order to track time in BrainHoney.

Auditors inquired whether there were forced logouts for the three LMS systems (BrainHoney, Plato, Acellus), but the Director did not know the answer for how long each system takes to time out). If a logout is forced after idle time, the Academy is not removing that time/adjusting down.

Clever is the syncing program between the SIS and Google App for tracking durational data.

Non-Computer Time

It has been an issue at Massillon that students are not logging their offline hours. The Academy wants students to come in every two weeks to turn in logs and they are either not coming in and reporting or not filling out the logs.

AOS viewed a non-computer time log for a student. It included students name, date, description, lesson, total minutes and student initials to validate the time reported. Time is not tracked with a start/end time. A classroom teacher goes through non-computer time logs but does not sign off. ODE accepted non-computer time logs without certification. ODE did not tell the school that its non-computer time was unacceptable.

The school does not pull durational data from Google. Any time spent through Google for learning would be reported within Florida Virtual School duration.

The Director agreed that younger students in the lower grades spend less time online and that Massillon does not provide hard copy textbooks. The Director also stated that the number of students in 4th through 6th grade is very small, accounting for around 5 percent of students. These students still complete a lot of their school work online though. The Director stated that the school's make up was roughly 90 percent students from Massillon and 10 percent from surrounding areas.

The Director talked about how HB410 and its requirements for tracking absences, creating plans, meetings, etc. was burdensome, difficult, and time consuming, but could not estimate how much additional cost this was placing on the Academy. However, the Academy did hire an additional employee for the purposes of tracking attendance.

The Director also stated that it is unlikely that a school such as Massillon could continue to keep its doors open for more than maybe two years based on receiving only about 75 percent of funding the school used to receive based on enrollment. The Director felt there were too many compliance requirements being placed on e-schools and that it is possible the school could be merged into the local school district as a separate program. This is a situation auditors are aware of occurring elsewhere as well.

Start times and end times are tracked for computer lab time and tutoring time at the Academy's physical location. Students are required to sign in and sign out. Students may also utilize the PLATO and BrainHoney systems during computer lab time.

The Director told auditors that ODE did not look at the data within the systems themselves.

Fiscal Year 2017

For fiscal year 2017, AOS selected five students for detailed testing at the Academy. For each student, AOS obtained a detailed spreadsheet that indicated the number of online and offline learning opportunities.

Online learning opportunities were in documented in Learner Daily Usage reports from PLATO and by screenshots of course times within Florida Virtual School. We did not receive documentation for offline learning opportunities reported. From our previous work in fiscal year 2016, we knew that these systems did not interface with each other. Therefore, we tested each student to determine if there was duplication of time between online sources. Because the Academy did not provide offline documentation, we were unable to test those times.

For each of the five students, we selected one day to determine potential duplication of time. In our testing we identified numerous instances of overlapped time between systems, as well as overlapped time between online and offline time. We also received no supporting documentation for certain school subjects.

In addition to the Learner Daily Usage PLATO reports, we requested Resource Usage Reports for the year. This second report presents two separate amounts of duration for each student: Time Logged In and Time on Activity. The Academy chose to report Time Logged In, the greater of the two amounts.

Auditors' findings resulted in a Noncompliance Material Weakness.

The Academy received a follow-up 2017 FTE review from ODE as well. ODE's review noted only one issue requiring corrective action which was unrelated to the issues identified above. The FTE review also notes that most students reviewed had incorrect percent of times reported because of an incorrect formula provided to the Academy by their Area Coordinator. No other significant issues were identified or reported.

Newark Digital Academy (Licking County)
Fiscal Year 2016

On March 28, 2017, AOS visited Newark Digital Academy. AOS met with the Director of the Academy. The purpose of this meeting was to obtain firsthand knowledge and observation of the Academy's education systems and their ability to capture and report students' duration times as required by ODE for FTE reporting. This included observing Academy staff logging onto Academy systems, running durational reports, working with student logs, and a walking through the Academy's physical facilities.

The Academy is an e-school that uses a learning management system called Aurora, provided by ACE Digital Academy. Aurora is not able to directly interface with the Academy's Student Information System, which is used to report student data to the state's Education Management Information System to determine FTE funding. Instead, the Academy manually tracks and maintains student durational data via a spreadsheet, including manual entry of non-computer-based student submitted logs. Also, according to Academy staff, updating this manual spreadsheet for durational data takes one employee a minimum of three days, regardless of whether it is being updated for one week, a quarter, or a year. The Academy updates its durational tracking spreadsheet quarterly. The reason for this manual approach is because the student information system is unable to properly account for adjustments related to percentage of time for each student.

The Aurora system tracks duration via computer clicks. For example, when a student clicks within the system, a duration timer begins recording that student's time. The system does not register that the student is still within the system unless the student clicks again. A student must log off of the system for the system to record a final time and thus be able to report the duration of that learning activity. For instance, if a student were to click within the system, perform work for three hours, but fail to log out manually, the system does not capture the three hours spent by the student after their last click. The Academy believes this system limitation means that a significant amount of student learning time has not been recorded.

Auditors were able to review some sample reports from the school's system. We immediately noted duplication of times being recorded. We also learned that Aurora reports based on Pacific Time Zone rather than Eastern Time. The reports we observed showed aggregate time being reported, though it is possible to generate more detailed reports with start and stop times. Based on our observations, we believe the system has a high risk of reporting duplicated and overlapping durations of time, though we did not attempt to determine the overall scope of this issue.

The Aurora learning management system is unable to capture time spent by the student on certain websites, which could include sites using videos for learning. This time must be logged manually by the students. Teachers are required to track down students who do not submit their logs on time, as well as attempt to verify the accuracy and completeness of logs submitted. The Director noted that teachers are aware of the situation involving adjusting and verifying logs, and of the threat to their teaching licenses if false information is reported. Because of this, teachers do not increase log times and often reduce durations to more appropriately show the time a student spent on a learning opportunity. The Director feels the time and effort involved has substantially affected the teachers' main objective of educating students. The Academy has had to spend substantial resources, time and money to attempt to comply with ODE's requirements. The Director also feels that duration times are being under-reported because of the conservative approach taken, resulting in less funding than the school deserves.

The Academy also uses several other applications and software to record student time. In addition to Aurora, which contains most student courses, the Academy also uses:

- Odysseyware, which contains math, science and career courses.
- ActivTrak, which tracks a student's computer activity in aggregate, similar to a spyware program.
- Aleks, which contains math courses.

- Inside App, which students use to sign-in when they physically visit the Academy's facility for tutoring, testing, conferences, and other learning opportunities.
- Verizon, which approximately 40 percent of NDA students use for mobile connectivity.
- Ohio Means Jobs, which students are required to use for career-exploration purposes.
- EDU Typing, which provides typing lessons.
- Rosetta Stone, which provides foreign language learning.
- Acellus, which provides video-based instruction.

The Director noted the difficulty in receiving or using durational data from all of these programs. Many of the vendors either are unable to provide meaningful data or purge data after certain regular intervals. ActivTrak reports are prone to duplication errors. The Director also noted that Ohio Means Jobs, even though mandated for use, does not provide any documentation that can be used to document duration. Inside App relies on students signing in and out each time they visit the facility, and using their correct names, which apparently not all do. He believes all of these limitations and issues have substantially hindered the Academy's funding.

For students in kindergarten through sixth grade, the Academy uses the Little Lincoln online curriculum. Our understanding of this curriculum is that it involves the use of books and study guides to educate younger students. Younger students tend to spend more of their learning time off of the computer, with online learning increasing with age. Because of this, the Director noted that it is likely the Academy is not able to fully document the full amount of time spent learning by these younger students. We were able to review reports generated from Little Lincoln. Reports show the date on which a student spent time learning, but defaults to show their start time as noon of that day. Little Lincoln can provide aggregated and disaggregated durational reports, but since accurate start and end times are impossible to determine, they can't be used since an auditor can't determine whether these duplicated or overlapped with other times recorded for that student.

Reviews/Audits

The Academy received a FTE desk review by ODE on June 3, 2015, that found all documentation to be in order. While the Academy did not have systems in place to accurately record durational time for fiscal year 2016, no FTE review took place. AOS obtained work papers from Rea & Associates, an independent public accountant contracted by AOS to perform the Academy's fiscal year 2016 financial audit.

During the IPA staff's compliance testing, they noted substantial variances related to reported FTE's and the IPA's recalculated FTE's based on durational data maintained by the Academy. Of a total 41.67 FTE's reported by the Academy within the IPA's testing sample, only 28.92 FTE's could be substantiated by durational support. This resulted in the IPA issuing a Material Noncompliance in the Academy's fiscal year 2016 audit report.

In response to the IPA's findings, the Director provided a lengthy response explaining his position on the matter. The Director strongly feels the Academy was misled by the 2015 FTE desk review which stated they were in compliance. Due to the 2015 review and a lack of communication from ODE, the Director assumed FTE's were to be calculated and reported in the same manner for fiscal year 2016.

In conclusion, AOS observed that the Academy does not properly adjust student FTE based on durational participation in learning activities. We observed that while the Academy is able to produce durational reports, the various systems and their limitations make it difficult for the Academy to obtain students' true FTEs.

Fiscal Year 2017

AOS visited Newark Digital Academy on October 16, 2017, to review what changes the Academy put into effect for fiscal year 2017 as compared to fiscal year 2016. Newark did not have an FTE review performed by ODE for fiscal year 2016 when we originally visited, however they did have a review performed in fiscal year 2017. From the Academy's FTE review letter from ODE, the Academy was funded for 384.65 FTEs for June 2017 and mentions no issues regarding the Academy's process for tracking and reporting duration. The Academy's Final #1 FTE funding was adjusted down to 308.15 which is about a 20 percent decrease.

The Director told AOS in an e-mail that the Academy was 'intimidated' by ODE into adjusting their FTE as noted above. The Academy reported FTE on the basis of enrollment, not duration, for their June 2017 payment. It is the Director's belief that according to ODE and Judge French of Franklin County that attendance and funding are separate and the Academy should be funded for the entire period that a student was enrolled. Even after making the adjustment to FTE, the Director further believes that the Academy should be funded for a student's hours of duration regardless of their enrollment period up to a maximum of 1.0 FTE. For example, if a student is enrolled half of the school year at the Academy, regardless of how many durational hours that student participates, the maximum FTE the Academy may receive is 0.50. The Director believes that if that same half-year student had 920 documented hours of duration, the Academy should receive 1.0 FTE for that student. The Director's thoughts on how FTE works in that kind of situation does not agree with the stance of AOS or ODE.

The Director also believes that ODE had taken the approach of telling the Academy to adjust their FTE outside of the FTE review letter, which would deny the Academy the ability to formally appeal its FTE review results. If the Academy adjusted its own FTE without ODE having to initiate a clawback scenario, the Academy would have no basis for appeal. The Director stated that 32 percent of the Academy's students went above and beyond the number of hours for which they were eligible to receive funding.

AOS did not do an in-depth review of the Academy's LMS or different curriculum vendors for fiscal year 2017 as we noted it was essentially the same makeup as fiscal year 2016. We did request durational support which included information obtained through eight different sources. Newark allows for up to half a student's time to be supported by outside employment hours. The Academy also began using online logs for students to report time, which is done through Google Docs. These logs are compiled into a spreadsheet and the Director meets with teachers each quarter to review and approve the spreadsheet/logs. Teachers will only adjust student reported time down if the teacher has prior knowledge of the student's proficiency in reading, or other applicable circumstances.

One vendor of interest that the Academy used extensively in fiscal year 2017, and that has become more popular amongst community schools recently, is ActivTrak (AT). AT is software that the Academy installs on the school owned computer. The Academy utilizes AT to capture durational time that is not captured by other curriculum vendors, such as time spent watching educational videos online, writing documents, spreadsheets or PowerPoints, as well as any other educational activities that a student may engage in that is not normally tracked by any systems.

AOS did a walkthrough with the Academy to see how it is able to configure and utilize AT. The Academy is able to differentiate applications, programs, and websites as either productive or unproductive. Items which have not been defined as either productive or unproductive are reported as undefined or other until a designation is made for that specific site or program. For instance, the Academy will designate Microsoft Office products and other educational software or websites as productive, while designating a websites that are either inappropriate or entertainment only as unproductive.

YouTube was listed as productive. Due to the vast number of videos available on YouTube, the Academy cannot differentiate individual YouTube URLs as productive or unproductive and just designates all of YouTube as productive. The Academy utilizes a web filter from its Information Technology Center (ITC), LACA, to filter YouTube content. Students on a school provided computer are prevented from watching videos that are flagged as offensive, vulgar, or otherwise inappropriate during school. The Director also noted that ODE requested a list of all items the Academy had designated productive.

AOS has also been told at another e-school that ODE requested an AT contact in order to learn more. While the AT website indicates that specific URLs can be tracked and recorded, each video on YouTube has a different URL making it cumbersome to determine which are productive and which are unproductive.

The Academy only reports AT time that is considered productive. Unproductive time recorded by the program is not reported, but is still used by the Academy for disciplinary purposes. The Academy is able to create reports that show the top websites and programs by usage.

The Director stated that the Academy essentially had two sets of data per student, assuming the student was on a school-issued computer. The Academy had AT data and non-AT data, such as from the LMS and curriculum vendors. If the durational hours from AT for a student exceeded the non-AT durational hours, the Academy would report the AT hours for funding and vice versa.

It is also worth noting that the Academy is unable to adjust idle time within AT. AT begins recording idle time after just two minutes, which is a hard-coded feature that cannot be adjusted by administrators. The Academy does not discard idle time for funding reporting, just time that is designated unproductive. The Director's rationale for this was that a student may be reading, watching, writing, or doing other productive things for more than a few minutes at any given time.

AOS received durational support for students and selected two students to review in detail (note that only a couple of students were selected for detail review since the Academy is audited by an IPA and not the AOS). During our review we noted several issues. Some issues were the result of manual error and Excel formula error. For instance, one Excel sheet used the "concatenate" function to insert a decimal between 2:15 (hr:min), which turned 2:15 into 2.15 hours. 2.15 hours is 0.10 hours less than 2:15 hours. In such instances, the Academy actually under reported FTEs. We noted other manual errors where 49 minutes for a student was keyed as 49 hours, resulting in over reporting of FTE. We noted instances of overlap, idle time, and were unable to properly determine overlap potential between various durational sources. Some sources reported aggregated times by day, month, etc. and another source would detail beginning and end times. It is not possible to analyze these situations for overlapped or duplicated time.

No such issues were identified during the Academy's 2017 FTE review performed by ODE.

Newark Digital Academy closed effective at the end of fiscal year 2018. The Academy is to be absorbed into the Newark City School District as an innovative program.

<u>Ohio Connections Academy (Cuyahoga County)</u>
Fiscal Year 2016

On March 29, 2017, AOS visited the Ohio Connections Academy and met with the Director, Superintendent and other Academy staff. The purpose was to obtain firsthand knowledge of the Academy's education systems and their ability to capture and report the time students spend on learning activities as required by ODE for FTE reporting. This walkthrough included observing Academy staff logging onto their systems, running duration reports, student logs, and student/parent portals.

Ohio Connections Academy is an e-school with a learning management system called Connexus, which is owned and operated by Pearson Education, the Academy's management company. The system was designed to interface directly with the Academy's student information system, which is used to report student data and information to the state's Education Management Information System.

According to the Academy, Connexus was developed to document the time students spend in learning activities, as required for FTE reporting by ODE. Academy staff noted that this required a significant investment of money, time and effort. The system incorporates the Academy's core curriculums and tracks the majority of a student's online time.

The Academy also includes a manual reporting option for students or parents to submit their non-computer learning time. These logs are generated from a drop-down list that includes any items not already tracked by Connexus, such as field trips, reading, watching YouTube videos and other non-computer learning activities. The student or parent then adds the number of minutes spent on these activities for any given date. We noted that the time reported is an aggregated value and does not include beginning and ending times. According to the fiscal year 2017 FTE manual provided by ODE, any documentation of non-classroom, non-computer based learning opportunities must include "dates and times of actual learning opportunities." The lack of starting and ending times would make it impossible for auditors to determine if the system was duplicating learning duration times. It has become the responsibility of teachers to review student-submitted logs and attempt to verify them as accurate. Teachers can reduce the amount of time submitted by a student, but Academy staff said teachers do not increase reported time.

Academy staff said that the time teachers spend tracking and reviewing student learning time reduces the time they spend on educating students. They also noted that sometimes there is conflict with students and parents because they don't understand the need to track learning time or because a student's time has been reduced by a teacher.

Staff also said that because teachers can't increase a student's reported learning time and because reporting false duration times could put a teacher's license in jeopardy, non-computer time is likely being under-reported. They noted that students often enter their non-computer time in hours rather than minutes, meaning that a student might enter "2" rather than "120." Teachers are reluctant to increase these reported times, even when it is likely they are inaccurate. An additional concern was that many younger students will print their assignments or tests to study and complete offline, even though they must still be submitted electronically. This results in the student finishing the assignment or test offline, logging on to the system to submit, in which they quickly select answers they have already determined offline, ultimately causing the system to capture only a few minutes of durational time that in reality took the student much longer to complete.

We were able to review some of the reporting capabilities within Connexus. Reports can be generated that display a student's aggregated duration times within the learning management system, as well as further detailed reports that include assignments and tests submitted, including the time spent on such tasks. These detailed reports are what teachers must seek out in order to substantiate and verify a student's reports of non-computer learning activities. Staff noted that this is not always quick or easy. Due to the limited nature of our review, we observed information that would suggest duplication/overlapping of durational time, however, we did not verify whether these amounts were being aggregated into total time reported for FTE purposes. It is our opinion that duplication is likely to be an issue within the system, particularly since manual logs are being reported as aggregated durational time only.

Younger students use books to perform much of their studies. As we have noted in many similar schools, younger students tend to have more non-computer based time, with the amount of work and time spent on the computer increasing as they age and gain increased ability and comfort using computers and the internet. The Academy uses Pearson products to provide the curriculum for K-6 students. Because younger students perform much of their work offline, and are not always accurate or prudent in reporting this time, Academy staff believes this hurts the school's funding.

Academy staff also said that the tracking of online learning activity, as well as offline manual logs, does not fairly represent the actual engagement that occurs between the Academy, teachers, staff and their students. For instance, it was noted that the Academy's truancy officer is very active, but this time and effort is not directly covered in the e-school funding method.

In conclusion, while the Academy did not have all the systems in place during fiscal year 2016 to capture all durational data, AOS observations indicate that the Academy can reasonably capture most durational data going forward.

However, certain limitations of systems or possible duplications of time may occur. Because of the limited nature of our review, we cannot conclusively determine the Academy's future compliance abilities.

2016 Audit/Review

Ohio Connections did not receive an FTE review from ODE during 2016. The Academy's 2016 financial audit was performed by an IPA, not the AOS. The audit had no reportable findings. However, the Academy's Management Letter stated that the Academy granted students six hours of daily attendance regardless of actual log in and log out times based on whether the student had substantially completed that day's activities within the system.

Management's response to the Management Letter comment states that the Academy had taken steps subsequent to year end in order to track actual times in order to accurately report duration. Auditors asked for clarification about this comment in their 2017 follow up and management claimed the comment was not accurate. Auditors asked whether the Academy reported student FTE based on enrollment or duration and was told the Academy reported duration for both 2016 and 2017.

Fiscal Year 2017 Follow Up

On October 26, 2017, AOS met with the Superintendent, the Director and others to observe and discuss changes implemented in fiscal year 2017 in contrast with fiscal year 2016.

The Academy received an fiscal year 2017 FTE review from ODE in June of 2017. As a result of the review, no issues were identified by ODE, as stated in its final letter, dated August 21, 2017. ODE selected 362 students and 89 special education students for review resulting in no issues. It is also stated that the Academy was funded for 3,368.26 FTEs on its June School Foundation Payment Report (SFPR). According to the Academy's Final #1 SFPR, the school was funded for 3,269 FTEs, a reduction of about 99 FTEs, or about 3 percent. This would imply that the Academy was able to document and report 97 percent of all durational hours required of each student for fiscal year 2017.

For fiscal year 2017, the Academy still uses the Connexus LMS which is proprietary to its management company, Pearson. The LMS interfaces directly to the proprietary SIS, which is then manually put into PowerSchool to be reported to ODE. This was put into place in August of 2016.

AOS observed the LMS and notes that activity dates showed aggregated duration allowing for multiple activities per date. This included non-classroom time that can be manually added and approved by teachers. It was noted that teachers approved times on a weekly basis.

Time corrections in the system used to indicate a total time and a reduced time. For example if a time was reduced from 10 hours to four hours for a particular date, the report would show 10 hours given then a separate line for negative six hours. Now the report would just show four hours as a single line. These time corrections are automatically sent to parents.

It was also noted that the offline time reported does not indicate beginning and ending times, just total times (as opposed to the method indicated by the FTE Manual).

The Academy indicated that it was told by ODE that it could not receive full funding for children with an IEP if full duration was not tracked.

Auditors requested the Academy's fiscal year 2017 FTE information and selected three students for additional documentation review. Auditors noted one student with over 300 hours of physical education hours documented and no online hours documented. Another student had 80 percent of duration as offline activities. Auditors were unable to accurately reconcile the documented durational hours to the FTE spreadsheets provided by the Academy.

ODE's FTE review made no mention of any items identified by auditors.

The Academy's fiscal year 2017 financial audit performed by an IPA, reported no issues and did not reissue the previous year's Management Letter comment.

Ohio Virtual Academy (Lucas County)
Fiscal Year 2016

On April 3, 2017, AOS visited the Ohio Virtual Academy. AOS met with the Operations Manager, a sponsor representative, the Superintendent, and the EMIS Coordinator. The purpose was to obtain firsthand knowledge and observation of the Academy's education systems and their ability to capture and report students' time spent on learning activities. AOS auditors performed a detailed walkthrough of how the Academy obtains information for its FTE reporting purposes. This included observing Academy staff logging onto their systems, running durational reports, student logs, and other systems-related information.

Ohio Virtual Academy is an e-school that uses a learning management system that is proprietary to K-12, their management company. The LMS is able to interface with PowerSchool, the Student Information System (SIS), which is used to report student data to the state. The Academy is able to produce reports that detail a student's time spent in learning activities in order to determine a student's FTE at the end of the year. The Academy reports its final FTE based on the number of documented hours for each student divided by the total number of learning opportunities offered to that student. For example, if a student was enrolled the entire year, he had access to 920 hours of learning opportunities. If the student only participated in 460 hours, the Academy would calculate his percent of time as 50 percent and report an FTE of 0.50 to the state for funding purposes.

Learning opportunities comprise online lesson plans from D2L, live online instruction via Elluminate, and offline learning activities by the student. D2L and Elluminate time is captured within the LMS. Offline time is submitted by the student or parent, then verified by teachers. The Academy runs periodic reports that detail the time each student spent within the LMS. These reports break down according to course, login date, total time, lesson title, activity start time, activity end time and source (D2L or Elluminate). Each teacher receives a report for his or her students, the EMIS coordinator receives reports regarding new enrollments and withdrawals, and the Superintendent receives reports on all students. Reports also can show enrollment dates, school start dates, funding dates, required funding hours for the school year, required funding hours as of report date, total amount of hours logged to date, and variances. A useful feature is the variance shown for the difference between the total number of funding hours a student should have as of the report date versus the total number of hours that student has logged. Variances greater than a certain threshold are color-coded so that the report user can identify students who are behind. This feature is also useful for identifying students approaching truancy.

The LMS is able to identify overlapping times when a student was active in D2L and also active within Elluminate. These times are identified as being duplicative and are automatically reduced by the LMS.

Students or their parents enter manual logs detailing time spent in offline learning activities each day. The LMS takes the total time submitted by the student and subtracts the amount of time captured within the LMS for that date, which calculates the theoretical amount of time the student spent participating in non-computer based learning opportunities. The teacher then adds together the student's total online time and offline time for that day to finalize duration for that day. The Academy calculates offline time in this manner because students and parents do not reliably track offline learning times in detailed form.

A teacher verifies time submitted by the student. When verifying student submitted times, the teacher compares these times to the work submitted by the student. If time claimed by the student doesn't appear to support the student's work, it is reduced to more accurately reflect time spent by the student. Academy staff noted that teachers do not increase the time submitted by students.

The LMS also does not allow for any time over 10 hours in a day to be counted. At the end of the school year, or upon a student's withdrawal date, the Academy's student information system is updated to reflect that student's FTE percentage.

The Academy bases a student's enrollment date for funding based on a student's first login. A student's last date for funding is based on the last login.

While the Academy has used the same LMS for several years, it had to be updated during fiscal year 2016 to be able to accurately capture and report time.

The LMS uses Learning Tools Interoperability (LTI) technology. This is a technology standard that allows for interfacing between any programs that use LTI and allows for a single login by the student. Students can only log into the LMS to access coursework, with any vendors being used by the Academy being integrated into the LMS. Therefore the Academy is not reliant upon a vendor capturing or maintaining durational data. The Academy also only contracts with vendors that are LTI compliant or can be integrated into the LMS. The Academy does not use vendors that cannot provide durational data. While this is prudent for accurate reporting purposes, it sometimes may exclude vendors that would be educationally superior for a student.

In conclusion, the Academy has a strong system in place for capturing and reporting student durational information going forward. However, because of the limited nature of our review, we cannot conclusively determine the Academy's future compliance abilities.

Fiscal Year 2017 Follow Up

On November 2, 2017, AOS visited the Ohio Virtual Academy to discuss and observe any changes made by the Academy from fiscal year 2016 to fiscal year 2017, as well as anything going forward for fiscal year 2018. In attendance for the academy was the Superintendent, the Operations Manager, formerly the EMIS Coordinator, as well as by phone a K12 representative.

The Academy received an FTE review with a final letter dated August 25, 2017 for fiscal year 2017. The Academy did not receive an FTE review from ODE for fiscal year 2016, so this review was of interest to AOS. As documented in the letter, ODE selected 713 students and 172 special education students for review. ODE identified no issues.

For the May 2017 School Foundation Payment Report (SFPR), per the letter, the Academy was funded for 8,347.75 FTEs. The Final #1 SFPR which is created after the fiscal year's end, saw the Academy funded for 8,136.41 FTEs, a reduction of 213.72 FTEs, or a decrease of 2.56 percent. This reduction would suggest that the Academy was able to document and report 97.44 percent of the required hours of duration for every student enrolled during fiscal year 2017.

According to the Academy, students do not receive attendance credit unless they complete coursework within K12, Study Island, USA test prep, or other approved educational programs, or they attend online sessions within Class Connect (an online virtual classroom). Students must be able to show proof of academic progress and OHVA does not permit the sudden submission of excessive attendance hours.

OHVA determines offline work hours by having students submit each day the total amount of time the student spent working that day and subtracting out the hours captured by the LMS. For example, if a student submits that he spent 6 hours on Monday and the system is able to track 3 hours of time, then the Academy documents 3 hours of non-computer time. According to the Superintendent, ODE was happy with this method of documentation despite it not matching the requirements of the FTE Manual. Furthermore, the online learning systems indicate a default time of how long individual course sections should take. For instance, a math section would indicate that it should take a student 1 hour to complete. When the student submits his time, he will enter the actual amount of time it took him, but will be cognizant of how many hours it should have taken. Parents are able to log in to the system and review the amount of hours their student has submitted as well as how many hours are expected of them to get back on track, if they are behind.

The Superintendent had an OHVA teacher demonstrate how a student submits work. Students are greeted by a home landing page for each teacher which will display a class plan, announcements and other information. A schedule is shown that tells students how much work is expected of them for that day. Here students are also able to review any past recordings of lesson instructions from teachers.

The teacher also showed the view of a student in the LMS. Teachers can observe all assignments submitted by students (including any scanned work papers), leave comments, enter grades, etc. This is the same way a teacher would know whether to approve or disapprove any time a student has submitted for particular days. It was explained that if a student submitted 10 hours of work on a particular Tuesday, the teacher can look at the preceding Monday, that Tuesday, and the following Wednesday to determine if work was submitted, tests, taken, etc., before approving time.

The above presentation was also provided to ODE during its FTE review. It was stated that the first day of the review, ODE reviewed OHVA's LMS and student assignments, but did not attempt to tie offline times or assignments back to the system reported times.

ODE also informed the Academy that OHVA could use related services time, which they had not previously been utilizing for FTE reporting. ODE allowed OHVA to add this time in.

Fiscal Year 2018 Changes

One major change for fiscal year 2018 is that OHVA is now adjusting for duration during its reporting of FTEs on a quarterly basis instead of waiting until year end as was done in previous years.

New internal status reports are generated Mondays and Thursdays instead of just Mondays. These now show last activity in different learning programs, last attendance entered by a learning coach/teacher, and last overall activity.

Most other changes mentioned were not very significant or not relevant to AOS' review.

AOS did not receive detailed student durational data in order to perform detailed analysis for inclusion in this report.

<u>Provost Academy Ohio (Franklin County)</u>
Fiscal Year 2016

Each student is required to participate in 300 minutes of learning opportunities each day. According to representatives of Provost, they were informed by ODE that the school is only allowed to credit coursework completed during hours that teachers are available. For Provost these hours are 8 a.m. to 8 p.m. Monday through Friday. Any work completed outside of this is counted for progress on the course, but can't be counted towards FTE requirements. Any student who completes fewer than 300 minutes a day is considered absent. The schools learning management system, eSchoolware, is only able to credit time actually worked inside a course towards attendance. However, the school is aware that many learning opportunities, such as writing a paper, studying, or watching an educational video happen outside of the eSchoolware portal. To credit students for time completing such offline activities, the school requires each student to maintain work logs. The LMS has a function to automatically log out a student after 15 minutes of inactivity.

The LMS is unable to prevent a student from logging into the system multiple times; thus the school has implemented procedures to detect duplications. The school compares the minutes to the student's work completed in assignments. If the quality of completed assignments doesn't appear to meet the time documented offline or time captured by the LMS, the teacher will adjust the student's time

For the first half of the 2016 school year, Provost used paper work logs to record the time spent on learning activities offline. These logs were required to be completed by the student and authorized by the student and parent, and submitted to the teacher or intervention specialist. During our discussion with school representatives, they indicated it was difficult for the school to collect the hard-copy logs. We noted that the manual logs didn't require the students to record starting and ending times.

Beginning in December of 2016, the school began using electronic student work logs. These logs are captured as part of the eSchoolware application. However, this system did not require the students to show the starting and ending times the student spent in each activity. Students are not allowed to begin a day's work without having completed the prior day's logs. While there are no parental signatures on these logs, the students are required to check a box affirming that all information is true and accurate for each daily log. For fiscal year 2017, the electronic work logs were upgraded to track learning opportunities more specifically by type of activity (studying, reviewing a PowerPoint presentation, writing a paper, etc.). Electronic logs cannot be rejected, but the teacher can edit the logs, including reducing the reported time if they determine the information provided to be false.

The teachers or intervention specialists review the coursework completed and determine if the hours reported on the log seemed reliable. If so, they authorize the log and add the hours to the student's attendance. For 2017, there is a dedicated Title I specialist who reviews and approves all student work logs. The intervention specialist completes a detailed review of all logs to determine their reliability. For instance, if a student reports that he spent 1 hour studying for a course on Tuesday, but shows no exams or coursework for that subject in the near future, the time would not be counted. Logs are required to be completed even for absent days (noted with 0 minutes in each subject).

Students are expected to attend every day of class. If more than 3 straight days of absences are recorded the student is required to obtain a doctor's note. The intervention specialist tracks absent students and contacts the family after one day of absence. After that, the school attempts contact the student and the student's family at five, 10, 15 and 20 days by phone, email and postal correspondence. Evidence of all correspondence is maintained in eSchoolware. On the 21st day, the student is automatically withdrawn from Provost. If after automatic withdrawal the school receives record of student attendance at another school district, the school backdates the student's withdrawal to the date of attendance at the new school.

Some Provost students have opted to complete college level coursework through the University of Cincinnati. For these students there is a certification of time spent in university classes that must be completed by the university, student and parent.

After the walkthrough discussion, representatives of the school provided a demonstration of the eSchoolware application. AOS staff reviewed a student's pending attendance log from January 19, 2017. In this log, the student had not met the 300-minute daily requirement. We then reviewed the student's electronic log, which brought the total minutes to 309. The school's representative demonstrated the steps the intervention specialist would complete to verify the log's accuracy (comparing the minutes to the actual progress made). They also demonstrated how a log reviewer would adjust the time reported. We also were able to view the student's overall progress in each of the assigned courses. There was an additional tab to show the student's attendance records and any notes made to the students account.

The school received an FTE review by ODE for fiscal year 2015. During this review, ODE found that the School's procedures and policies that were in place for fiscal year 2015 did not capture the duration of time a student spent on computer and non-computer learning opportunities. It was determined that the school was overfunded by $799,492 and was required to pay this money back to ODE in 19 monthly installments. As noted, in the 2015 final FTE review letter, dated September 14, 2015, the school was required to have another FTE review completed for fiscal year 2016.

During our review of Provost's policies and procedures, we noted that they included many things above and beyond what Ohio Law requires to capture duration of time to support computer and non-computer time. For instance, the school's policy indicated that the time a student spent on learning opportunities during the weekend and holidays did not count toward FTE. Furthermore, the school was requiring the students to complete 300 minutes of learning opportunities each day before counting any time toward their FTE.

Upon our initial testing of 30 student files, we realized that while the school was capturing computer and non-computer learning opportunities, the FTE being reported for each student was based on the number of days the student was enrolled. If a student was enrolled for the entire school year, the school reported an FTE of one for the student. Similarly, if a student was enrolled for a portion of the year, the student's FTE was adjusted accordingly. The school did not adjust FTE for actual learning duration for each student, which could result in the school over reporting FTEs.

After learning that the school was reporting FTE based on the enrollment period, we selected four students to determine if the time of duration captured by the computer system and non-computer logs were reasonable when compared to the FTE reported to ODE. As part of our selection, we considered all time which the school's procedures captured. If the student participated in learning opportunities during the weekend and holidays, those minutes would be applicable as part of the student's FTE. We also did not consider whether or not the student completed 300 minutes of learning opportunities each day, as long as there was evidence of participation in learning opportunities.

However, the school's procedures to track non-computer time did not require students to log the start and end times related to the non-computer learning opportunities, meaning we were unable to determine if any of this time was duplicated within the time captured by the school's computer system. Furthermore, because of the significance of non-computer time, we decided we would be unable to accurately recalculate any of the selected students' FTEs. The lack of substantiated non-computer learning opportunities combined with the school's practice of reporting FTE based on enrollment period, leads to the conclusion that the school is likely to be over-reporting FTEs.

Further, upon review of the school's contract with the Ohio Council of Community Schools, the school's sponsor, we noted that the contract and attachments extensively define the educational curriculum used by the school. The contract and attachments, however, do not specify how the school should document student participation in compliance with state law and, therefore, how the sponsor could effectively monitor such compliance. The inclusion of such documentation would facilitate the school's compliance with requirements and standards established by law.

The lack of start time and end time makes it impossible for the auditors to determine if the time documented in the manual/electronic logs for non-computer time is also time that was captured by the LMS. Also, there is no true basis for an auditor or reviewer to determine if adjustments made by teachers are adequate. We did not review these adjustments, but according to the school, the teacher would only reduce the reported time students spent on learning activities, not increase it. While this reduces the risk of overpayment, for accuracy the auditors or reviewer would have to be able to determine that the time was reduced a reasonable amount. This would require an auditor to make a judgment call by reviewing the quality of work. While it is easy for a teacher to determine if the quality of work is adequate, an auditor or reviewer would not have the knowledge or skills to do so.

The Academy received an FTE review from ODE for fiscal year 2016 in response to the poor review received in 2015. The 2015 review noted that original source documentation was in order, the Academy had followed and implemented previous recommendations, and that information entered into EMIS was to be accepted without issue.

The Academy received a Noncompliance Material Weakness in its fiscal year 2016 financial audit from AOS based on issues identified above.

Fiscal Year 2017

Provost Academy did not make significant changes for fiscal year 2017. AOS met with the Superintendent to perform a walkthrough similar to the previous year. Auditors noted that the system and process, along with its limitations, were consistent between years. The major difference that the Superintendent stated was implemented was that the Academy began reporting partial attendance days for funding purposes, which in prior years the Academy only reported time for full days completed by students. Partial time was granted for students who performed work any time on any day.

As noted previously, the Academy did not do this in prior years because it was initially informed by the ODE Area Coordinator that the school could only grant students credit for time a teacher was available to the students, which would not have included weekends, evenings, and holidays.

Audit/Review Results

The Academy received another FTE review from ODE for fiscal year 2017. This FTE review did not note any of the weaknesses found by AOS. The two issues noted by ODE included mismatched enrollment and withdrawal dates in EMIS which were corrected by the Academy and required no further corrective action.

The Academy received a repeat finding in its fiscal year 2017 financial audit from AOS based on auditors determining that the same Noncompliance Material Weakness present in 2016 remained.

The Academy closed effective as of the end of fiscal year 2017 due to the ongoing financial hardships.

Quaker Digital Academy (Tuscarawas County)
Fiscal Year 2016

Quaker Digital Academy is an e-school that was audited by the AOS office for fiscal year 2016. During the audit, auditors noted that it primarily uses a curriculum called Calvert. This is a curriculum designed for grades K-8 and is primarily book based. When a student enrolls at the Academy, he or she receives lesson manuals, textbooks, workbooks, test manuals and answer keys for daily work. The online portion of the Academy's curriculum is through supplemental learning opportunities such as Brain Pop, Brain Pop Jr., and Discovery Education.

The Academy also uses several other curriculum providers such as Edmentum, Lincoln Learning Solutions, and Study Island, among others. Students are required to log into the Academy's Student Website in order to access courses and education resources. Per the Academy's director, this is a single sign-on system that was developed exclusively for the Academy. However, the system does not interface with other systems, requiring the Academy to manually combine data into a spreadsheet, which is very labor intensive. It is also very difficult to determine whether data obtained by the program overlaps with other sources of durational data, which might result in duplication of time.

The Director also noted that the school's attempt to track durational data has been an expensive endeavor. The Academy spent approximately $30,000 for software, $25,000 on two part-time hires to catalog and organize data, as well as requiring certain existing staff members and teachers to take on extra responsibility of tracking time. They expect these burdens will increase in the future.

Students also access sources that cannot be tracked within the Academy's main system, as well as performing tasks such as note taking and report writing. Per the director, this activity was not tracked during fiscal year 2016, however, for fiscal year 2017 the Academy has begun implementing ActivTrak, which log keystrokes on the computer. This would allow the Academy to account for all of a student's time on the computer. The AOS has encountered this program in other schools and knows that the program produces a substantial amount of data and it can be cumbersome to separate the academic activity from the personal activity.

The curriculum consists of daily lessons with tests included at regular intervals approximately every 20 lessons. Students perform this work on their own and at their own pace. Students are granted the whole year to complete their courses. Students do not submit their daily work, except for art compositions. Tests are submitted as they are finished by students.

During fiscal year 2016, the Academy used Calvert Advisory Teaching Service to provide third-party test grading. Students or their parents send the tests to Calvert, where they are assigned an advisory teacher for the year. Tests are graded at Calvert then returned to the student along with comments over the work. The Academy receives a copy of everything that is sent to the student, and also has access to a gradebook for each student maintained by Calvert. According to the director, the school no longer will have Calvert grade tests in fiscal year 2017. Instead, the Academy's own teachers will do this.

The Academy was scheduled for an FTE review during fiscal year 2016 from ODE. In a letter dated September 30, 2016, ODE notes that of the 666.31 FTE reported by the Academy, ODE's final determination was an FTE of zero because the Academy did not track student time spent participating in online learning opportunities. Also in the letter, ODE states that its Office of Budget and School Funding requested additional information from the Academy on August 26, 2016, and received no records. AOS learned from the Academy director that on the advice of the school's attorney, no records were sent to ODE while the school attempted to gather student data, including data from vendors, a process that was taking several months.

The AOS issued a noncompliance citation regarding the Academy's inability to properly support reported FTEs with durational documentation.

Fiscal Year 2017

During fiscal year 2017, students attending Quaker Digital Academy participated in online learning opportunities via Odysseyware, Edmentum, or Rosetta Stone. Each of these three online systems tracks the number of minutes a student spends within. Students are also required to log into the Academy's system when performing any online work, which also separately tracks duration. The Academy's process for reporting total online time was to add the individual durations tracked by Odysseyware, Edmentum and Rosetta Stone and compare that sum with the total amount of time tracked by the Academy's system. The Academy selected the greater of the online totals calculated.

The Academy also separately tracked offline participation in learning opportunities. These learning opportunities existed of writing assignments, special education, state testing, tutoring, and others. The Academy added all the offline sources to calculate a total offline durational component for each student.

Students may document offline time in a few different manners. First, a student may submit a "QDA Attendance Calendar" each month. This calendar lists the student's name and the number of hours spent each day working on offline learning. The calendar is to be signed by the student's parent. However, our testing showed that these paper calendars were not certified by an employee of the Academy.

The second method a student may utilize for submitting offline learning opportunities is to complete an "Extended Offline Learning Opportunities" form. This form is signed electronically via Google Docs. Students must document the activity start and end times, dates, and what activities the student worked on. This method allows for the Academy to produce a summarizing spreadsheet for each student.

During our testing we noted that we were unable to determine duplication of time between certain sources. Rosetta Stone reports only showed the curriculum worked on, but does not show individual log in and log out times. Students who submitted paper calendars also did not document individual start and end times. Therefore, it would be impossible to determine duplication on any date which a student submitted a paper calendar and also logged into Rosetta Stone. Auditors also noted that the Academy's attendance system did not show beginning and end times either. While the attendance system cannot overlap other online times, due to only one set of times being accepted, it cannot be checked for duplication with offline times.

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We noted for two students that time was submitted and reported by the Academy in which the students worked for more than 10 hours in a day.

For one student we identified time that was duplicated between online and offline reports for an overstated 15 hours and 48 minutes.

Reviews/Results

AOS included a comment related to the findings above in the Academy's fiscal year 2017 Management Letter.

The Academy received a follow up FTE review from ODE in 2017 as well. ODE's review noted an issue with three of fifty students reviewed that needed their percent of times corrected due to having multiple entries (a student may often have multiple entries if that student withdrawals and re-enrolls at a school in the same school year). These issues were corrected and required no further action. However, the review did not note any issues related to the findings AOS made during its audit of the Academy.

TRECA Digital Academy (Marion County)
Fiscal Year 2016

TRECA Digital Academy was audited by the AOS office for fiscal year 2016. During our audit of the Academy, we noted that it uses many third-party vendors to provide a curriculum to its students, such as PLATO, Compass and others. The Academy uses a learning management system called Brightspace to manage its curriculum and data. Our office met with staff of the Academy in order to gain a deeper knowledge of their system and practices for collecting and reporting FTE information.

Brightspace uses Learning Tools Interoperability (LTI) technology which allows for a single sign-on function for students. This means that students of the Academy log into Brightspace and from there are able to access any of the third-party vendors that provide educational services to the Academy. LTI also allows for Brightspace to interface with the third-party vendors as long as those vendors are also LTI compliant, which makes for more seamless relay of information between each system. We noted that not every vendor is LTI compliant, however, which results in Brightspace being unable to track the duration of time a student spends using that vendor's learning modules. This means the Academy must request durational data from those LTI non-compliant vendors in order to report durational data. Information collected from vendors must be converted by the Academy's IT administrators for reporting purposes.

The Academy also developed a program called Engagement Tracker which is used to log a student's participation in non-computer learning opportunities. These include reading, note taking, writing papers, research and other activities. The Academy also uses Engagement Tracker to input data received from vendors that do not interface through LTI. From an audit perspective, information reported in this manner has inherent risks because of the possibility for data manipulation as well as duplication of times already captured within Brightspace.

The Academy has also begun use of a software program called ActivTrak for fiscal year 2017. This program allows for a student's activity on a school-provided computer to be tracked at all times. The program is able to capture keystrokes and determine websites accessed as well as other activities not normally tracked, such as writing papers within word processing programs. While our office is aware of this program being used by other schools in Ohio, the program produces a substantial amount of data which schools must be able to extract and use. Data captured in this way must be analyzed by schools to ensure it is academic in nature and does not duplicate time already reported in other systems or programs. Schools also typically do not install programs such as ActivTrak onto computers which the school does not own. Since students are allowed opt out of a school-provided computer, tracking programs such as ActivTrak are not always a possibility.

During our office's fiscal year 2016 financial audit of the Academy, we learned that the school based its FTE report on the student's enrollment period, as has been the practice for all schools in past years. The Ohio Department of Education performed an FTE review over the Academy for fiscal year 2016. In a letter dated September 30, 2016, to the Academy, ODE noted that of the 1,963.50 FTEs reported by the school, only 1,225.44 FTEs could be supported by duration-of-time documentation submitted by the Academy for review. This resulted in a potential liability to the Academy for the repayment of approximately $4.4 million of state foundation payments. The Academy appealed these findings to the State Board of Education.

The Academy was only able to pull approximately 70 percent of the online learning opportunities given to students, which was the information readily available to the Academy captured by their systems. Additional third-party vendors were not contacted in order to obtain additional durational support. Prior to the creation of Engagement Tracker and use of ActivTrak in fiscal year 2017, the Academy did not have a system in place to track non-computer learning activities by its students. As a result of the insufficient durational data maintained in order to support FTEs, the AOS issued a Noncompliance Material Weakness within the Schedule of Findings for the Academy's fiscal year 2016 financial audit report.

Fiscal Year 2017

In fiscal year 2017, the Academy implemented and began using the ActivTrak software to capture additional student activity for reporting durational data.

The Academy provided two types of ActivTrak reports; one for websites and one for applications, but the information available within both is very similar. Each contains three data points; Application/Website, User, and Time. These reports were provided according to month with Time being representative of an aggregated amount for that entire month. For example, the Application reports would indicate how much time a student spent within a program such as Microsoft Excel, while the Website reports would show how much time a student spent on a website such as www.yahoo.com.

ActivTrak is a software program that the Academy installs only onto computers owned by the Academy, which are then given to the students. The Academy does not install this software onto computers which they do not own, so students who opt to use their own computers will not have the ActivTrak software on their computers. The software is able to monitor user activity on any computer which it is installed. However, the software is not a key logger, nor does it track mouse clicks, so it will not pick up usernames, passwords, or other sensitive data. Rather, the software captures and stores certain information such as application titles, website title bars, and URLs. It also is able to take screenshots, shut down applications, create pop-up warnings to redirect users, and block unproductive websites. All of these functions may be employed in real time.

From our experience with other entities using the ActivTrak software, we are aware that a school may tune the software to determine what are productive and unproductive websites and applications. For instance, the administrator can deem websites related to school work as productive, but deem websites like Facebook or other social media websites as unproductive. The same concept is available for computer applications; Microsoft Office can be labeled productive while video games or media players may be labeled unproductive. Websites and applications are not automatically determined as productive or unproductive by the software, but must be manually adjusted as such by the entity administrator. The reports provided to our office made no note of productive or unproductive activity.

The ActivTrak website also notes that while it does not record mouse and keyboard movements, it can determine that a user is idle based on if the mouse or keyboard hasn't been used. The default idle time is two minutes after no user inputs. The reports provided to our office did not indicate idle times.

The ActivTrak reports made available to our office detailed how long a student was in a certain application or website aggregated for a month at a time. The software has reporting capabilities that can display an activity log which is able to break down duration in a more detailed, granular level, however these functions may be based on the software level purchased by the entity. The software is available in different pricing tiers that come with additional features.

The Academy utilized ActivTrak durational information for less than 5 percent of the hours submitted in the calculation of student FTE. It is primarily used to monitor students who are not progressing in their schoolwork to determine what is actually being done during the time spent online. For the durational data used from ActivTrak, data was generally only used for certain students that were not submitting offline time and was only taken from specific websites visited (i.e. YouTube was not included as "productive time" during ActivTrak review, although it was determined to be the second most commonly visited website apart from Brightspace). Additionally, the idle time-out feature for ActivTrak was set at two minutes, though this was not evident in the reports provided.

As of November 2017, 1,038 of the Academy's approximate 2,000 students had installed the ActivTrak software, which was one the contributing factors of the Academy not using a portion of ActivTrak data. Many students haven't installed the software due to using their personal computers at home rather than the Academy's. Additionally, if students are working using an internet connection other than the Verizon connection provided by the Academy, ActivTrak, it is unable to track movements.

When students submit an assignment they also report the amount of time spent on the assignment working offline; this is reviewed for reasonableness and certified by the teacher. Teachers are encouraged to certify student offline time on a daily basis; however it is accepted if this time is certified on a weekly basis. Teachers may also add time for meetings with students such as phone calls. Offline time for field trips is typically added by the event coordinator. Teacher entries certifying time are periodically reviewed to ensure that information being entered into the system and to search for errors such as negative time or bulk time entered (time entered as a sum for the week rather than daily).

The Academy tracking of offline duration does not include start or finish times of offline work performed. This could result in the duplication or overlapping of offline and online duration, and does not provide enough information to give sufficient assurance that the data is not overlapping.

Software used during fiscal year 2017 includes Brightspace, Plato, and Jigsaw. Brightspace was used as the Academy's main LMS. Plato integrates durational data within Brightspace, and is not submitted directly. Although a good learning tool, Jigsaw does not provide durational data at the level desired by the Academy. As a result, durational data from Jigsaw was reported directly by teachers in the their time certification for each student. The teacher certification process for Jigsaw time was added in fiscal year 2017 as a result of ODE's review for fiscal year 2016, where Jigsaw durational time was put into question.

The Academy is working with Brightspace to address the overlapping time issue encountered in fiscal year 2016. This will continue to be an issue in fiscal year 2017 because the school has not yet found a solution to the problem. However, the Academy did sign a 5-year contract with Brightspace in exchange for the company looking into and attempting to resolve the issue.

AOS Audit

Auditors found that the Academy included substantial amounts of idle time in its reported student times. Of five students reviewed, auditors noted that idle time consisted of roughly 69 percent of all time reported, and that students were forced-out by the LMS in about 91 percent of all learning sessions.

Auditors also found that significant amounts of overlap occurred for the five students as well. Of the 1,480 unique rows of data reviewed by auditors, nearly 39 percent of these rows contained either overlapping or duplicated times.

Auditors also noted that non-LMS learning opportunity sources reported aggregated duration for certain time periods. This did not allow auditors to determine if further overlap occurred with duration from the LMS.

ODE Review Fiscal Year 2017

ODE performed a walkthrough of the Academy's system, reviewing several students, looking at times, where the information was coming from in the system, how it was compiled, and how the Academy documented student offline time in Engagement Tracker. ODE initially requested 50 students for durational testing and later increased its sample size to 298. ODE did not show significant concern about the potential of student online/offline time overlaps, and focused on overlaps of online/online time. ODE's review resulted in no comments regarding the calculation of student duration, and only commented on lack of enrollment documentation such as student birth certificates and proof of residency.

Fiscal Year 2018 In-Process

The Academy is working to add Engagement Tracker to require students to report offline hours worked, rather than posing it as an option. The student submitted offline time spent working on each course daily will be tied to attendance. This is an effort to prepare for HB410. If a student doesn't submit offline time and truancy benchmarks aren't met, a letter will be sent. The Academy is also working to integrate up-to-date attendance data to be viewable by each student so that they are able to see if their attendance is what it should be, however gaps in turnaround time for vendor data is posing an issue in the implementation of this.

Urbana Community School (Champaign County)
AOS met with Urbana Community School on November 6, 2017.

Urbana Community School is an online based community school offering learning opportunities to students exclusively in digital form (non-blended). The student population consisted exclusively of students living in the Urbana School District. A few of the students were enrolled in career-tech programs, however the majority of students enrolled used the Academy as an alternative to home-schooling, to catch up on hours required for graduation for students who had fallen behind, or as a result of having chronic discipline issues.

In fiscal year 2016, the Academy was classified as a Drop-out Recovery and Prevention school, however in fiscal year 2017 it did not reapply for this status and decided that the time and money required determining whether or not it would be eligible would not be cost effective, given doubts that it would qualify.

The School utilized META (formerly TRECA) software as a medium to provide these learning opportunities and to track online activity of students. Although no one at the Academy seemed to know anything about the Plato software being used, it had an automatic idle time-out feature of 60 minutes

School officials stated that when students were performing work that involved extended periods of time doing lessons that might result in computer inactivity -- such as reading -- they were encouraged to move the computer mouse every so often to prevent the session from timing out.

The Academy did not offer tutoring, nor did it maintain logs of calls or other interactions with students outside of the online learning portal. The school did not require students to submit duration of offline time spent on school work. The school did maintain documentation of time students physically came to the building for testing.

Online duration was not adjusted or certified by teachers based on quality of work or student progress. The Academy maintained that proof of work exists in the assignments that were submitted. The e-Superintendent would track the progress of each student regularly, however this information was just reported to the teachers. The Superintendent would correspond with teachers to inform them if students weren't making progress in their classes. Lack of progress was not compared to online duration and was not used as a basis for adjustment of time.

The Treasurer initially met with the AOS in November 2016 regarding issues in the School's FTE reporting that were discovered in the fiscal year 2016 financial audit. She was made aware that the Academy had been calculating Student FTE incorrectly by taking the sum of days attended by each student and dividing by 180 (total days in school year) to calculate student FTE. Following the meeting, the school continued maintaining data in the same. EMIS automatically calculated Student FTE based on the number of days the students were enrolled which was the information initially submitted to ODE. FTE was manually recalculated at the end of the year by the Treasurer based on online duration, and the amendment was submitted to ODE

In June 2017, the Treasurer requested online logs for all students from META and scanned each student's daily participation for any unusual entries or overlapping time stamps. She did not indicate whether unusual entries that would indicate the system logging idle computer were noted during her review and recalculation. However she did indicate that overlapping time stamps were noted for all students. She proceeded to manually recalculate online hours for 100 percent of the students that were enrolled in the school during fiscal year 2017 by removing overlapping entries. The Treasurer stated there were many instances in which students worked in excess of 10 hours in a single day to complete work prior to the graduation deadline. However students working in excess were capped at 10 hours in her recalculation. Recalculating total hours spent online for every student took her about a month to complete.

Student FTE recalculated by the Treasurer and submitted to ODE contained exclusively online hours. Time students came to the building for required testing was not added in the calculation of FTE submitted to ODE and figures obtained from online data were not adjusted based on student progress or quality of work. School officials stated that they chose to take a conservative approach in calculating the Student FTE, and used only concrete, non-subjective supportable data.

The updated calculations performed by the Treasurer were then submitted to ODE at the end of June, amending FTE from 43.77 to 28.52, a 35 percent reduction. As a result of this adjustment the school was required to repay $103,273.94 of state foundation monies back to ODE which was paid immediately after receiving the letter in September 2017.

2017 FTE Review

ODE's FTE review selected 25 students and 7 special education student files. The Treasurer provided the files, she performed a walk-through of the process she performed to hand calculate each student's FTE, during this walkthrough she pointed out to ODE's Area Coordinator the overlapping of student duration and students with greater than 600 minutes in one day, which were adjusted in her recalculation. Upon completion of the walkthrough the Area Coordinator agreed with her on the recalculations. He was later sent the electronic files for the students selected for review.

ODE's review letter noted that the system inherently reported overlapped duration. Due to the system reporting overlapped duration, the Treasurer was required to calculate duration for students by hand, manually removing overlapped times. ODE determined that based on student records reviewed by the Area Coordinator, all overlapping data had been removed by the Treasurer and therefore FTEs submitted by the school were accurate. ODE did not note any issues or corrective actions required in their review.

2017 Audit

While the audit for fiscal year 2017 has not been released at the time of this report, auditors noted issues that will be reported. The school attempted to manually reduce overlapping times and reduce times that exceeded 10 hours for a student in a day. While many of these manual reductions were correct, auditors noted many instances where reductions were miscalculated or omitted due to human error, contrary to the conclusion reached by ODE's FTE review.

Following the fiscal year 2017 School year the Academy decided to close as a result of increasingly difficult standards to maintain as an e-school and the cost associated with compliance. Following closing the majority of students formerly enrolled in the academy went to TRECA, ECOT, or enrolled in the City's school district.

Virtual Community School of Ohio (Franklin County)
On March 30, 2017, AOS visited the Virtual Community School of Ohio. Auditors met with the Superintendent, the Director of Operations; the Director of Student/Staff Services; the Director of Special Education; and the high school Principal. The purpose of this meeting was to obtain firsthand knowledge of the school's education systems and their ability to capture and report the time students spend in learning activities, as required by ODE for FTE reporting. Our visit included a detailed walkthrough of how the school obtains information for its FTE reporting purposes. This included observing school staff logging onto their systems, running durational reports, student logs, and other systems-related information.

The school uses several learning management systems, Maestro by BocaVox, Edgenuity, and Buzz by Agilix. The school also uses systems from Florida Virtual School. The school's student information system is a function of Maestro. The student information system is coded in a way that it can integrate with the learning management systems used by the school. However, the school is required to use their student information system (SIS) to report information to the state's Education Management Information System (EMIS). Transferring information from the student information system to EMIS is a manual process.

AOS staff reviewed ADM compliance work papers prepared by independent public accountants Charles E. Harris & Associates for the school's fiscal year 2016 financial audit. The audit found that the school could not provide sufficient evidence of participation in online learning activities for 10 out of 10 students tested. The IPA did not attempt to recalculate student FTEs as reported by the school.

The school adopted new measures in fiscal year 2017 to comply with duration-of-learning requirements that are being enforced by ODE. Maestro is now able to interface with the learning modules used by the school. These systems interface through Learning Tools Interoperability (LTI) technology. LTI is a standard created by IMS Global Consortium that ensures different systems are able to communicate through a single user login. This means that if a student logs into Maestro and accesses any LTI compliant module, all data from the module is collected and reported within Maestro. New to fiscal year 2017, students can only access learning modules via Maestro, ensuring that a student's time spent participating in learning opportunities is captured by Maestro.

Upon review of reports generated by Maestro, we noted that the system was showing obvious duplication and overlap of durational data. The school believes that while this information is shown, it is not being rolled-up into the total amount of durational time reported by the system. Based on our limited review, auditors could not confirm whether or not duplicated data was being captured and reported as part of FTE., Nor did the E. Harris & Associates auditors perform procedures to test this. AOS staff did note that the reports are able to show duration broken down by the course a student was participating in. The report also showed a beginning time with the duration of time in that course, allowing for a calculation of the ending time of the session.

Not every learning opportunity available to students is accessible through Maestro, or LTI compliant. A student may participate in learning by logging onto YouTube, Khan Academy, or other third-party websites that do not conform to the standards allowing for single logins through Maestro/LTI. To comply with reporting time not captured by Maestro, as well as offline learning opportunities, the school implemented a self-reporting time-log for students and parents to complete within Maestro.

The log requires reporting of the course of learning, aggregated number of minutes the student spent learning, and a description of the activity the student performed. But the log does not allow for input of a beginning or ending time for the learning activity. According to the fiscal year 2017 FTE manual provided by ODE, any documentation of non-classroom, non-computer based learning opportunities must include "Dates and times of actual learning opportunities." Because the beginning and ending times are not being reported, AOS would not be able to verify whether these times duplicated times already captured by the LMS.

School staff told us that younger students are much more likely to participate in non-computer based learning opportunities, similar to other e-schools. The school uses a curriculum called Accelerate that provides online instruction to K-6 students. While these students are required to participate and complete assessments via the online program, often they perform much of their learning off the computer. This is not unusual, because students tend to become more capable of using computer-based learning as they grow older. While other schools provide textbook-based curriculums to their younger students, the only physical learning tool Virtual Community School of Ohio provides is a supplementary workbook. The school believes that younger students are greatly underreporting their non-computer based learning opportunities.

School staff indicated that the development of the learning system has had a significant cost in dollars and time. They also noted that requiring teachers to track down students to fill out logs, as well as spending significant time reviewing and certifying logs, has detracted from their main responsibility to teach.

The school has a strong foundation in place for capturing and reporting student durational information going forward. However, because of the limited nature of our review, we cannot conclusively determine the school's future compliance abilities.

Review/Results

The school received a 2016 FTE review performed by ODE. This review resulted in a final determination that the School's 835.03 reported FTEs would be reduced by 66.4 percent to just 280.34 FTEs. ODE did not count non-computer logs from the school. In future conversations between ODE and AOS, auditors learned that ODE did not allow the school's logs because the logs were not approved by a certified teacher, rather they were approved in a blanket approach by the Superintendent at the end of the school year. The 2015 and 2017 FTE Manuals refer to Ohio Rev. Code Section 3314.08(H)(2) which states that non-classroom based learning opportunities shall be certified by an employee of the school. ODE told AOS that OAC 3301-102-02(M) states that these logs must be certified by a licensed teacher and therefore, the Superintendent's approvals were not valid.

The School appealed this determination, but later withdrew that appeal.

ODE performed a subsequent 2017 FTE review of the School. This review also resulted in a final determination that the School's 676.05 reported FTEs would be reduced by 51 percent to 331.26 FTEs. Again, ODE disallowed non-computer based logs that were not approved by a certified teacher.

The School's 2016 financial audit performed by an IPA noted that number of actual learning opportunities did not match the reported time in EMIS. As of the date of this report, the 2017 financial audit has not been released.

The school has since closed due to compliance and financial troubles.

West Central Learning Academy (Allen County)
Fiscal Year 2016

We did not review fiscal year 2016 information for inclusion in this report. This Academy's financial audit was scheduled as a biennial audit for the fiscal year 2016 and 2017 period.

Fiscal Year 2017

The AOS met with the leadership of West Central Learning Academy in Lima, Ohio on November 30, 2017. We began the meeting by making introductions and describing the role each individual played at the school. The Superintendent discussed her role and the Treasurer's role and that both of them are contracted through the Allen County ESC to provide their services for the school. Also discussed was the role of the curriculum specialist and that she was the person who was the most familiar with the learning management system. We also spoke with the individuals responsible for the day-to-day attendance taking and responsible for the monthly and quarterly attendance and for entering the data into the school's student information system (SIS).

School officials said that as of the 2017- 2018 school year, the school had become a blended-learning and a dropout recovery school for grades 9-12. They stated that due to the issues going on with e-schools across Ohio, it was decided the best course of action was for the school to become a drop-out recovery school for this school year and to use blended learning.

The Academy indicated that for the 2015-2016 and 2016-2017 school years, the school operated as a regular e-school for grades 7-12. The school again explained the reason that they changed is because of the political environment regarding ECOT and that the Superintendent did not want the school to fall into the same scrutiny as ECOT.

The Academy provided us with copies of the letters provided by ODE from May and July of 2016. The Area Coordinator signed the first letter from ODE and then an amended letter was provided on July 6, 2017. The only issues outlined in this letter are that the school was including excused absences towards the 920-hour requirement. The letter required that the school adjust for this prior to July 20, 2016, and no other issues were noted in the ODE review.

It was confirmed with an employee who has been with the school since it opened that the only system used by the school to track attendance has been Odysseyware. The only other time that would be counted was non-computer time that was logged by the school via sign-in sheets. Non-computer time was logged for field trips and time spent with the teachers for tutoring on site. If the student was on site and logged in, the computer time would be removed from the time counted because the school did not want to duplicate time. This was reviewed by the teachers during the week and manually removed where necessary.

Attendance was counted Monday through Sunday beginning July 1, 2015 through June 30, 2017. The students were able to work whatever hours they needed to work during these days so long as they were putting in their time and effort. We asked how this was determined and school officials said that the students do not progress without doing work, and that in instances where a student would simply move the mouse periodically in order to get credit, they would request to meet with the student. Mentors help to ensure students are making progress even though they may not necessarily pass.

We asked about logout times and if the system would automatically log students out for inactivity. The Academy said they were not aware but thought that students would be logged out and that both students and teachers are logged out after a period of inactivity. The Superintendent further explained that the time was 15 minutes for students and 30 minutes for teachers. The only time counted for students is the time that is recorded in Odysseyware and the sign-in sheets for direct instruction time. Staff reiterated that the time recorded for students for direct contact was very small for the period under audit, and that the majority of time would come from time spent using the LMS. When asked about adjusting the time for the quality of work, the employees agreed that the times are not adjusted for quality of work and that whatever time is in Odysseyware is the time used to report FTE.

We asked if the school used any other software providers for teaching students, but the school solely relies on Odysseyware. They went on to discuss the reports they obtain from Odysseyware. The Superintendent showed an example of the printout that is made every nine weeks for each student. These reports can be generated whenever needed. The school also enters this data manually into spreadsheets to track daily attendance.

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Direct instruction hours are included in this spreadsheet as a separate heading from that of the Odysseyware time. The data from the nine weeks report from Odysseyware is checked against the daily attendance sheets.

Offline work was not counted by the school. When asked how this time was tracked, the Director stated that the school erred on the side of caution and took a conservative approach to how time was calculated and reported. She went on to say that the only time that was counted was the time that was reported in Odysseyware. We were told that any time reported in excess of 10 hours in a day would be capped at 10 hours. The Student Services Coordinator monitors the attendance to help ensure all students are making progress. Mentors are also used to monitor this progress. Progress and attendance are logged every day in a manual spreadsheet. Direct instruction time is tracked by individual teachers using a daily attendance log. This sheet contains the time, the course, the student name, whether the student was tardy or absent, the starting and ending times, and the total duration of the direct instruction. If the Student was also logged into the system during direct instruction, the teacher will indicate this by deleting the start and stop times on the daily attendance sheets. The Director stated these processes have been updated now that the school is a blended-learning environment to include this step. Before 2017, the sole source for student time was the Odysseyware time reports and the direct instruction time that would have come from field trips or tutoring sessions.

The school does not add modules to the Odysseyware system. All learning software is contained within Odysseyware and Odysseyware is the source for the attendance reports. The school relies on Odysseyware to catch duplicated time and nothing is done by the school itself to check for double-counting of hours. When asked if it was possible to duplicate time by logging in on a different tab, they were unsure but thought it might be possible. We pointed out an instance of time being duplicated on the handout provided to us and they stated they would contact the vendor to find out why this duplication is allowed to occur. When asked about the maximum number of hours allowed in a day, we were shown on a handout where these instances are highlighted to be limited to 10 hours for the day. This is manually corrected in the system.

When asked whether the school provided any computers or internet for students, it was stated that the school would only provide Chromebooks when students were physically present on-site. No internet or computers were provided to students for home use.

The Intervention Specialist (the attendance officer for the school) tracks all time on manual spreadsheets that come from the reports from Odysseyware for duration. This time is added to direct instruction time from the daily attendance sheets prepared by the teachers. This is the data provided to the EMIS Coordinator to upload into the school's student information system (SIS).

Reviews/Results

As noted previously, the Academy received an FTE review performed by ODE in 2016. The only issues noted by ODE include the Academy having to make time adjustments within EMIS and that the Academy had been reporting excused absences for student funding.

ODE did not perform a 2017 FTE review of the Academy.

AOS performed the fiscal year 2016 and 2017 financial audit and identified several issues. Auditors noted that overlapping time within the LMS was common, and overlap between the LMS and offline logs also occurred. We also noted instances where students received more than 10 hours a day for funding. In some instances, the excess of 10 hours was removed, while in other instances it was not. Auditors also noted glitches in the LMS in which minutes would be recorded as hours, however this appeared to automatically correct itself. The LMS also did not indicate whether students became idle or were forced out of the system.

Auditors also noted that the Academy performed batch certifications of student non-computer, non-classroom times with these certifications all being made at the end of May. During conversations between AOS and ODE, ODE indicated that this is not allowable and was a point of contention with Virtual Community School of Ohio, where ODE did not allow the offline logs to be counted. In the case with VCS, the Superintendent, rather than a certified teacher, had performed the batch certifications, though the FTE Manuals had not made any differentiation in this respect.

APPENDIX D: MEETING WITH ODE AREA COORDINATORS

ATQP Meetings with ODE Regional Coordinators responsible for conducting community e-school and blended learning model FTE reviews

ODE Representatives: Diane Lease, Chief Legal Counsel; Aaron Rausch, Director Office of Budget and School Funding; Elena Sanders, Financial Manager;

Regional Coordinator Interviewees:

- Wednesday October 10: Leanne Sidley (12:30pm); Jack Pierson (1:30pm); Estelle Diehl (2:30pm)
- Thursday October 11: Ron Victor (1:00pm); Elena Sanders (2:00pm)

Background

ORC 3314.08 (K) (1) – If the department determines that a review of a community school's enrollment is necessary, such review shall be completed and written notice of the findings shall be provided to the governing authority of the community school and its sponsor within ninety days of the end of the community school's fiscal year unless extended for a period not to exceed thirty additional days….

Community schools are required to have an FTE review at a minimum of every 5 years. Community schools are identified as requiring an FTE review if they are a new community school for that school year, are up for a regularly scheduled review every 5 years, or they meet the recommendations and criteria listed by ODE on page 4 of its Fiscal Year 2017 FTE Manual. Some of these criteria include:

- Community school was overpaid by 10 percent or more in the previous school year;
- Community school went insufficient in any monthly payment in previous fiscal year;
- Office of Budget and School Funding recommendations;
- Community schools referred to ODE by the Auditor of State;
- Area Coordinator recommendations;
- Office of Community Schools recommendations;
- Community schools with significant reporting errors identified within EMIS at the end of previous school year; and
- Random selection of community schools.

During AOS Compliance testing of FTE calculations, inconsistencies have been discovered on community school FTE reporting completed by ODE. Because of this, AOS requested to meet with several of the ODE Regional Coordinators responsible for the reviews individually to determine what procedures are being employed.

The coordinators are not responsible for selecting a sample of students to review during the FTE review; this function is performed by the Department of School Funding, Aaron Rausch's department. According to Aaron and the coordinators, ODE doesn't inform the school of the students selected until two days prior to the start of the FTE review. The school will only receive a list of half of the students being reviewed; upon arriving at the school to begin the FTE review, the reviewer notifies the school of the remaining sample to be tested.

The AOS started each Area Coordinator interview by asking each coordinator to explain the process for performing a review. As the Area Coordinators explained their processes, the AOS staff would ask additional questions.

Interviews:

Leanne Sidley:

Leanne is responsible for reviewing Alternative Education Academy and Mahoning Unlimited Classroom. Throughout the school year, Leanne assists schools and maintains regular communication with the e-schools. This includes informing the schools of what she will be looking for during the reviews (enrollment documentation, birth certificates, proof of residence, durational data if a blended-learning school offering non-classroom time and e-schools, etc.). She also provides the school with a cumulative data spreadsheet to complete; there are examples of this spreadsheet in the 2017 FTE manual. This spreadsheet will show the cumulative data for each student's computer time and non-computer time. At the end of the year, she obtains this spreadsheet to determine if the FTE reported in EMIS matches the FTE for each student shown on the cumulative data spreadsheet. If the amount matches it is an indication that the percent of time was adjusted properly, if the amount doesn't match she will recommend the School update the percent of time in the Student Information System (SIS) to update EMIS based on the support in the cumulative spreadsheet. Leanne would then select several students for specific backup and receive an itemized sheet with all daily hours specified. She would tie selected amounts to the cumulative information. How a school keeps the daily durational hours varies significantly from school to school. There could be several spreadsheets or just one spreadsheet for the daily hours. These spreadsheets would need to add up to the cumulative spreadsheet.

At this point we asked Leanne to explain what she did to test the daily hours; did she look at all students, select a sample of students, review all days for a student, take the daily hours on the spreadsheet back to support, etc.? She indicated she would select a few students from the sample provided by the school and confirm a few daily hours back to the support to ensure they match; i.e. system report(s) and Non-computer logs. The number of students and days selected will vary from school to school.

We asked Leanne what she did to test for duplications and we explained that some systems will allow a student to log in multiple times at the same time, log in to various systems at the same time or log non-computer time at the same time the system is capturing duration. In response to this question, Leanne stated it was up to the school to account for click activity or to determine if time is double counted. It is also up to the school to provide backup for time that is not electronically captured. At which point the AOS staff simply asked if she was taking what was submitted by the school at face value and not looking at the underlying data to determine if the school was in fact checking for and eliminating duplications; she responded by saying "yes" she relies on the school to eliminate duplications and assumes the school has done such.

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Furthermore, we asked Leanne how ODE was taking "forced time outs" into consideration when determining FTE. Forced time outs would mean the student is automatically logged out by the system(s) due to inactivity; each school can set this time. Again, her response was that she would rely on the school to deal with elimination of inactive time. The AOS tried to explain that some systems will identify if a student was forced out of the system and if the hours on the daily worksheet matched the system report how can ODE rely on the daily hours? At this point, Aaron Rausch spoke up to explain that ODE would rely on the schools policy. If the school informed ODE that they eliminated the inactive time, then ODE relied on the information submitted.

Because of the nature of an electronic school, there are no excused or unexcused absences, just time spent on assignments that would be counted towards the schools FTE. The AOS asked Leanne to explain how she understood the following language in the 2017 FTE manual (page 21) "missed days (both excused and unexcused) or assignments do not count as hours."

She stated that absences don't count toward hours like a school funded based on enrollment due to the fact the student has access to the learning opportunities all the time; thus absences can and should be made up.

The AOS explained that they understood this to mean an assignment must be completed as well. She stated she didn't understand, so the AOS went on to explain they thought that if the student had hours documented but no assignment turned in for the time spent on learning opportunities that no hours would be counted.

At that point Leanne stated the AOS was misunderstanding this and taking it out of context. As explained below, it was noted that ODE feels that schools should adjust non-computer time based on quality of work. At which time the AOS asked how we have taken the language over missed assignments out of context if ODE believes non-computer time should be adjusted for quality of assignments. To which we got no response.

For non-computer time and assignments, a teacher may suggest an amount of time that an assignment may take a student. The student then reports how much time they actually spent on the assignment. The teacher must then certify the amount of time reported for the assignment. They have the ability to use their professional judgment to modify the amount of time reported based on the quality of the assignment.

In the schools where a teacher is responsible for tracking a student's offline hours, they must base hours granted on the quality of the work and the performance of a student, according to Aaron Rausch. They also use their professional judgment of the academic ability of each individual student.

The certification of hours is not a black and white process. Some teachers are willing to certify more than others. Teachers are not supposed to perform batch approvals of hours and ODE will not certify batch approvals.

In some schools, parents are also able to certify the time spent offline working on school projects, however this is still reviewed by the teachers and only certified by the teacher if he or she thinks the time is appropriate for the work performed and the individual student's abilities. In these cases, the parents and students have separate logins to help prevent abuse of this system.

After listening to Leanne, Aaron and Elena explained ODE's approach to non-computer time, the AOS staff was a bit confused and asked several questions about tracking non-computer time. The first question was related to "estimating" hours a student performs in non-computer learning opportunities. The staff indicated they were confused because the FTE Manual states an "estimate" is not acceptable; however, there are several instances in ODE's explanation of its review process where it relies on estimates.

The AOS gave two examples of this, first was that if a school is adjusting non-computer time based on quality of work performed by a student, then the schools are truly estimating.

ODE responded by saying yes, however, the intent of the FTE manual was to discourage schools from automatically establishing a time for each student to receive for performing an assignment. As long as the teacher was adjusting the time based on his or her knowledge of the student's ability then "estimating" was acceptable.

NOTE: There is no rule or law that prohibits estimating, only the vague statement in the FTE manual that refers to estimating. This statement led to other questions from the AOS. We asked if the school was allowed to adjust the hours by increasing hours based on quality of work or if the school could only decrease hours. We gave an example of situations we know were occurring; a student prints the test off and answers all the test questions offline but student doesn't track non-computer time for this, but when the student got back online to answer questions for the test the system only shows 10 minutes of durational data for the student to complete the test. We asked if the school could increase the hours based on the teacher's knowledge of the student's ability, ODE responded by saying "yes" as long as the teacher uses his or her professional judgment to document the necessary increase in hours.

Regarding non-computer time, AOS asked if ODE realizes the difficulty in auditing adjustments based on a teacher's judgment. In other words, how could ODE or the AOS ever audit these increases or decreases in hours?

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ODE's response was that it understood the difficulties and thus relies on the school to make these judgments. Further in the interviews, the AOS explained to ODE that it should be careful relying strictly on the adjustments because without a written policy describing how a teacher is to adjust the FTEs, these adjustments are subjective and hard to audit. As we explained, the schools will learn what it is that ODE or the AOS want to hear and if reviewers can't truly audit, there is a significant risk of schools adjusting hours to benefit the school with no way to hold the school accountable.

It was also brought to our attention that a school cannot certify the non-computer time in a "blanket" manner; meaning once a year, and that the school can't take the non-computer time submitted by the student at face value. We asked ODE to expand on what it means by "no blanket approval" and why the school couldn't take the non-computer time at face value. ODE explained that at Virtual Community School of Ohio (VCS) the Superintendent was going to approve all non-computer time at year end and that the Superintendent was not going to adjust non-computer time based on the quality of work submitted by the student. Therefore, ODE rejected VCS's non-computer time and required VCS to pay back a significant amount of money to ODE and ultimately close.

On Thursday, auditors again tried to address the issue on whether schools should be adjusting non-classroom time reported by students based on quality of work. Mr. Rausch changed his previous answer about this and VCS and stated that the reason VCS' non-classroom logs were not accepted was because it was the Superintendent of the school certifying them all at once and not a certified teacher.

While the Ohio Administrative Code does require a certified teacher to certify these offline logs, ODE could not indicate where, if anywhere, certification en masse was prohibited.

It was also noted during this time by Elena Sanders that the FTE Manual explicitly stated that it was a school employee or teacher who must certify, which contradicts the OAC and may explain why the Superintendent of VCS took it upon himself to certify logs.

It was at this point that the meeting gained a tense tone and legal counsel of ODE informed auditors that this type of questioning was too generalized and that ODE could not speak to it as they were involved in litigation over some of these matters.

ODE informed auditors that the 2018 FTE Manual had been updated to indicate it was a certified teacher that must be performing certifications. However, when pressed as to whether any certified teacher at the school may perform this function, ODE stated it felt it should be the individual student's teacher of record performing this duty. But ODE could not clarify where the FTE Manual, ORC, or OAC stated as much.

Auditors asked ODE whether it was acceptable for a teacher to adjust computer-based time based on the student's quality of work, since it was acceptable to do so for manually submitted time. ODE's answer was no.

Leanne stated that ODE performs a review of time to its source for students who are selected for review. She also stated that time not subject to the sample is checked for reasonableness, but not how this is performed. She also stated that the schools submit daily times throughout the year to ODE.

Auditors asked Leanne if she reviews individual student assignments as part of her review, even though homework is not to be counted towards total hours per the FTE Manuals. Leanne stated that it did not matter whether the student only completed two assignments and claimed 25 hours of time as long as the teacher certified it as accurate. She stated that ODE is not responsible for the content of the assignments and does not check student grades as part of the FTE review either.

It became clear through conversation that Leanne does get a general overview of an e-school's learning management system, but does not spend a significant amount of time to fully understand its capabilities in either capturing or reporting data. She was unaware that systems have a forced logout feature which will automatically log off a student after a predetermined time of inactivity. She stated that accounting for such features of a system and ensuring that data reported is the responsibility of the school and not ODE. She also stated that the Area Coordinators assume that any amount of durational duplication or overlap is removed by the school and therefore ODE accepts this information as is, though it will perform some review for obvious duplications.

Jack Pierson:

Jack Pierson has performed the FTE testing at ECOT, Quaker, BOSS, Massillon Digital, and the Ohio Distance & Electronic Learning Academy (OHDELA). Additionally he performed the FTE testing at blended schools Utica Shale and Ohio Valley Energy Technology Academy (OVETA).

For fiscal year 2017, Jack spent a lot of time meeting the various schools he oversees before the FTE review to make sure the schools understood how to complete the spreadsheets and what is expected of the schools as part of the FTE review.

Again, Jack stated he relies on the sample of students provided by Aaron's department and selects a few students and days to determine if the daily hours collected by the system match the information submitted by the School.

AOS asked Jack if he gained an understanding of the various LMS's and vendors ability to capture durational data.   Jack indicated he does not gain much of an understanding of the Learning Management systems or vendors used by the schools.   His understanding is limited to the click data and auto log-offs to learn how they capture time.

Once he receives the school's spreadsheet, he tests the data using the =SUMIF formula in Excel to determine if duplicate time has been recorded. When asked what the formula looks like, he said he couldn't recreate it. He Googled it and followed the instructions. This leaves uncertainty about the validity of the results of the formula.

While running a formula is a good start in capturing duplication, our experience indicates it is only possible for the individual reports generated by each system. If a school such as ECOT uses multiple vendors to capture data, one would have to have a sophisticated formula to track duplications among the various systems.   All of Jack's schools except for OHVA calculate duration manually.

Offline time may be captured electronically or manually. This time should be certified by the teachers. However, he said it is difficult to determine if offline time reported overlaps with electronic time logged, so he tends to rely on the school and assumes the school has subtracted all duplications.

Since Jack performed the fiscal year 2017 FTE review of Quaker and noted no issues with the school's use of Calvert, which is a textbook-based curriculum used often by homeschooled children.   Use of Calvert in an e-school would indicate the school is operating as a correspondence school for certain students, which is disallowed by ODE. AOS asked Jack to define "correspondence course." He replied that he would like to have someone explain it to him first, because for years he has asked for a definition and still couldn't tell us what a correspondence course is. We then asked Jack if he was aware of the guidance in the HB 2 Blended-Learning Guide, which states that no correspondence courses are to be funded. We went on to explain that we know that students in K-6 tend to spend more time using textbooks because younger students are not capable of utilizing computers in the manner needed to learn online 100 percent of the time. We explained to Jack and others that we believe if a student is learning by using a text book then it is a correspondence course.

Jack said he was not aware of the Blend-Learning Guide's prohibition against correspondence courses.   ODE's legal counsel asked to see what the AOS was referring to and we provided the legal counsel with the Blend-Learning Guide. Legal counsel initially responded that our reference was outdated because the document showed an August 2016 date. AOS and Aaron Rausch explained that it was not outdated because HB2 went into effect in fiscal year 2017.

Legal counsel for ODE again stated the guidance was likely incorrect. They also stated that ODE believes schools may utilize textbooks, but prefer schools utilize systems that are capable of capturing and analyzing data.

Auditors were aware through independent research that the main purpose of an LMS is to perform data analysis in order to be able to provide as much information to educators to allow them to individualize education plans for each student. While auditors are also aware that these systems and schools may utilize textbooks to a degree, we were also aware that ODE took a much different approach with the London Academy. London Academy had used a textbook correspondence-style approach in years prior in which students worked from home but did not access their education online. Students completed assignments and tests via textbook and submitted physical copies of work. London Academy was advised this was unacceptable by ODE and was forced to change its education model. The school would eventually close.

So we again asked to clarify why ODE provided guidance that no correspondence courses were to be funded, yet it accepted the Calvert work at Quaker. We asked Jack if he was aware that AOS cited Quaker for the use of Calvert in the fiscal year 2016 financial audit report. He said he hadn't seen the report, so didn't know this. ODE officials said they would need to revisit this, but felt their stance on the correspondence courses has changed. Also, since Jack performed the testing at ECOT and AOS became aware that some students were only taking one class an entire school year, we asked Jack if in his review of schools determined if the students were full-time students and if not, did the school further adjust FTE based on credits hours below 5 credits in a school year. We showed ODE the FAQ on its website that states that if a student takes fewer than five credit hours during the year, the student is considered part time and should not receive a full FTE. Jack was unable to answer, because at this time, Aaron and Diane said that most e-schools provide more than 5 credit hours due to credit recovery and students being behind in credit hours. We explained we understood that and in most cases students are taking courses that last only 6 weeks under credit recovery as opposed to the 9 weeks it takes for a normal class.

However, we still didn't understand why ODE wasn't looking at the number of classes a student was attending. ODE stated most students take a full course load and they were not aware of any school offering only one class. We explained that the AOS brought this to ODE's attention last year because we knew of a school offering only an OGT review course to students. The student had passed all parts of the OGT except one and had earned all credits to graduate.

Aaron said he vaguely remembers the conversation and that led ODE to add guidance to the FAQ, but now believes the FAQ is wrong. We asked Aaron to clarify that based on this, it is possible for a student to have one class the entire school year and still earn a full FTE. Aaron responded by saying ODE only worries about the durational data presented, if a student takes one class and documentation shows that the student participated in 920 hours (or whatever the school's calendar hours are) then yes, a student can earn a full FTE by simply attending one class in a given school year.

We are also aware of another e-school, Newark Digital Academy, whose leadership believes that they were provided guidance from ODE that if a student participated in 920 hours of learning opportunities, despite the enrollment period or number of courses taken, they could receive a full FTE.

AOS later asked Aaron for clarification regarding this concern. Aaron responded that a student who participated in 920 hours, but was only enrolled for 50 percent of the school year, could only earn 0.50 FTE. This further shows the confusion on the part of some e-schools based on guidance they receive from ODE or from the school's misunderstanding of guidance provided by ODE.

During testing of ECOT, Jack did not review how many classes a student is taking, and FTE was not adjusted based on the number of classes a student is enrolled in. Therefore as stated above by ODE, it is possible for a part-time student to be enrolled in just one class but still receive a full FTE if he or she was performing at least 5 hours of work a day in the class.

Estelle Diehl:

Estelle performed the FTE review at London Academy, which was formerly London Digital Academy, but is no longer an e-school. She did not complete the FTE review of any e-schools.

The AOS asked Estelle about her experience with London Academy. She said she initially looked at the Academy for fiscal year 2013, at which point she questioned the school's documentation of non-computer learning opportunities. She indicated that what was being documented at this time didn't appear to be adequate. Aaron confirmed that Estelle was one of the first to bring some documentation issues to ODE's attention.

Estelle explained that there were several schools using the same correspondence-style education model as London Academy in 2013 and that most had closed except Townsend Academy. At this time, AOS didn't ask ODE why Townsend was being treated differently from London Academy in the fiscal year 2017 FTE Review. Note: Townsend Academy's 2017 FTE Review showed no issues.

AOS asked if Estelle knew the Townsend Director. She said yes and that the Director was at London Academy at one time and took the same education model with him to start Townsend.

At the beginning of the school year, Estelle's process was to complete a first FTE review. During this review, she would get a preliminary understanding of how the school documents learning opportunities and hours of learning. She would ensure the schools had teachers certify non-classroom learning time. She identified an issue where a student completed only 2 assignments in one week, and this student was reported as a full FTE.

Ron Victor:

Ron performed the FTE review at Akron Digital Academy, Lorain Digital Academy, and various other blended-learning and e-schools. In January, he holds a mass orientation for all schools scheduled to receive an FTE review in his area at the end of the upcoming school year. This list includes e-schools and brick-and-mortar schools. During this orientation, Ron explains how his review is conducted, and allows them to select their review date. The opportunity to choose the review date is an incentive for schools to attend. The schools are able to ask questions and the Area Coordinators provide answers. **NOTE**: it appears more Area Coordinators are taking this approach with schools that have upcoming FTE reviews. Also, it was noted by Ron and Elena that it is likely e-schools will have annual FTE reviews because of new criteria established by ODE. We later confirmed with Aaron Rausch that these criteria are outlined in the FTE Manuals as we indicate above.

Akron Digital in 2016 requested a pre-FTE meeting prior to its official FTE review. During this meeting, Ron explained specifically what the review would examine. He also recommended that the school use the e-school spreadsheet for percent of time created by Jack Pierson, which is available the ODE website. It was further noted that Akron Digital decided not to use the recommended spreadsheet provided by ODE for the percent of time calculations.

On the day of Akron Digital Academy's review, Ron said he sent a list of students to the school 2 hours before he arrived. At the meeting the school had the student files and information ready. He would look at the online attendance and sheets of non-computer activity. He reviewed the logs of non-computer learning activities to ensure they were signed by a teacher. He would also select 10 to 15 students to fully recalculate their FTE.

Ron also mentioned that at Akron Digital Academy, students are highly encouraged to come to the school location to receive additional assistance. This is not mandatory, but time spent at the school counts towards their daily hours.

Ron stated Akron Digital Academy is actually a blended-learning school and not an e-school, and that he has encouraged school officials to seek formal blended-learning status by utilizing the quasi-blended learning model they currently employ. AOS asked Ron to explain why he thinks Akron Digital Academy is a blended-learning school and not an e-school. He said this is because students could attend the brick-and-mortar location on Tuesdays and Thursday for five hours of classroom instruction each day. **NOTE: the 2017 FTE review letter for Akron Digital advises the school to discuss using blended learning with the school's sponsor.**

The legal counsel in attendance spoke up to make it clear the students were not mandated to attend the school and that it was voluntary. AOS asked Ron and other ODE representatives if they understood Enriched Virtual Learning, a blended-learning education model. None was familiar with it. AOS explained the model and how it can be closely related to e-schools. The main difference is that enriched virtual learning requires students to meet with a teacher once a week for an hour or so. The ORC allows for e-schools to have physical tutoring locations, which should not be confused as constituting blended learning. These sites are aimed as a supplemental tool to help struggling students, not as a location for all students to be required to attend for their core curriculum. ODE's Area Coordinators recommending schools to switch to blended learning can further muddy what is allowed and not allowed by some of the schools.

AOS posed this question: If Ron was in charge of the school, which model he would prefer to operate as, an e-school or a blended learning school? Ron could not answer. However, the legal counsel in attendance understood the question and said he would choose blended learning. She said this was because if the school adopted blended learning, and it required students to attend 5 hours on Tuesday and Thursday, it would guarantee the Digital Academy would receive 10 hours of participation for each student, whether the student showed up on those days. AOS agreed and it would mean the Digital Academy would have two fewer days a week in which a student would be required to sign in and out, and only be funded for the time the student actually attended the physical location.

The login sheet for prior years only documented if the student was present in the morning or the afternoon. Ron said that he suggested the school change the attendance sheets for non-computer time to reflect a beginning and ending time. Otherwise, there is no way for ODE to determine the student spent the entire 5 hours at the school.

Based on Ron's description of how Akron Digital operated, AOS presented Ron and others in ODE a situation in which it would be hard to confirm duration. We explained that we have run into situations where a student is mandated to attend school 3 hours a day and during the time the student was at the school, the student spent two out of the three hours on the LMS. So we asked Ron how he made sure that the students were not logged into the system during the time the student was at the physical location and if so, how he determined the school was counting durational hours for both computer time and attendance (non-computer time). He stated he did look for that during his review. So the AOS went on provide the following example and asked Ron what he believed was the correct durational time:

> The school offers blended learning and has a policy requiring students to attend a brick-and-mortar building for four hours a day, with 1.5 hours of learning opportunity to take place outside the classroom, for a total school day of 5.5 hours. Student attends school from 10 am to 2 pm, while at school the student is logged into the school's LMS system for 2.5 hours. The student again logs into the system at home from 5 pm to 10 pm.

Ron's initial response was the school could only claim 7.5 hours. When we asked why, he explained that it was because the student was online for 7.5 hours. But the correct answer, according to the FTE manual, would be 9 hours (4 hours required to attend school (funded no matter if the student shows up or not) plus the 5 hours spent online from 5 pm to 10 pm).

AOS explained that here is where the difficulty of reviewing this situation comes into play. We assume the LMS will generate a report that shows the actual login duration; meaning we can see that the student was logged on for the 2.5 hours while also in attendance, and that the school actually kept an attendance log at the brick-and-mortar location requiring students to sign in and out and noting the times.

However, we know that not all systems are capable of showing the exact time a student is logged on and schools are not tracking attendance at the brick-and-mortar to the extent it shows the time the students were in attendance. As he notes above, Akron was indicating attendance only as "AM" or "PM." So we wanted to know, how would ODE account for the time if the school didn't track attendance at a brick-and-mortar building showing the exact time students began and ended their day there, or if the LMS couldn't show the beginning and end times of the logins? Does the school get the 7.5 hours the system shows, does it get nine hours based on the FTE manual, or does it get 10 hours (maximum daily hours) because of the 4 hours required to attend plus the 7.5 hours online? How does anyone know what to do? Is ODE just relying on what the school submits? We got no answer to this.

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We also noted that coordinators such as Ron were relying heavily on the school's policies. For instance, when asked about the possibility of overlapping participation hours, Ron said the school did not combine these times, therefore the time was not being duplicated. But AOS has found examples of this at some schools, despite a school's insistence that it was not the case.

Elena Sanders

When Elena began her current role, her primary goal was to get all Area Coordinators on the same page when completing the FTE review. She began a spreadsheet that would track the progress of all reviews, including a place for Area Coordinators to ask and have questions answered. This also included a checklist to track the progress of all reviews to ensure all reviews have taken place. Additionally, they began a standard process for writing letters and dealing with common issues. In fiscal year 2016, they began using standardized review letters that are sent to the schools. Prior to fiscal year 2016, the style and substance of these letters depended on the coordinator who performed the. Also, Elena now reviews FTE letters before they are sent to the schools.

Elena's goal was to review at least one school with each Area Coordinator to learn each Area Coordinators progress and ensure consistency between them. Area Coordinators may also request her help when they had a heavy volume of testing to complete or if a personal concern prevents them from completing the reviews. She was never a lead, and only helped wherever she could. Other than this, her involvement was similar to that of other Area Coordinators.

APPENDIX E: ODE RESPONSE

AOS held a meeting with ODE on March 14, 2018. AOS received the following response from ODE on June 29, 2018.

ODE responses in **Bold**. In some cases below, AOS notes that ODE did not provide a response.

Training

1. What training has been provided to the Area Coordinators? **Area Coordinators receive regular training. Coordinators have in-person meetings every other month and regular calls in between. The FTE manual and FTE reviews are a frequent discussion item during in-person meetings. For example, any changes to the FTE manual are reviewed with the Area Coordinators and comments received from stakeholders are reviewed with them. In addition, the legal analysis for the ECOT FTE review was discussed with them so they had a better understanding of the legal authority for the department to review durational data.**

   How well do the Area Coordinators have to understand the systems used to capture data? **Since each school has different data systems, our expectation is that Area Coordinators seek to understand the methodology used by each school in capturing durational data, the types of systems used, and the learning opportunities those systems represent. As part of the FTE review process, the Area Coordinators have support of the office leadership, who participate in the FTE reviews so they can assist with any issues and ensure consistency among the reviews.**

   ➢ How are Area Coordinators instructed to test school policies?

   ➢ **Through discussion with school staff, as well as follow-up upon submission of durational data, ODE seeks to review and understand the process each school uses to track durational time. Area coordinators work to confirm their understanding of the methodology by reviewing data.**

   ➢ In other words, if a school indicates there is a policy in place to remove duplicated time, does the Area Coordinator accept the policy as written or is there a test performed over the policy to determine the operating effectiveness of the policy?

   ➢ **Area Coordinators work to confirm their understanding of the methodology by reviewing data.**

2. Has ODE trained the ITC on the need to have Student Information Systems capture durational data?
   ODE has regular communication with ITCs through monthly conference calls. While ODE has not conducted formal training to ITCs on this subject, ODE will consider future opportunities to dialogue with ITCs on the topic.

3. What training has been provided to e-schools and blended learning schools in regards to tracking durational data?
   Initially, ODE staff met with community schools and sponsors to review the

FTE manual and discuss associated issues. Since tracking durational time and processes varies by schools, the Area Coordinators conduct site visits and have regional meetings with schools about the FTE review process. ODE is in regular contact with e-schools and schools with blended learning designations responding to questions and working to ensure schools understand the durational requirements in the law and the FTE manual is made available to them prior to the next school year. In addition, department staff meets with schools to review any issues they may have.

Definitions

1. How does ODE define the following:

   - Participation – **This is referenced in ORC 3314.08. While participation is not defined in the statute, this statute further provides that the student is enrolled in a community school if the student has commenced participation in learning opportunities. Learning opportunity is defined in OAC 3301-102-02(M). Under this rule, learning opportunity means classroom-based or non-classroom-based supervised instructional and educational activities that are defined in the community school's contract and are (1) Provided by or supervised by a licensed teacher; (2) Goal oriented; and (3) Certified by a licensed teacher as meeting the criteria established for completing the learning opportunity.**
   - Classroom – **For a brick-and-mortar school, this is the time spent in the physical classroom/building. For an e-school, this could be time spent at the community school, including testing time for state assessments.**
   - Non- Classroom – **For a brick-and-mortar school, this is any time spent outside of the classroom. For an e-school, under ORC 3314.02, this would include time spent online for education.**

   - Durational time for the following:

      - Computer – **Learning opportunities accessed through a computer.**

      - Classroom – **Time spent in a physical classroom for brick-and-mortar schools and time spent on-site at the community school for e-school students.**

      - Offline – **The law doesn't use the term "offline time." Rather, it refers to "non-classroom time," as outlined above.**

ODE Policy or Guidance

1. What is ODE's policy or guidance as it relates to the following:

   o What constitutes time spent on the computer? **ODE does not believe it is appropriate for the department to develop a policy since the law outlines funding for classroom and non-classroom learning opportunities. As a result, the Department's Area Coordinators work with the schools to understand how they document participation in learning opportunities.**

      ➢ Log In/Out – No response

      ➢ Time on Activity – No response

2. What is ODE's policy related to "Forced" log off times; in other words, is there a policy or guide to demonstrate to schools that if a student is inactive for X number of minutes on the computer the schools must remove the inactive time or show support for offline time?
   ODE has not defined or established a policy for forced log off times. In discussions with schools, there is an understanding that it is reasonable to claim some time even when a student is not typing, moving a mouse, due to the nature of some of some learning opportunities. Watching educational videos and listening to a lecture by a teacher may not require typing or moving a mouse. Area Coordinators are asked to understand what systems have forced log-offs, capture different types of time, and how the school has accounted for this time. We would appreciate your office's input regarding such a policy.

   o Can ODE define Inactive? **Since the law recognizes classroom versus non-classroom learning, the department does not define inactive time.**

   o How do FTE reviewers test for inactive time? **Area Coordinators are asked to understand what systems have forced log-offs, capture different types of time, and how the school has accounted for this time.**

3. What is ODE's policy over missed assignments?
   The law recognizes classroom versus non-classroom learning, it does not reference missed assignments. The nature of blended learning models and e-schools afford more flexibility for students to complete assignments missed due to absence and teachers would consider this as part of the review of the student's overall attendance.

   o Can a school count offline hours if there are no assignments completed or the number of assignments completed appears minimal?

Revised Code 3314.08 (H) requires a student's instruction time in non-classroom learning opportunities be certified by an employee of the community school. OAC 3301-102-02(M) defines learning opportunities.

4. Do missed assignments have any impact on online time?
   Since the law recognizes classroom versus non-classroom learning, it does not reference missed assignments. The nature of blended learning models and e-schools afford more flexibility for students to complete assignments missed due to absence and teachers would consider this as part of the review of the student's overall attendance.

5. What is ODE's policy related to the documentation of Offline time?
   Revised Code 3314.08 (H) requires a student's instruction time in non-classroom learning opportunities be certified by an employee of the community school. OAC 3301-102-02(M) defines learning opportunities.

   o Does a school have to document all the requirements listed in the FTE manual; i.e. dates and times, subject, etc.

   ➢ Does 'dates and time' mean a school must show the beginning and ending time for offline hours?
   Since ORC 3314.08 references classroom and non-classroom learning opportunities, ODE believes it is incumbent on the schools to detail when the student is participating in learning opportunities. ODE may recommend that schools add more specificity to learning opportunities, including specific start and end times, to ensure non-classroom hours do not duplicate other documented time.

6. The FTE manual states a school can't **ESTIMATE** hours; can ODE define 'Estimate?'
   From ODE's FTE manual: *Estimated or approximated times cannot be used for the purposes of calculating percent of time. For example, if an assignment was estimated to take 15 hours to complete and it only took the student 10 hours to complete, the student would be given credit for 10 hours.*

   o Can a school provide a list demonstrating the time it will take a student to complete an assignment and use this list to document offline time?
   Non-classroom time must be certified. ODE regularly sees that this time has been self-reported by students or parents and then signed off by the teacher. If a teacher has an estimate of how long an assignment can take, this may be used as a guide when verifying time.

- o **The estimates cannot, however, serve as a proxy for the actual time spent on an assignment, as noted in the above-mentioned section of the FTE manual.**

7. Same scenario as above, but the schools adjust the time based on quality of work submitted by the student? - This question was intended to clarify ODE's stance on teacher's adjusting a student's reported duration based on work quality, which could be construed as an estimate on behalf of the teacher. **ODE has seen schools who have not certified the amount of non-classroom time reported, and will adjust the amount of self-reported time down based on the work product submitted.**

8. What is ODE's policy in regards to how a vendor shows durational data? **ODE does not have a policy and understands that different vendors report time differently.**

   - o Can a vendor show durational data in aggregate for the entire year? Or does the vendor have to show durational data in the same format as Offline time; i.e. date and time, subject, etc.? **While ODE has accepted vendor time that is captured on a yearly and limited basis, our recommendation and preference is time with greater specificity. Part of the discussion with schools is to understand how the time interfaces with other durational tracking that occurs.**

   - o What percentage of time spent outside the classroom requires a school to provide the student a computer and internet access? **ORC 3314.22 defines when a student must be provided a computer, and there is not a specific percentage listed. Students in e-schools must be provided a computer, unless the parent waives a computer. Students in non e-schools must be provided a computer if the school requires students to participate in learning opportunities from their residences via computer (see section (C)). A computer is not required if both the learning opportunities are supplemental, and the resident is equipped with a computer.**

   - o For example, if a student spends 55 percent of his calendar hours working outside the classroom, is the school required to provide a student with a computer and internet access? – No response

     - ➢ Same example as above but student only spends 40 percent of his calendar hours outside the classroom. - No response

9. Is there any limitation on the number of blended learning models a school can use? For instance, can a school use a blended learning model allowing 5 students to work online outside the classroom for 100 percent of their learning opportunities, 15 students have the ability to work 3 of the required 5 hours outside classroom, 5 students work 100 percent online outside the classroom for 15 percent of the year, while the other 85 percent is a mixture of classroom/non-classroom?
The contract between the school and the sponsor should define the blended learning model(s) employed by the school.

10. What effect, if any, does the following scenario have on funding;

   o A blended learning school has a policy that a student is required to attend 3 out of 5 hours a day in a classroom. The remaining 2 hours are outside the classroom.
   ORC 3314.08 provides for a different standard for e-schools.

   o A brick-and-mortar school has a 1:1 education model; meaning every student is given a computer and has 24-hour access to the online learning modules. The school allows students who are absent to make up work at any time and students' grades are not affected by any make up work performed at home.
   No response

   o Same scenario as above but the school doesn't provide the computer. Instead the school has a low attendance rate but students will go to the library or work on their own computer at home to complete work?
   ORC 3314.08 provides for a different standard for e-schools.

11. What effect, if any, does the following scenario have on funding; (continued)

   o A school has given students 24-hour access to online learning and allows students to work as much as they want from home with the only stipulation that the students attend a classroom setting for 3 hours each month.
   No response

      ➢ Same scenario but the school doesn't mandate the student attend a school unless the following occurs:

         • Student needs assistance on an assignment and request help or

         • a student's grade falls below a C in a subject matter, then the student is required to attend one on one sessions with a Teacher until the grade is above a C?
         No response

Sampling

1. Questions related to ODE's sampling;

   o During testimony of ECOT's appeal to ODE it was stated that ODE followed the AOS sampling methodology and was assured the project error amount is within $500,000 of the actual error amount.

     ➢ Can ODE direct the AOS as to where in our sampling methodology it states a projected error amount is within $500,000 of the actual amount? (This question was aimed at clarifying how ODE was able to determine its projection for ECOT's clawback in fiscal year 2016 was accurate)
       Aaron Rausch discussed the sampling with AOS staff members Marnie Frederickson and Fred Kruse.

   o How does ODE define the following:

     ➢ Sampling Population?
       This is addressed in the FTE manual. Please keep in mind that this is not an audit, but rather a review of full time equivalence for students enrolled in an e-school.

     ➢ Sampling unit?
       This is addressed in the FTE manual. Please keep in mind that this is not an audit, but rather a review of full time equivalence for students enrolled in an e-school.

     ➢ Error?
       No response

2. How does ODE project the errors found?

   o For instance, if ODE finds a glitch in 1 of 10 systems used to capture duration. How would ODE project this error?
     ODE has not projected errors. ODE is reviewing information for purposes of making a full time equivalent determination and is not projecting errors. We would be interested in better understanding your perspective on this issue.

     ➢ For example, a student logs on at 11 pm 1/1/XX and doesn't log off until 1/2/xx at 8 am. You find the system has a glitch where is recording both the 9 hours (11 pm to 8 am) on 1/1/xx and 8 hours (12:01 am to 8 am) on 1/2/xx.

       • Is the error from the glitch projected over the entire population?
         No response

- Is the error from the glitch weighted then projected over the population?
  No response

APPENDIX F: GLOSSARY

Active Time (PLATO)	Active Time in PLATO represents the amount of time a student is engaging with an education module. See Login Time (PLATO) as well.
API	Application Programming Interface: A technology interface protocol; can be used to connect and LMS with a third party application or website.
Area Coordinator	An ODE employee that performs FTE reviews.
Blended Learning	A combination of digital and traditional brick-and-mortar learning. Students are required to have some element of control over time, place, path, or pace.
Brick-and-mortar	A physical building that students attend and receive in-person, on-site instruction.
Clawback	If ODE determines that a community school has over reported FTEs, based on an FTE review, ODE may force the school to repay the amount of money the school was not eligible to receive. Schools may appeal a clawback. Clawbacks typically are recuperated as reductions of future funding.
Duplication/Overlap	Duplication and overlap occur when duration, between a single or multiple duration sources, include times that intersect themselves and would result in a student's duration to be over reported.
Durational Data	Data that shows the amount of time a student is actively participating in learning opportunities. Duration is broken down to show hours and minutes, sometimes seconds.
EMIS	Education Management Information System. The statewide data collection system for schools to submit information, including attendance information.
E-School	E-schools are community schools that offer their students a fully digital educational curriculum. Students primarily perform school work and activities via computer and online.
Forced Out	This is a function within an LMS that automatically logs a student out of the system after a predetermined amount of idle time.
FTE	Full-Time Equivalent: A student is considered one FTE if that student remains enrolled for the entire school year without withdrawing during the year. For an e-school or blended-learning community school student, a full FTE requires that the student participate in the full number of learning opportunities offered by the school according to the official school calendar. For example, an e-school with a school calendar of 920 hours of learning opportunities would require a student to participate in at least 920 hours of learning opportunities to receive an FTE of 1.00. If that student only participated in 460 hours of learning opportunities, he or she would receive an FTE of 0.50.
FTE Manual	This manual is published by ODE on its website annually. The manuals serve as a reference guide for the Department's Area

	Coordinators for performing FTE reviews. The manuals also serve as a guide for community schools and other interested parties on how different laws and regulations affect the schools.
FTE Reviews	These reviews are performed by ODE to substantiate the level of funding that community schools report. They are performed periodically, unless issues arise in which case a school will receive a subsequent review the next year.
Idle Time	While idle time varies based on the system measuring it, this time represents the period where a student is not actively engaging in a learning opportunity.
IEP	Individual Education Plan. An IEP is a specialized plan developed by the school and a student's parents.
Innovation Program	Traditional school districts have implemented innovation programs that allow them to offer the same style of learning as e-schools or blended learning schools. These programs do not require the same level of detailed durational data to substantiate funding since traditional school districts are funded strictly on an enrollment metric.
ITC	Information Technology Center which handles information technology services for a school.
LMS	Learning Management System: A software program that digitally houses an educational curriculum. The LMS is the nexus for students to access assignments, testing, communications, and other educational materials.
Login Time (PLATO)	Login Time (PLATO) is the total amount of time from when a student enters the system until they exit it. This number will always be larger than the Active Time metric and may or may not include excessive idle time. Total Login Time had been determined as acceptable by ODE.
LTI	Learning Tools Interoperability: A technology interface protocol similar to API. Developed by IMS Global, now an open-source standard.
OCS	Ohio Compliance Supplement: Annual guidance document published on the Auditor of State's website for auditors and government entities.
ODE	Ohio Department of Education. The authoritative body for distributing school funding as well as performing FTE reviews.
Participation	While undefined by ODE or State law, participation implies an active engagement by a student with an educational activity. Participation does not presumably include excessive idle time or time spent by a student in an activity that is not educational in nature.
SIS	Student Information System is a system used by schools to collect information for reporting to ODE through EMIS. These systems are also used by traditional school districts and primarily focus on information useful for enrollment-based funding and therefore are often not as useful for an e-school.

Dave Yost · Auditor of State

E-SCHOOL FUNDING AND FTE MONITORING

FRANKLIN COUNTY

CLERK'S CERTIFICATION
This is a true and correct copy of the report which is required to be filed in the Office of the Auditor of State pursuant to Section 117.26, Revised Code, and which is filed in Columbus, Ohio.

Susan Babbtt

CLERK OF THE BUREAU

CERTIFIED
DECEMBER 13, 2018