Case Studies:

To provide evidence of the impact EPP completers have on P-12 student learning, the unit conducted two case studies. Upon receiving IRB approval, the EPP worked with school partners and faculty to identify two completers to serve as participants and selected one from the traditional (TRAD) program and one from the alternate (ALT) program. Each served in different schools but were asked to provide the following information: Unit Plans and Assignments, Unit Assessment Data, Standardized Data, and Completer Observations. The EPP also conducted interviews with the completers and their principals and had each complete the appropriate state-developed satisfaction survey. The case study was modeled on the option for private universities from the CAEP Standard 4 Evidence: A Resource for EPPs document (4.0.2).

The case study used semi-structured interviews to allow interviewers to follow relevant topics that arose during the interview for further clarification. The questions were the same for both the teacher and administrator and were modeled off questions used in the James Madison University EPP Completer Case Study (4.0.3).

Case Study Completer 1

Completer 1 was a female in her third year of teaching at a suburban, elementary school and was a graduate of the EPP's TRAD program. According to the state's Department of Education website, in 2018-19 the demographic makeup of her school was 70.5% (N = 432) white, 12.7% (N = 78) black, 7.7% (N = 47) multiracial, 6.2% (N = 38) Hispanic, and 2.9% (N = 18) Asian. Across the school, 26.1% qualified for free or reduced lunch. According to the Annual Performance Report, the district was above average for minimum and maximum teacher salary range, had a lower than average percentage of special education students (12.7%), and an above average percentage of students in gifted and talented programs (14.0%) compared to the state. The district had an "A" rating and the school performed slightly below the average pass rate on the state standardized test (80.7%) compared to the district (83.6%). But both outperformed the state average (50.8%).

Completer 1 provided a lesson plan for number modeling and finding totals; unit review; lesson study guide; lesson quick check and activities; pre- and post-unit assessment; DIBELS data for all first grade classes at the school; and pre- and post-test unit assessment data for all first grade classes at the school.

The completer provided the individual lesson plans within the unit, with one standard identified for each lesson. The lesson plans were minimal, each only one page, with brief descriptions of what the completer and students would do in each lesson. In addition to the lesson plans, the completer provided multiple examples of instructional materials and resources that provided students opportunities to practice these skills (4.1.1.1). While this lesson plans could have been stronger, her observations and student learning data suggest that she is an effective teacher.

The school uses a specific and thorough process for observing their teachers, which was evident in the feedback and provided as part of the case study documents (4.1.4.1). The first section of the observation form is a checkbox of expectations related to instruction and classroom environment. While completer 1 consistently checked the vast majority (or in several observations, all) of the boxes, the one area that was unchecked on two observations related to differentiated instruction. However,

written feedback on the observations were very positive and indicated consistent and strong instructional practices, which aligns with the quality of the unit materials that completer 1 provided.

The real strength of the documents provided by completer 1 was the unit data (4.1.2.1). There is pre and post-test data for all students in the first grade at her school organized by teacher to make comparison easy. The completer sent the pre- and post–test that assesses each of the seven skills identified in the data tracker. In the pre-test data, completer 1's students performed at a very high level (19/22 showing mastery) for all skills except addition and subtraction to determine the skip counting rule. On that skill, only eight of 22 students showed mastery in the pre-test, but all showed mastery on the post-test. In fact, all students demonstrated the level of mastery needed for all skills on the post-test.

Since the school provided the pre- and post-unit data for the entire grade level it was possible to compare completer 1's student performance to the other teachers. The percent correct for each of the seven questions were compared between all grade-level teachers using ANOVA. The findings indicated that there was no statistically significant difference in the percent of students who got correct answers on the pre-test questions between the various classes in the grade level, $F(4, 30) = 2.05$, $p = .11$. The findings indicate that any differences in the number of students who got the different questions correct was a product of chance. This is important as it suggests that, from a statistically significant perspective, the classes were performing similarly on the pre-test, which can inform findings on the post-test.

The post-test was also analyzed using ANOVA. The completer's students all showed growth as all 22 students demonstrated mastery on each of the seven skills. Additionally, the ANOVA analysis indicated that there was a statistically significant difference between the first grade classes in the percent of students with correct answers on the post-test, $F(4, 55) = 8.14$, $p < .00$, $\eta 2 = .379$. Post hoc analysis using Dunnett C found that completer 1's class outperformed two other classes in post-test performance, and these were the only statistically significant differences. This suggests that some salient factor, not mere chance, is responsible for the differences in the post-test scores. The reported effect size of $\eta 2 = .379$ suggests that 37.9% of the variance in the scores can be attributed to the predictor variable, which in this case is the teacher. While the sample size was small, completer 1 was found to have statistically significantly higher performance on the post-test than two other teachers in her grade level, and higher performance in general (though not statistically significant) than all the teachers in her grade level.

In addition to the pre and post-test data for all the classes of the same grade level within the school, completer 1's administrator provided de-identified DIBELS data for all first grade students from the 2018-19 school year, organized by each classroom teacher (4.1.3.1). Statistical analysis was conducted for completer 1's DIBELS, pre-, and post-test scores that were provided in comparison to her fellow grade-level teachers. The DIBELS composite score was compared for growth from beginning of the year (BOY) to end of the year (EOY) using ANOVA. There was no statistically significant differences between the completer and her grade-level colleagues, $F(4, 83) = .45$, $p = .77$. The findings indicate that any differences in the growth rate of the students on DIBELS composite scores in each of the classes was most likely a product of chance.

The last elements of the case study were interviews and a satisfaction survey. The interviews were semi-structured and are provided as evidence (4.1.5.1). The satisfaction survey was the same survey used by the state DOE (4.1.6).

Completer 1 was able to clearly explain what evidence she used to determine whether and how her students were learning. She noted using math quick checks, spirals, and checking retention of sight words as three ways she gauged comprehension and standardized tests such as DIBELS for checking overall learning. For students requiring differentiation or special assistance she indicated that she utilized a more hands-on approach for academic support but identified efforts to also support them for more successful classroom behavior, citing flexible seating as one such tool. Both the principal and the completer pointed out that the curriculum for the grade is preset and that her charge is to find the best way to engage students in the learning. In completing the satisfaction surveys, both the principal and completer responded with "Agree" or "Strongly Agree" for all statements and "Satisfied" or "Very Satisfied" for their level of overall satisfaction.

Case Study Completer 2

Completer 2 was a male in his second year of teaching at an inner city, elementary, charter school and was a graduate of the EPP's ALT program. He was in his second year as a completer but spent two years prior at the same school while completing his Master of Arts in Teaching. According to the state's Department of Education, his school is 73.9% (N = 363) Hispanic, 22.2% (N = 109) black, 2.6% (N = 13) white, and 1.2% (N = 6) multiracial. Across the school, 91.2% (N = 448) qualify for free lunch and 5.5% (N = 27) qualify for reduced lunch, meaning that 96.7% of students are living at 185% of poverty level or worse. According to the district's Annual Performance Report, the district has a higher than average percentage of special education students (16.4%, N = 70) and has a below average percentage of students in gifted and talented programs (0%, N = 0) when compared to the state. The school is below the average pass rate on the state standardized test (25.8%) compared to the state average (50.8%), but the district has an "A" rating on the federal accountability report card based on academic progress.

Completer 2 provided a science unit on energy and force; two weekly assessments used to assess student learning during the unit; unit pre and post assessment; pre and post assessment data for his three 4th grade science classes; two cycles of NWEA data from the 2018-19 school year for his students; additional standardized test data for the "focus group" students from each class; and administer-conducted completer observations.

Overall, the materials from completer 2 were comprehensive. The unit plan clearly mapped out the learning objectives for the unit, with objectives at different levels of thinking (engage, explore, explain, elaborate, and evaluate). There were objectives identified for each lesson with the formative assessment task, criteria for success, and even anticipated scenarios of students struggling and what he will do to address them if they arise. The assessment is part of the unit plan, with the specific standards that are assessed, key vocabulary, and materials needed. It is clear what the objective for each lesson is, how it will be assessed, and what the criteria for success in that lesson is (4.1.1.2).

Observations of completer 2 were conducted by the school, but the system did not appear as structured as that of completer 1 (4.1.4.2). Observations indicated two areas for improvement. First was student engagement. On September 26 the observation mentioned that a student was in and out of the room several times and the observer asked how completer 2 might be more deliberate in engaging him. On

November 14 the school observer indicated that she wanted to discuss with completer 2 how to, "boost student engagement and investment." The second area of improvement was focused on student accountability. On both November 1 and 14, the school observer noted that students weren't following directions or on task and asked how completer 2 could hold them accountable.

Completer 2 provided unit assessment data in the form of a weekly tracker and post-test unit data (4.1.2.2). His two weekly assessments were used to determine students' level of mastery of standards, and four learning objectives from the week. These standards and objectives were identified at the top of the weekly assessments, showing a high level of transparency in the completer's assessment writing. The same pre and post-test was used, and the standards were identified within the body of the assessment, after questions addressing those specific standards. Within the test, the completer identified answers at the different levels of mastery for short response questions, with a rubric for these short response questions.

There was pre and post-test data for one of the completer's three classes to which he taught the unit. Sixteen out of 23 students initially mastered the Habits of a Scientist standard, then all 23 students mastered this in the post-test. The standard covering how potential energy is converted to kinetic energy only included pretest data for four students in the "focus group, which three mastered. These same results are indicated in the post-test. Twenty of the 23 students mastered this standard in the post-test. Similarly, there is only pretest data for the end of unit assessment for the "focus group," with 1/5 showing mastery. This improved to 3/4 in the post-test (one student absent), and 22 students showed mastery in the class. Preferably, there would have been pre and post-test data for all students in all three classes. During the interview, the candidate disclosed administration identified the students for the "focus group," and that this is a common practice for data analysis within the school. These students are roughly one-half grade level below the expectation, so teachers focus on this group specifically because they are so close to grade level work.

The unit assessment data also included post-test data only for each class section on mastery of the unit standards. While this data offers limited value without the pre-test data for comparison, the key takeaway is that across all standards and all class sections, all but 2 standards were mastered by all the students. And of the two standards that were not unanimously mastered, only one student did not master them.

Completer 2 provided standardized test data for the five "focus group" students in each class and an NWEA comparison of the completer with the entire school (4.1.3.2). This included scale scores for ELA and math, Lexile, IREAD-3 initial and retake scores. The IREAD-3 retake score is of interest, because there is improvement in all students who had to retake this test. In such an instance, the completer would be responsible for some portion of that growth due to literacy instruction that is part of his science classes.

In analyzing the NWEA data, in 2016-17, the percentage of students meeting reading growth goals in completer 2's class was above the school, and the same was true for math growth goals in 2018-19. However, the percentage meeting reading and math growth goals in 2017-18 were below the school average. A similar pattern existed with projected proficiency; however, those numbers are lower than school averages across the entire 3 years of data outside of 2017-18 math.

During the semi-structured interviews, when asked what specific evidence he uses to determine impact on student learning, completer 2 stated that exit tickets and weekly quizzes were his primary tools. He also referred to using Second Step to both teach and assess social emotional learning for his students. His principal discussed how he remains calm when working with students with special needs and he referenced literacy intervention curriculum as one of his methods. Both the completer and his principal selected "Agree" or "Strongly Agree" for all the statements on the satisfaction survey, and "Very Satisfied" and "Satisfied" respectively for their level of overall satisfaction with the completer's preparation.

Effectiveness Rating Results from State DOE

Each year the state Department of Education provides the EPP with a review of teacher effectiveness (4.2.1). This report includes teachers with one, two, and three years of experience and how many were rated as "Effective" or "Highly Effective" by their supervisors. The EPP analyzes this data from multiple perspectives to look for trends and guidance on decision-making regarding curriculum and programming.

Looking at the overall ratings for the EPP effectiveness over the past three cycles of data the trend shows a decline. Through the three most recent cycles of data, the effectiveness rating dropped from 92% to 91% to 88%, each one below the state average. Given that the specific factors for this drop are not evident in the effectiveness data provided to the EPP, the EPP reviewed the data from different angles to look for trends.

Because the effectiveness data gathered by the state covers three years and teachers in their first, second, and third year of teaching, the EPP was able to follow cohorts at different points of their 1st, 2nd, and 3rd years as completers. The analysis was able to review the 2015-16 cohort through all three years after completion, the 2014-15 cohort through their second and third year as completers, and the 2016-17 cohort through their first and second years after completion. The common theme that arises regardless of how the data was analyzed was that as teachers spend more time in their profession, they were rated as more effective. This would not qualify as a surprise, but it does suggest a need to find ways to work with candidates throughout the program and get them better prepared to enter the classroom more confident and competent. The 97% effectiveness ratings for third year teachers prepared by the EPP is a strong number, but the opportunity for growth exists with recent completers just entering their classroom.

The EPP's largest school partner provided effectiveness data for novice and first year teachers for both the ALT and TRAD (4.0.4) programs. For the ALT program, 35% of novice teachers were rated as "Effective" or "Highly Effective" compared to only 25% for the district overall. For the TRAD program, 67% of novice teachers were rated as "Effective" or "Highly Effective."

In addition to the DOE effectiveness report, the EPP also reviewed the student impact data from the case studies, as this should indicate the effectiveness of the EPP's teacher preparation process. Completer 1's class showed statistically significantly higher performance on the post-test compared to two other teachers in her grade level (4.1.2.1), and her walkthrough observations also indicated that she was consistently meeting the expectations for instruction and classroom environment (4.1.4.1). Completer 2 showed growth in the pre- and post-test for the i-READ 3 assessment and his unit assessment data indicated a high percentage of mastery on the post-test (4.1.2.2). In the principal interviews it was noted that the school would like to have both completer 1 and completer 2 for as long as possible and each has been moved into leadership roles (4.1.5.1 & 4.1.5.2). Each of these pieces of evidence suggest these completers are effective in their practice.

Employer Satisfaction Survey Results from IDOE

Each year the state Department of Education surveys school leaders on their level of satisfaction concerning the preparation of first-year teachers by their EPP (4.3.1). The survey includes 20 questions broken into three sub-sections (Knowledge, Pedagogical, & Professional Disposition) in which the principal indicates their level of agreement with statements on a four-point scale ranging from "Strongly Disagree" to "Strongly Agree."

In reviewing the principal responses to the survey, a few trends arose. Principals, for example, consistently indicated strong agreement with the preparation of student dispositions. For three of the statements related to Professional Disposition, 100% of the principals surveyed selected "Agree" or "Strongly Agree." Specifically, those statements were for working with parents and guardians, working with other professionals and exhibiting ethical practice. Principals also chose "Agree" or "Strongly Agree" 98.33% of the time for content and knowledge preparation.

Areas that serves as opportunities for growth in the preparation of EPP candidates are classroom management and differentiation of instruction. Over the three years of the data, these were two of the lower rated areas by the principals at 91.67%. The ratings still exceeded state averages, but as part of a continuous improvement process, they were still viewed as both opportunities for growth.

The case study included both interviews and had the principals complete the state DOE employer satisfaction survey. The interviews indicated a level of satisfaction among the principals as they were asked how they saw the completer progressing in the school (4.1.5.1 & 4.1.5.2). The principal for completer 1 indicated that she could see completer 1 moving into an instructional coaching role in the future. The principal for completer 2 indicated that he had a future with the school for as long as he wanted. Additionally, both principals noted how the completers, even though early in their careers, had already moved into leadership roles. Completer 1 was already a grade level lead and completer 2 was the science chair. On the satisfaction surveys, both principals selected "Agree" for all statements, except the principal for completer 1 chose "Strongly Agree" for the completer's preparation to work

effectively in school cultures (4.1.6). Likewise, both principals chose "Satisfied" regarding their level of satisfaction on the completer's preparation by the EPP. The fact that each of the principals indicated that they saw a future for the completers and had moved them into leadership roles suggests both satisfaction with their preparation and a recognition of their effectiveness.

Completer Satisfaction Survey Results from the IDOE

Each year the Indiana Department of Education surveys first-year completers on their level of satisfaction concerning the preparation they received by their education preparation provider. The EPP then uses these surveys as part of their analysis regarding areas for improvement or review within the program (4.4.1). In reviewing the responses from the completers across three years of data, analyzing student assessment data and managing the learning environment were two opportunities for growth both in the cycle trends and aggregate ratings.

The EPP's largest school partner also surveyed completers on their feelings regarding preparation (4.0.4). Classroom management was mentioned as one area that the EPP could improve to better prepare their candidates in the future.

The EPP publishes a magazine annually that includes highlights of work that is being done within the various programs. They also include completer interviews on their reason for choosing their program and their experiences within the program. Those responses also provide insight into the satisfaction of program completers (5.0.1, p. 11 & 5.0.2, p. 18).

To provide additional measures, both completers were interviewed and completed the DOE satisfaction survey as part of the case study. During the interview with completer 1, when asked for areas she could improve, she indicated that differentiation was something she would like to work on (4.1.5.1). This was worth noting since in the three cycles of the DOE completer satisfaction survey, 6.25% (n=5) selected "Disagree" or "Strongly Disagree" regarding their preparation for using differentiated instruction. As a follow up question, interviewer 1 asked if Marian could have better prepared her in this area. Her response was that she felt very good about her preparation and that she knew what to do, but just needed to slow down and think about the entire group in those times. Completer 2 indicated that Marian could have better prepared him with skills for aligning curriculum to standards, but also suggested that the difficulties he faced may have been the product of not having any set curriculum when he arrived at the school (4.1.5.2). Both completers selected "Strongly Agree" with all the satisfaction elements of the DOE survey (4.1.6) and "Very Satisfied" in response to the statement, "Indicate your overall assessment of how well you were prepared to teach by Marian University."

Principal/Completer Comparison

To dig further into the make meaning of principal and completer responses, the EPP compared aggregated responses for both parties with state averages (4.0.5). Doing so gave the EPP the opportunity to detect not only where principals and completers agreed and disagreed, but to consider those perspectives compared to state averages. On 17 of the 21 statements, principals rating EPP

completers exceeded the state average, and on 14 of the 22 statements on the completer survey, EPP completers exceeded the state average.

Looking at areas of agreement, there were 10 statements in which the percentage of both principals and completers exceeded the state average for responses of "Strongly Agree" or "Agree." When combing the responses for the 10 questions in the section related to completer pedagogical preparation, both the principals and completers ratings exceeded the state averages. Likewise, across the entire survey, principal and completer ratings exceeded state averages when all responses were combined. An area for growth, which appeared in other components of standard 4, was in statement 10 regarding differentiated instruction. Principals exceeded state averages in their ratings, but completers did not.

Triangulation of Data

To make sense of the totality of the data in standard 4, the EPP looked for overarching trends. The two trends that appeared across all the components were the opportunity for growth in classroom management and differentiated instruction. Beginning in the case study observations, classroom management was noted as an area of improvement for completer 2. The data from the EPP partner also indicated that completers in that district felt that classroom management was an area in which they could have been better prepared. Responses to both the employer and completer surveys indicated that, while not a dire need, that classroom management was something that completers could use help upon entering the profession.

Similarly, differentiation was another area that appeared across all the components of standard 4. Completer 1 indicated that differentiated instruction was an area where she needed improvement during the interviews, this despite her assessment data and reviews from the principal being outstanding. Differentiated instruction appeared as an area of growth in the completer and principal surveys, generally being one of the lower rated elements.

case study responses about classroom management, observation data on classroom management, effectiveness data showing growth over time, completer and principal data regarding classroom management, IPS data on classroom management – same with differentiated instruction

Actions Taken

When he findings from the case study, effectiveness, completer satisfaction, and employer satisfaction data are analyzed, several themes are evident. First, the overall effectiveness of completers increases over time. While overall EPP effectiveness percentages dropped across the cycles, effectiveness for completers from year to year, as rated by supervisors, increased in each year. Second, classroom management was identified as a growth opportunity by completers and employers regarding completer preparation. Third, differentiated instruction was another area suggested in the data that the EPP can improve. While none of these received overwhelmingly poor ratings, they represent opportunities for growth for the EPP. Finally, it appears that the students who come through the EPP's teacher preparation program are prepared with the necessary dispositions to function in the role. Across the

board, the various components of the dispositions section of the satisfaction survey received high marks from completers and employers alike.

To address the findings from this data, the EPP has undergone a significant change in its approach to completer preparation. Working with the consulting group MGT to evaluate program design (5.3.2), and with NCTQ to review program curriculum (5.3.3), the program has been reimagined its approach to preparing candidates to be job ready immediately upon graduation. Two significant changes have come from this redesign. First, the program uses Mursion to expose candidates to the classroom environment and P-12 student interactions in their very first semester (1.5.3). The interactive software that uses artificial intelligence can simulate a wide array of customized classroom experiences from classroom management issues to their content questioning to parent-teacher conferences. The EPP has also designed the TRAD program to a 5-year model with the 5th year using a residency component where candidates are earning a Master of Arts degree while working under a master teacher. Finally, while the case study was extremely informative, the goal is to use the Residency Stakeholder Committee (2.1.4) and other partners to develop a system to gather data broadly in such a way that is does not create undue burden on the schools and completers. But to also gather and analyze data that is beneficial both the EPP and the schools in which its completers serve. All the changes are intended to address the growth opportunities identified in our work with partners, consultants, and in light of the available data.