Chapter 2: Claims and Rationale for Assessments

The fundamental inquiry of this study was guided by the systematic process of continuous improvement explained by the Baldrige Performance Excellence Framework for Education, which is a systems approach to evaluate and improve the processes and outcomes towards accomplishing the institutional mission and key objectives. The inquiry brief explores several key critical areas important to educator preparation, as explained in the CAEP standards, such as content and pedagogical knowledge of the candidates/completers, clinical partnerships and practice, candidate quality, recruitment and selectivity, completers’ teaching effectiveness and impact on P-12 student learning and development and overall quality assurance system.

The inquiry brief begins with examining the professional competence of CMU’s teacher education completers. This empirical evaluation derives evidence from direct and indirect measures assessing completers’ performance at various developmental levels, i.e., before entering into the teacher preparation, at the midlevel of teacher preparation, nearing program completion, at exit and during in-service. The following four claims investigate the effectiveness of CMU’s teacher preparation programs against CAEP Standard-1 and objectives of the PEU. Each claim was further supported by several sources of evidence, a description of the rationale for the chosen assessments, and the detailed specifications of each measure.

Claim-1 Do program completers demonstrate knowledge and understand the central concepts of the content by utilizing tools of inquiry and structures of the discipline to assure learners’ mastery of the content?

Claim-2 Do program completers create meaningful learning experiences for all students across various developmental levels in their content areas including the use of technology towards promoting student learning and development?

Claim-3 Do program completers effectively use research and evidence to improve student learning and their own professional practice?

Claim-4 Do program completers demonstrate reflective, ethical, collaborative behavior with learners, families and professional practitioners towards promoting student’s growth and advancing the profession?

[Note: Completers refer to candidates nearing completion (at exit) and candidates who exited the preparation program by successfully satisfying the requirements of the Educator Preparation Provider (EPP)]

Some of the evidence measures, such as the Principal Survey, the Alumni Survey, and the Teacher Effectiveness Labels evaluating the claims addressed in the components of CAEP Standard 4. Other standards of the educator preparation program addressing CAEP standards 2, 3, 4 and 5 were investigated through the self-study with evidence gathered from an internal audit process and case studies of the process and procedures at the PEU.
Table-2.a shows the Claims aligned with the CAEP Standard-1 and the list of the sources of evidences supporting the claim. Each of the evidence sources has multiple components addressing different CAEP standards. Tables-2.b. to 2.e. shows the delineated evidence sources mapped to the standards and the claims.

**Table-2.a. Alignment of CAEP Standard-1 Components to Claims**

<table>
<thead>
<tr>
<th>CAEP standard-1 Components</th>
<th>CMU’s Claims</th>
<th>Supporting Evidences</th>
</tr>
</thead>
</table>
| 1.1 Candidates demonstrate an understanding of the 10 InTASC standards at the appropriate progression level(s) in the following categories: the learner and learning; content; instructional practice; and professional responsibility. | CLAIM-2: Do program completers create meaningful learning experiences for all students across various developmental levels in their content areas including use of technology towards promoting student learning and development? | CMU Pre-Student Teaching Final Evaluations  
CMU Student Teaching Final Evaluations  
MDE University Supervisor Survey  
MDE Teacher Exit Survey  
MDE Year-out-survey  
CMU Alumni survey  
CMU Principal Survey  
MDE Teacher Effectiveness Labels |
| 1.1. InTASC – The learner and Learning | CLAIM-1: Do program completers demonstrate knowledge and understand the central concepts of the content by utilizing tools of inquiry and structures of the discipline to assure learners’ mastery of the content? | MTTC results  
CMU Student Teaching Final Evaluations  
MDE University Supervisor Survey  
MDE Teacher Exit Survey  
MDE Year-out-survey  
CMU Alumni survey  
CMU Principal Survey  
MDE Teacher Effectiveness Labels |
| 1.1. InTASC – Content | CLAIM-2: Do program completers create meaningful learning experiences for all students across various developmental levels in their content areas including use of technology towards promoting student learning and development? | CMU Pre-student Teaching Final Evaluations  
CMU Student Teaching Final Evaluations  
MDE University Supervisor Survey  
MDE Teacher Exit Survey  
MDE Year-out-survey  
CMU Alumni survey  
CMU Principal Survey  
MDE Teacher Effectiveness Labels |
| 1.1. InTASC – Instructional Practice | CLAIM-4: Do program completers demonstrate reflective, ethical, collaborative behavior with learners, families and professional practitioners towards promoting student’s growth and advancing the profession? | CMU Pre-student Teaching Final Evaluations  
CMU Student Teaching Final Evaluations  
MDE University Supervisor Survey  
MDE Teacher Exit Survey  
MDE Year-out-survey  
CMU Alumni survey  
CMU Principal Survey  
MDE Teacher Effectiveness Labels |
### 1.2 Providers ensure that completers use research and evidence to develop an understanding of the teaching profession and use both to measure their P-12 students’ progress and their own professional practice.

<table>
<thead>
<tr>
<th>CLAIM-3: Do program completers effectively use research and evidence to improve student learning and their own professional practice?</th>
<th>CMU Student Teaching Final Evaluations</th>
<th>MDE University Supervisor Survey</th>
<th>MDE Teacher Exit Survey</th>
<th>MDE Year-out-survey</th>
<th>CMU Alumni survey</th>
<th>CMU Principal Survey</th>
<th>MDE Teacher Effectiveness Labels</th>
</tr>
</thead>
</table>

### 1.3 Providers ensure that completers apply content and pedagogical knowledge as reflected in outcome assessments in response to standards of Specialized Professional Associations (SPA), the National Board for Professional Teaching Standards (NBPTS), states, or other accrediting bodies (e.g., National Association of Schools of Music – NASM).

<table>
<thead>
<tr>
<th>CLAIMS 1, 2, 3 &amp; 4</th>
<th>MTTC results</th>
<th>CMU Pre-student Teaching Final Evaluations</th>
<th>CMU Student Teaching Final Evaluations</th>
<th>MDE University Supervisor Survey</th>
<th>MDE Teacher Exit Survey</th>
<th>MDE Year-out-survey</th>
<th>CMU Alumni survey</th>
<th>CMU Principal Survey</th>
<th>MDE Teacher Effectiveness Labels</th>
</tr>
</thead>
</table>

### 1.4 Providers ensure that completers demonstrate skills and commitment that afford all P-12 students access to rigorous college and career-ready standards (e.g., Next Generation Science Standards, National Career Readiness Certificate, Common Core State Standards).

<table>
<thead>
<tr>
<th>CLAIM-1: Do program completers demonstrate knowledge and understand the central concepts of the content by utilizing tools of inquiry and structures of the discipline?</th>
<th>MTTC Results</th>
<th>CMU Student Teaching Final Evaluations</th>
<th>MDE University Supervisor Survey</th>
<th>MDE Teacher Exit Survey</th>
<th>MDE Year-out-survey</th>
<th>CMU Alumni survey</th>
<th>CMU Principal Survey</th>
<th>MDE Teacher Effectiveness Labels</th>
</tr>
</thead>
</table>

### 1.5 Providers ensure that completers model and apply technology standards as they design, implement and assess learning experiences to engage students and improve learning; and enrich professional practice.

<table>
<thead>
<tr>
<th>CLAIM-2: Do program completers create meaningful learning experiences for all students across various developmental levels in their content areas including use of technology towards promoting student learning and development?</th>
<th>CMU C grade addressing technology standards.</th>
<th>CMU Student Teaching Final Evaluations</th>
<th>MDE University Supervisor Survey</th>
<th>MDE Teacher Exit Survey</th>
<th>MDE Year-out-survey</th>
<th>CMU Alumni survey</th>
<th>CMU Principal Survey</th>
<th>MDE Teacher Effectiveness Labels</th>
</tr>
</thead>
</table>

### 2.a. Brief Definitions of the Sources of Evidence

Evidence for the claims are taken from nine major assessment tools used in the teacher preparation programs. A brief description of each measure is listed below. A detailed description including the quality of these measures can be found in the Methodology section of this document.

1. **Michigan Test for Teacher Certification (MTTC) results:**
   (CAEP Standard 1.1, 1.3, 1.4, Technology, Diversity)
   MTTC is a State licensure examination designed to measure candidates’ content knowledge at the end of their program of study.

2. **MDE University Supervisor Survey:**

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Michigan Department of Education administers this survey biannually. The university supervisors, who directly supervise the clinical placement and directed student teaching of teacher candidates, complete the survey reporting candidate preparedness through observation of candidate behavior.

3. MDE Teacher Exit Survey:
Michigan Department of Education administers this survey biannually. Candidates complete the survey electronically subsequent to finishing their final clinical experience. The survey contains questions designed to measure completers' perception of preparedness in their program of study.

4. MDE Year-Out-Survey:
Completers teaching in the state of Michigan 1 to 3 years after graduation complete this survey electronically. The survey presents perception data revealing how completers feel about their preparation as educators.

5. MDE Teacher Effectiveness Labels:
Teachers working in Michigan are evaluated annually and assigned Teacher Effectiveness Labels, indicating whether teachers are considered “Highly Effective -1,” “Effective -2,” “Minimally Effective -3,” and “Ineffective -4” based to several factors, including P-12 student academic growth on statewide assessments. The single effectiveness label is based on various factors used in teacher evaluation, including: (a) absenteeism from the job (b) classroom management (c) content knowledge (d) instructional practices (e) pedagogical knowledge and practice (f) professional development (g) professional responsibilities (h) student achievement data (i) student growth measures (j) student learning objectives (k) portfolio and/or peer reviews (l) self-assessment, and (m) surveys. The effectiveness ratings on teachers in their first three years of experience are analyzed for this study since teachers’ success in early annual evaluation can be reasonably considered to be a reflection of the preparation received by the educator preparation institution.

6. CMU Pre-Student Teaching Final Evaluations:
This evaluation is completed by the cooperating teachers at the end of the pre-student teaching experience. Pre-student teaching experience typically occurs during the candidate’s third year in the B.S. in Education program. The Pre-Student Teaching Final Evaluation is a comprehensive evaluation of candidate’s performance during clinical experience.

7. CMU Student Teaching Final Evaluations:
This evaluation is completed at the end of a candidate’s 16 week student teaching clinical experience. The final evaluation is completed by the cooperating teachers. The Student Teaching Final Evaluation is a comprehensive evaluation of candidate’s performance during clinical experience.
8. CMU Alumni Survey:  
(CAEP Standard 1.1, 1.2, 1.3, 1.4, 1.5, Technology, Diversity)  
CMU administers this survey annually. The survey data provide alumni self-reports on the extent to which key learning objectives have been achieved. In addition, the survey provides faculty and staff with feedback on alumni views of the organization of the program and its support services.

9. CMU Principal Survey:  
(CAEP Standard 1.1, 1.2, 1.3, 1.4, 1.5, Technology, Diversity)  
CMU administers this survey annually. The Principal survey data provide feedback from key employers of CMU teacher education alumni about the on-the-job success of CMU graduates.

2.b. CLAIM-1:  
Do program completers demonstrate knowledge and understand the central concepts of the content by utilizing tools of inquiry and structures of the discipline to assure learners’ mastery of the content?

2.b.1. Academic Components Ensuring Higher-order Content Knowledge  
(CAEP Standard 1)  
The teacher preparation program for initial certification at CMU involves 16 departments and three interdisciplinary councils in five academic colleges. These departments offer majors and/or minors, and discipline-specific methods courses that prepare teacher candidates to become certified in elementary and secondary disciplines in the state of Michigan. Sufficiency in higher-order content knowledge is ensured by (a) offering a wide spectrum of academic courses with rigor sufficient to, or exceeding, the State requirements; (b) enforcing a minimum amount of course hours; (c) enforcing admission criterion into the teacher programs; (d) implementing exit-criterion on the required content knowledge; and (e) testing the candidates’ ability through the State administered MTTC exam.

2.b.2. Courses and Minimum Credit Hours: Elementary Education Program  
(CAEP Standard 1)  
All candidates enrolled in the Elementary education program at CMU must complete a comprehensive major (45 credit hours) or planned program of study that offers broad content knowledge in several domains including integrated sciences, language arts, social studies, mathematics, reading, visual and performing arts, physical education and health. Further, all elementary candidates must select a major/minor content area from among the given options. For example, Option-1 is to select either one major or two minors from possible groups of majors/minors, and Option-2 is to select one major or one minor from the possible groups of majors/minors, as outlined in the undergraduate bulletin, year 2015-16. The number of hours required in a major in the Elementary Education program ranges from 31 to 40 semester hours, and the number of hours required in a minor ranges from 22 to 31 semester hours.

Last year, CMU completed a thorough mapping of the elementary certification program curriculum, subsequently reviewed student learning outcomes and performance measures, and bolstered the clinical experience modules. Based on the recommendations from the review process, the credit hours were condensed to...
offer the same breadth and depth of content in fewer courses, and new courses were created to maintain candidates’ competitiveness. The new revisions were approved by the State and will be effective starting AY 2015-16.

2.b.3. Courses and Minimum Credit Hours: Secondary Education Program
(CAEP Standard 1)
Candidates enrolled in the Secondary Education program at CMU must select one major and one minor from a group of possible majors and minors. The number of hours required in a major in the Secondary Education program ranges from 34 to 71 semester hours, and the number of hours required in a minor ranges from 23 to 36 hours. Thus, candidates complete a minimum total of 57 semester hours in at least two content areas.

2.b.4. Admission Criterion
(CAEP Standard 3.2)
All candidates must have an overall GPA of at least 3.0 (2.7 in AY 2014-15 and before) for admission to the teacher education. GPA computation includes all post-secondary coursework inclusive of CMU and non-CMU courses (in the case of transfer students). Many departments require a GPA of 2.70 or above in the teaching area as a requirement for student teaching and/or to be recommended for certification (e.g. English, Chemistry, and Mathematics).

All candidates enrolled in CMU complete the general education program (30 to 42 hours), which equips candidates with a common set of academic skills including writing, mathematics and quantitative reasoning, and oral English, referred to as Competencies, and a broad knowledge base in additional courses in Natural Sciences, Humanities, Social Sciences, and Studies in Culture and Diversity, referred to as the University Program.

2.b.5. The Michigan Test for Teacher Certification
(CAEP Standards 1.1, 1.3, 1.4, 3.5, 5.2)
Candidates who seek an elementary teaching certificate in the state of Michigan must pass the elementary subject area test of the Michigan Test for Teacher Certification (MTTC) in order to be certified to teach all subjects grades K-5 and/or all subjects grades K-8 in a self-contained classroom. They also have the option to pass the subject area test(s) in their major/minor(s) to be certified to teach the specific subject(s) in grades 6-8. Candidates who seek a secondary certificate (grades 6-12) in the state of Michigan must pass the subject area test of the MTTC in their respective major and minor subject areas. Higher-order skills such as critical thinking, problem solving, application of content knowledge, etc. are embedded within content area courses in which utilizing tools of inquiry and structures of the discipline are introduced, reinforced and emphasized.

2.b.6. Assessments Used to Evaluate Claim-1

Claim-1 is aligned with CAEP standards 1.1 (InTASC/content), 1.3 and 1.4. Claim-1 also addresses the “content and knowledge driven” outcomes of the CLeaR Conceptual Model. Claim-1 focuses on the content and higher-order academic skill sets to assure program completers capable of leading P-12 learners to mastery of content. Elements of Claim-1 examine candidates’ (at exit) and completers’
ability to: (a) understand the central concepts, tools of inquiry, structures of the discipline; (b) understand how to connect concepts and different perspectives to engage learners in critical thinking, creativity and collaborative problem solving related to local and global issues; (c) apply content and pedagogical knowledge as addressed in standards of Specialized Accreditation Associations (SPA) and Michigan InTASC; and (d) demonstrate skills and commitment that afford all P-12 student access to rigorous College and Career Ready standards (CCRS).

To evaluate this claim, evidence was collected from (a) MTTC results, (b) CMU Student Teaching Final Evaluations, (c) MDE University Supervisor Survey, (d) MDE Teacher Exit Survey, (e) MDE Year-Out Survey, (f) CMU Alumni Survey, (g) CMU Principal Survey, and (h) MDE Teacher Effectiveness Labels.

2.b.7. Rationale for Assessments: Claim-1

Evidence measures for Claim-1 were selected from each assessment directly or indirectly measuring elements of Claim-1. Please refer to Table-2.b. which details items in each assessment that present evidence of Claim-1. For Claim-1, data are provided in two categories, one addressing the CAEP 1.1 (InTASC standards 4 and 5) and a second addressing CAEP 1.4. Some of the assessment items may be referred in both categories as standards overlap.

In consideration of the effectiveness of the assessment sources in measuring InTASC standards 4 and 5, it appears that MDE assessments are well-aligned with the InTASC standards and, therefore, effectively measured the InTASC standards embedded in Claim-1. Items in the MDE surveys were consistent across instruments evaluating candidates’ performance, and completers’ perceptions at exit and in-service. Although the MDE surveys from 2012-13 and 2011-12 are slightly weaker in their alignment InTASC, reliability of effectively measuring the core aspects of InTASC remained intact.

CMU’s surveys were more general and demonstrated less specificity compared to the MDE surveys. The overarching aspects of the InTASC standards, however, are still captured by these surveys. For example, several components of the MDE survey measure constructs of Claim-1 specifically, while corresponding CMU survey components more generally consider the constructs. This is partially due to the fact that when CMU’s alumni and principal surveys were originally designed, the instruments measured additional elements of the teacher education program, such as quality of advising, course work, clinical experience, and employment status. CMU’s surveys were designed to be simple and direct, rather than lengthy questionnaires. Recently, CMU revised and realigned all of its assessments to the current expectations of professional practice and CAEP standards which improved the quality of the instruments and the feedback that they provide to candidates.

Michigan defines the characteristics of College and Career Ready students (CCRS) as those students who can: (a) use technology and tools strategically in learning and communicating; (b) use argument and reasoning to do research, construct arguments, and critique the reasoning of others; (c) communicate and collaborate effectively with a variety of audiences; and (d) solve problems, construct explanations, and design solutions. To evaluate candidates in terms of CCRS
attributes, data from assessment sources were analyzed for evidence as described by CAEP standards and MDE. For example, the technology proficiency defined in CCRS is evaluated through such items in the MDE measures as: (a) facilitated the creation of digital content by students; and (b) created a learning environment which engaged students in both collaborative and self-directed ways. Problem solving aspects of the CCRS are evidenced in elements of the MDE measures that assess candidates in: (a) applying various perspectives to analyze complex issues and solve problems; (b) developing meaningful learning experiences to help students apply content knowledge to real world problems; and (c) using content knowledge to help students solve real-world problems. During the revision process of CMU’s assessments, it was noted that problem solving, critical thinking and reasoning skills needed to be addressed specifically during the performance evaluation of candidates in order to better prepare them to teach College and Career Ready standards, hence the newly developed tools incorporate CCRS components.

The content knowledge of candidates was evaluated using the Michigan Test for Teacher Certification (MTTC) which is the state teacher licensure examination. The MTTC is a standardized assessment developed by Pearson. The test objectives were prepared jointly by the Evaluation Systems group of Pearson and in-service Michigan educators and purposed to measure candidate content knowledge in each content area.

Finally, Michigan Department of Education Teacher Effectiveness Labels were used to assess the ability of program completers to assure mastery of content learning for all P-12 students. This teacher effectiveness rating is based on several factors including P-12 student academic growth on statewide assessment.
| Table 2.b: Data Self-Assessment Items: Details of Assessment Items within Evidence Measures Pertaining to Claim-1. |
|-------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------------------|
| **Claim-1:** Do program completers demonstrate knowledge and understand the central concepts of the content by utilizing tools of inquiry and structures of the discipline to assure learners' mastery of the content? |
| **Details of Assessments Used for Evaluation** |
| **Aligned to CAEP stds:** | **CMU Student Teaching Final Evaluations** | **MDE University Supervisor Survey** | **MDE: Teacher Exit Survey** | **MDE: Year-out survey** | **CMU Alumni survey** | **CMU: Principal Survey** |
| **1.1** (InTASC/ ITASC/ CAEP stds.) | Taught the core concepts of the assigned subject area. Related classroom learning to the real world. Integrated subject matter with other content areas. Used a variety of teaching strategies to meet the different needs of students. Helped students become self-motivated and self-directed. Supported the use of available technology in student work. | Used knowledge of content area(s) to design high-quality learning experiences. Used multiple ways to model and represent key concepts in the content area(s) taught. Demonstrated a commitment to work with every student to ensure mastery of the content and skills taught. Questioned and challenged assumptions within the content area(s) being taught. Applied various perspectives to analyze complex issues and solve problems. Interpreted and evaluated information in their content area(s). Connected content knowledge to LOCAL issues in his or her teaching. Connected content knowledge to GLOBAL issues in his or her teaching. Developed meaningful learning experiences to help students apply content knowledge to real-world problems. | Use my knowledge of my content area(s) to design high-quality learning experiences. Use multiple ways to model and represent key concepts in the content area(s) I teach. Question and challenge assumptions within my content area(s). Apply various perspectives to analyze complex issues and solve problems. Interpret and evaluate information in my content area(s). Connect content knowledge to LOCAL issues within my teaching. Connect content knowledge to GLOBAL issues within my teaching. Develop meaningful learning experiences which help students apply content knowledge to real-world problems. | Use my knowledge of my content area(s) to design high-quality learning experiences. Use multiple ways to model and represent key concepts in the content area(s) I teach. Question and challenge assumptions within my content area(s). Apply various perspectives to analyze complex issues and solve problems. Interpret and evaluate information in my content area(s). Connect content knowledge to LOCAL issues within my teaching. Connect content knowledge to GLOBAL issues within my teaching. Develop meaningful learning experiences which help students apply content knowledge to real-world problems. | Teach contents in your discipline (major/minor). Incorporate curriculum standards. Align curriculum goals with state academic standards. Connect across content areas in developing appropriate instruction. |
| **1.4 & 1.3** | Used state and local student teaching standards to plan instruction. Supported the use of available technology in student work. | Questioned and challenged assumptions within the content area(s) being taught. Applied various perspectives to analyze complex issues and solve problems. Interpreted and evaluated information in their content area(s). Developed meaningful learning experiences to help students apply content knowledge to real-world problems. Used content knowledge to help students solve real-world problems. Facilitated the creation of digital content by students. Created an on-line learning environment for students which include digital content, personal interaction, and assessment. Created a learning environment which engaged students in both collaborative and self-directed ways. Connected content knowledge to LOCAL issues in his or her teaching. Connected content knowledge to GLOBAL issues in his or her teaching. | Question and challenge assumptions within my content area(s). Apply various perspectives to analyze complex issues and solve problems. Interpret and evaluate information in my content area(s). Connect content knowledge to LOCAL issues within my teaching. Connect content knowledge to GLOBAL issues within my teaching. Develop meaningful learning experiences which help students apply content knowledge to real-world problems. Facilitate the creation of digital content by students. Create an online learning environment for students which includes digital content, personal interaction, and assessment. Create learning environments that support individual and collaborative learning. | Question and challenge assumptions within my content area(s). Apply various perspectives to analyze complex issues and solve problems. Interpret and evaluate information in my content area(s). Connect content knowledge to LOCAL issues within my teaching. Connect content knowledge to GLOBAL issues within my teaching. Develop meaningful learning experiences which help students apply content knowledge to real-world problems. Create learning environments to support individual and collaborative learning. Facilitate the creation of digital content by students. Create an online learning environment for students which includes digital content, personal interaction, and assessment. | Incorporate curriculum standards. Align curriculum goals with state academic standards. Connect across content areas in developing appropriate instruction. |

**CMU:** Carnegie Mellon University **MDE:** Michigan Department of Education **ITASC:** Integrating Technology into the Academic Standards **TASC:** Teacher Accreditation Standards Council **CAEP:** Council for the Accreditation of Educator Preparation **ITASC:** Integrating Technology into the Academic Standards **TASC:** Teacher Accreditation Standards Council **CAEP:** Council for the Accreditation of Educator Preparation **CMU:** Carnegie Mellon University **MDE:** Michigan Department of Education **ITASC:** Integrating Technology into the Academic Standards **TASC:** Teacher Accreditation Standards Council **CAEP:** Council for the Accreditation of Educator Preparation **CMU:** Carnegie Mellon University **MDE:** Michigan Department of Education **ITASC:** Integrating Technology into the Academic Standards **TASC:** Teacher Accreditation Standards Council **CAEP:** Council for the Accreditation of Educator Preparation

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2.c. CLAIM-2:
Do program completers create meaningful learning experiences for all students across various developmental levels in their content areas including the use of technology towards promoting student learning and development?

2.c.1. The Academic Program of Study: Ensuring Claim-2
(CAEP Standards 1.1, 1.3, 1.5)
CMU believes that a combination of classroom theory and practical field experiences is of utmost importance in the development of candidates’ pedagogical knowledge and demonstration of instructional pedagogy. The core principle of CMU’s educator preparation includes multifaceted foci on cognitive, affective, and physical needs and characteristics of each learner. This principle is based on the understanding that learning is a continuous process and that all students can experience effective learning with appropriate facilitation.

Candidates acquire the knowledge and skills addressed in Claim-2 at various stages of their preparation, i.e., during professional education course, content area methods courses, and clinical experiences. All teacher candidates complete courses in teaching methods, learning theories, learner development, teaching students in inclusive setting, and educational technology.

Elementary education candidates complete methods courses in their planned program of study learning methods to teach reading, mathematics, social studies, science, art, physical education, and music. In addition, elementary education candidates complete methods course in their areas of specialized studies emphasizing planning, instruction, and assessment. Secondary education candidates take methods course in their content area within the major/minor. In methods courses, candidates learn a variety of lesson and unit planning models allowing them guided practice in appropriately employing pedagogical strategies, assessments, and differentiated instruction with consideration of content and the needs of diverse students. Clinical components (also known as Pre-Student Teaching) are concurrently scheduled during methods courses or may be a separate co-requisite course in which candidates have the opportunity to practice their teaching in school environments, thereby connecting both theory and practice.

Candidates complete a variety of courses focused on learning theories, learner development, teaching students in inclusive setting, and psychological foundations of education. Learning how to appropriately and accurately assess student learning is an integral part of all education courses. Candidates learn how to write effective lesson plans that link goals, objectives, procedures, and assessment. To fulfill these requirements, elementary education candidates take EDU 393: Learning Theory in Elementary Education and secondary education candidates take EDU 325: Middle Level and High School Teaching Methods. Further, all teacher education candidates take HDF 100: Lifespan Development and SPE 504: Teaching Students in Inclusive Settings.

Candidates in the initial program avail technology as an appropriate tool to enhance teaching and learning in schools. For example, using the Internet, using utility software (e.g., database, spreadsheet), and learning about the implications that software tools present in enhancing P-12 student learning are taught in specific technology courses. Professional education courses include technology
components requiring candidates to use specific and/or general technologies as teaching and learning tools, and candidates also explore the implication of technology in classrooms. Feedback on the candidates’ abilities to integrate technology in their teaching is measured via the Student Teaching Evaluation and the Survey of candidates.

All of the initial teacher education programs include, at minimum, a 45-clock hour pre-professional (pre-admission) observation experience, a 30-clock hour pre-student teaching experience within the cohort system of classes, and a full-time 16-week student teaching experience. The number of clock hours of clinical experiences for elementary and secondary candidates are comparable in length; whereas, highly specialized programs, such as those in Special Education, require additional and specific clinical experiences.

2.c.2. Assessments Used to Evaluate Claim-2

Claim-2 is aligned with CAEP standards 1.1 (InTASC/The Learner and Learning and Instructional Practice), 1.3 and 1.5. Claim-2 also addresses the “Learner-centered” and “Reflective” practices outcomes of the CLear Conceptual Model. Claim-2 examines candidates (at exit)/completers’ (a) understanding of learner development and learner difference to design and implement developmentally appropriate and challenging learning experiences; (b) ability to create learning environments that support P-12 student learning and development; (c) understanding and application of multiple methods of assessment to engage learners in their own growth, to monitor progress and to guide instructional practice; (d) ability to plan instructions that supports every students in meeting rigorous learning goals; (e) understanding and application of various instructional strategies to support learners to develop deep understanding of the content; (f) apply content and pedagogical knowledge as addressed in standards of Specialized Accreditation Associations (SPA) and Michigan InTASC; and (g) ability to model and apply technology standards as they design, implement and assess learning experiences to engage students and improve learning.

In order to evaluate this claim, evidences were taken from (a) CMU Pre-Student Teaching Final Evaluations; (b) CMU Student Teaching Final Evaluations; (c) MDE University Supervisor Survey; (d) MDE teacher exit survey; (e) MDE Year-Out Survey; (f) CMU Alumni Survey; (g) CMU Principal Survey; and (h) MDE Teacher Effectiveness Labels.

2.c.3. Rationale for Assessments: Claim-2

Evidence measures for Claim-2 were carefully selected from each assessment measure that directly or indirectly measured elements of Claim-2. Please refer to Table-2.3 which presents the delineated evidence items within each assessment measure. For Claim-2, evidence is provided in three categories, i.e., those addressing (a) CAEP 1.1 (InTASC # 1, 2 & 3), (b) CAEP 1.1 (InTASC # 6, 7 & 8) and (c) CAEP 1.5. Some of the assessment items may be represented in more than one category as standards overlap.

Various aspects of the standards addressed by Claim-2 were evaluated by assessment probes around program completion (i.e. Student Teaching evaluations,
MDE University Supervisor Survey, MDE Teacher Exit Survey) and post-completion (i.e. MDE Year-Out Survey, CMU Alumni Survey and CMU Principal Survey). Evidence of Claim-2 included candidates’ ability to support P-12 students from diverse population (i.e. diverse cultural and ethnic backgrounds, English language learners, special education students, gifted and talented students, and students with disabilities), manage learning environments, communicate expectations with colleagues and families, use state and local standards to plan instruction, use various instructional strategies and assessments to guide instruction, effectively integrate educational technology, practice high-ethical standards in the use of educational technology and several other output attributes of Claim-2.

Finally, the ability of the completers to impact P-12 student learning and development was evaluated using MDE Teacher Effectiveness Labels. The effectiveness evaluation is based on several factors including P-12 student academic growth on statewide assessments. Data from MDE Teacher Effectiveness Labels are derived from a subpopulation of CMU completers employed in Michigan public schools.
Table 2c: Data Self-Assessment Items: Details of Assessment Items within Evidence Measures Pertaining to Claim-2.

<table>
<thead>
<tr>
<th>Claim-2: Do program completers create meaningful learning experiences for all students across various developmental levels in their content areas including the use of technology towards promoting student learning and development?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Details of Assessments used for Evaluation</strong></td>
</tr>
<tr>
<td><strong>Aligned to CAEP stds.</strong></td>
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<tr>
<td>1.1 (InTASC/Learner and Learning) &amp; 1.3</td>
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<tr>
<td>Practice &amp; Instructional Practice</td>
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</tbody>
</table>
| 1.5 & 1.3 | No Assessment items tied with technology standards | Integrated educational technology into classroom instruction
Supported the use of available technology in student work
Used technology to organize and manage records | Facilitated the creation of digital content by students.
Created an on-line learning environment for students which includes digital content, personal interaction and assessment.
Integrated digital content into her or his teaching which is pedagogically effective.
Used technology tools to organize the classroom, assess student learning and her or his teaching, and communicate.
Practiced high ethical standards in his or her use of technology. | Facilitate the creation of digital content by students.
Create an online learning environment for students which includes digital content, personal interaction, and assessment.
Integrate digital content into my teaching which is pedagogically effective.
Use technology tools to organize my classroom, assess student learning and my own teaching, and communicate.
Practice high ethical standards in my use of technology. | Facilitate the creation of digital content by students.
Create an online learning environment for students which includes digital content, personal interaction, and assessment.
Integrate digital content into my teaching which is pedagogically effective.
Use technology tools to organize my classroom, assess student learning and my own teaching, and communicate.
Practice high ethical standards in my use of technology. | Integrate available technology into planning and teaching for differentiating instruction
Use appropriate technology in carrying out your professional responsibilities | Use available technology for instructional delivery |
2.d. CLAIM-3:
Do program completers effectively use research and evidence to improve student learning and their own professional practice?

2.d.1. Academic Components Facilitating Candidates’ Ability to Apply Research and Evidence
(CAEP Standard 1.2)
All PEU programs include research components that teach candidates to use current research to inform their practice. The core content area courses in STEM fields, such as integrated science, biology, chemistry, geography, mathematics, as well as social studies, include preparing teacher candidates for various aspects of research in teaching. These include constructing new knowledge by conducting research, reading, discussing, and applying inquiry methods, mathematics and analytical thinking to investigate evidence, and analyzing data in the field. Similarly, the core courses in the fields of language arts, foreign languages, physical education, and health include preparing teacher candidates to use research and reference resources for inquiry-based learning in literacy education, human physiology and health sciences.

Methods courses prepare teacher candidates to use various levels of formal and informal assessment strategies to ensure continuous intellectual, social and physical development of learners. In addition, SPE 504: Teaching Students in Inclusive Settings prepares candidates to apply inclusive and evidence based practices to foster learning for all students. The use of research to develop an understanding of the teaching profession is being taught and reinforced through curricular components of the teacher education programs and CMU is revisiting the e-portfolio-based assessment to determine how this measure might directly assess these elements. For example, the methods courses teach candidates to (a) use a variety of discipline-specific, researched-based, formative and summative assessment practices (e.g., classroom observations, performance assessments, computerized assessments, concept inventories, classroom surveys, and traditional worksheets and tests) and (b) conduct investigations by formulating a clear statement of questions; gathering, organizing and evaluating evidence from variety of sources; and analyzing, interpreting, and reporting results.

Feedback on how well candidates use research and evidence to assess student learning is obtained from the clinical evaluations, Survey of Student Teachers, and Employer surveys.

2.d.2. Assessments Used to Evaluate Claim-3

Claim-3 is aligned with CAEP standards 1.2 and 1.3. Claim-3 also addresses the “Reflective” practice outcomes of CLeaR Conceptual Model. Claim-3 examines candidates’ ability to use research and evidence (a) to develop an understanding of the teaching profession; (b) to measure their P-12 students’ progress; and (c) to measure their own professional practice.

This claim purposes to measure candidates’ use of research and evidence in three dimensions outlined in CAEP standard 1.2. Evidence was obtained from the following assessments: (a) CMU Student Teaching Final Evaluations; (b) MDE
University Supervisor Survey; (c) MDE Teacher Exit Survey; (d) MDE Year-Out-Survey; (e) CMU Alumni Survey; (f) CMU Principal Survey; and (g) MDE Teacher Effectiveness Labels.

2.d.3. Rationale for Assessments: Claim-3

The assessments presenting data that demonstrates evidence of Claim-3 address the ability of the completers (a) to use P-12 student assessment data to guide instruction and professional practice; (b) to analyze assessment data to understand patterns and gaps in learning for each student, and for group of students; (c) to use assessments to improve the teaching-learning process, and (d) explain assessment and standardized test results to parents. Table-2.3 details the subsections of each assessment that provides direct evidence for Claim-3.
Table 2.d. Data Self-Assessment Items: Details of Assessment Items within Evidence Measures Pertaining to Claim-3

<table>
<thead>
<tr>
<th>CLAIM-3: Do program completers effectively use research and evidence to improve student learning and their own professional practice?</th>
<th>Details of Assessments used for Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aligned to CAEP stds.</strong></td>
<td>CMU Student Teaching Final Evaluations</td>
</tr>
<tr>
<td><strong>1.2</strong></td>
<td>Used assessments to guide instructional and/or reflect on student learning</td>
</tr>
</tbody>
</table>
2.e. CLAIM-4:
Do program completers demonstrate reflective, ethical, collaborative behavior with learners, families and professional practitioners towards promoting student's growth and advancing the profession?

2.e.1. Academic Components Ensuring Claim-4
(CAEP Standards 1.1, 1.3)
Knowledge of the profession is first introduced to candidates in EDU 107: Introduction to Teaching, which is required for all candidates for admission to teacher education. Further, teacher candidates are provided opportunities to develop dispositions and characteristics of reflective, collaborative, and ethical practitioners in methods courses and professional education courses including EDU 432: Student Teaching Seminar and EDU 458: Student Teaching. Elementary candidates complete ART 345: Art in the Elementary School, MUS 330: Music for Elementary Classroom Teachers, PES 310: Physical Education for the Classroom Teachers, ENG 315: Teaching Writing in Elementary and Middle Schools and HSC 345: Health Education in the Elementary School. Secondary candidates complete EDU 325: Middle and High School Teaching Methods, EDU 495: Foundations of Education and content-specific methods courses, in which they develop the professional characteristics of an effective teacher. In addition, clinical experiences provide all candidates the opportunity to practice and demonstrate appropriate communication and collaboration skills, knowledge of professional organizations, and provide candidates with resources to support and improve their teaching and learning practice.

2.e.2. Assessments Used to Evaluate Claim-4

Claim-4 is aligned with CAEP standard 1.1 (InTASC Professional Responsibilities) and 1.3. Claim-4 also addresses the “Professionalism” outcomes of the CLeaR Conceptual Model. Claim-4 examines candidates’ ability to demonstrate reflective, ethical, collaborative behavior with learners, families, and professional practitioners towards promoting student’s growth and advancing the profession.

In order to evaluate this claim, evidence was obtained from the following assessments: (a) CMU Pre-student Teaching Final Evaluations; (b) CMU Student Teaching Final Evaluations; (c) MDE University Supervisor Survey; (d) MDE Teacher Exit Survey; (e) MDE Year-Out Survey; (f) CMU Alumni Survey; (g) CMU Principal Survey; and (h) MDE Teacher Effectiveness Labels.

2.e.3. Rationale for Assessments: Claim-4

Data presenting evidence of Claim-4 address various aspects of professional practice explained in InTASC standards 9 and 10. For example, leadership and collaboration are assessed by determining that candidates (a) collaborate with colleagues and other school personnel on professional issues; (b) take on service roles in the teaching profession (such as curriculum committees and school improvement teams); and (c) seek out district resources that students need. Ongoing learning and ethical practice are measured by data indicating whether candidates (a) participate in professional growth opportunities; (b) use school and
district resources to enrich instruction; (c) use professional development opportunities to improve teaching; (d) engage in reflection on professional practice as part of a life-long learning process; (e) behave ethically in the variety of situations faced as a teacher; and (f) demonstrate dispositions, ethics, and behaviors appropriate to the profession. Table-2.5 shows details of the items used to collect evidence within each assessment measure.

CMU is in the process of implementing a teaching promise group interview process in which candidates will be assessed for their potential to become effective teachers. The process assesses each candidate’s demonstration of positive and influencing human interaction and leadership prior to admission to the teacher preparation program. Upon implementation, this interview-based evaluation will add additional data and serve as an early check to ensure candidates’ potential to develop into effective teachers (practitioners).
Table 2c. Data Self-Assessment Items: Details of Assessment Items within Evidence Measures Pertaining to Claim 4

| CLAIM 4: Do program completers demonstrate reflective, ethical, collaborative behavior with learners, families and professional practitioners towards promoting student’s growth and advancing the profession? |
|---|---|---|---|---|
| **Details of Assessments used for Evaluation** |
| **Aligned to CAEP stds.** | CMU Pre-student Teaching Final Evaluations | CMU Student Teaching Final Evaluations | MDE University Supervisor Survey | MDE Teacher Exit Survey | MDE Year-out survey | CMU Alumni survey | CMU Principal Survey |
| **1.1 (InTASC/Professional Responsibilities)** | Collaborates with host teacher in an effective manner | Behaved ethically in the variety of situations faced as a teacher | Used technology tools to organize the classroom, assess student learning and her or his teaching, and communicate. | Use technology tools to organize my classroom, assess student learning and my own teaching, and communicate. | Use technology tools to organize my classroom, assess student learning and my own teaching, and communicate. | Use technology tools to organize my classroom, assess student learning and my own teaching, and communicate. | Use appropriate technology in carrying out your professional responsibilities |
| | Attends professional opportunities made available to CMU Student (i.e. staff meeting, PD, etc.) | Collaborated with colleagues on professional issues | Practiced high ethical standards in his or her use of technology. | Practice high ethical standards in my use of technology. | Demonstrate dispositions, ethics and behaviors appropriate to the profession | Demonstrate dispositions, ethics and behaviors appropriate to the profession |
| | Acts in a professional manner with staff and students | Participated in professional growth opportunities | Years 2011-12 and 2012-13 survey includes, | Years 2011-12 and 2012-13 survey includes, | Work effectively within the school community | Work effectively within the school community |
| | Professionally dressed and groomed | Used technology to organize and manage records | Student teacher/intern abilities in WORKING IN THE SCHOOL AND DISTRICT ENVIRONMENT: | Behave ethically in the variety of situations I will face as a teacher. | Communicate effectively with parents | Communicate effectively with parents |
| | Models desired behaviors (i.e. punctual, confidential, ethical, etc.) | Demonstrated responsible citizenship | Uses state and local student learning standards to plan instruction. | Use professional development opportunities to improve my teaching. | Deal with school politics |
| | | | Communicates with parents, guardians and families. | Collaborate with colleagues and other school personnel. | | | |
| | | | Behaves ethically in the variety of situations faced as a teacher. | Seek out district resources that students need | | | |
| | | | Teaches effectively in schools with limited resources. | Take on service roles in the teaching profession (such as curriculum committees and school improvement teams). | | | |
| | | | Collaborates with colleagues on professional issues. | Engage in reflection on my professional practice as part of a life-long learning process. | | | |
| | | | Access school and district resources that students need | Use technology for my professional development. | | | |
| | | | Participates in professional growth opportunities. | | | | |
| | | | Uses school and district resources to enrich instruction. | | | | |
Table 2. Criterion of Success and the Rationale.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Criterion of Success</th>
<th>Rationale</th>
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<tbody>
<tr>
<td>MTTC results</td>
<td>At least 90% of the candidates will pass MTTC on their cumulative attempts</td>
<td>The Statewide 3-year mean cumulative passing percentage was 86.1% for the period August 2011 through July 2014, with a range of 70.3% – 95.8%. With this information, the 90% criterion was heuristically determined by the members of the PEAC.</td>
</tr>
<tr>
<td>CMU Pre-student Teaching Final Evaluations</td>
<td>At least 90% of the candidates will receive a rating of 3 or higher on the 4-point scale i.e. “1-Ineffective”, “2-Minimally Effective”, “3-Effective” and “4-Highly Effective”</td>
<td>The three recent evaluations had 94.12% (Spring’15), 95.67% (Fall’14) and 95.15% (Spring’14). The 90% was set as the lower bound so that any drop below that would trigger a corrective feedback.</td>
</tr>
<tr>
<td>CMU Student Teaching Final Evaluations</td>
<td>At least 90% of the candidates will receive a rating of 3 or higher on the 4-point scale i.e. “1-Not at all agree”, “2-Somewhat agree”, “3-Mostly agree” and “4-Strongly agree”</td>
<td>The three recent evaluations had 96.43% (AY 14-15), 96.35% (AY 13-14) and 95.98% (AY 12-13). The 90% was heuristically determined by the PEAC members.</td>
</tr>
<tr>
<td>MDE University Supervisor Survey</td>
<td>At least 90% of the candidates will receive a rating of 3 or higher on the 4-point Likert scale i.e. “1-Strongly disagree”, “2-Somewhat disagree”, “3-Somewhat agree” and “4-Strongly agree”.</td>
<td>Statewide, the mean efficacy (defined as the overall percentage of “3” and “4” responses on the Likert scale) was 94.4% in the combined MDE university supervisor and the Teacher Exit Surveys for the year 2013-14. The highest was 99.4% and the lowest was 88.8%. The 90% was heuristically determined.</td>
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<td>MDE Teacher Exit Survey</td>
<td>At least 90% of candidates will indicate 3 or higher on the 4 point Likert scale i.e. “1-Strongly disagree”, “2-Somewhat disagree”, “3-Somewhat agree” and “4-Strongly agree”.</td>
<td>Statewide, the mean efficacy (defined as the overall percentage of “3” and “4” responses on the Likert scale) was 94.4% in the combined MDE university supervisor and Teacher Exit Surveys for the year 2013-14. The highest was 99.4% and the lowest is 88.8%. The 90% was heuristically determined.</td>
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<tr>
<td>CMU Alumni survey</td>
<td>At least 90% of completers will indicate adequately prepared or well prepared on the 4 point Likert scale i.e. “1-Well prepared”, “2-Adequately prepared”, “3-Barely prepared” and “4-Not at all prepared”</td>
<td>The 90% was heuristically set as the lower bound so that any drop below that would trigger a corrective feedback. The three recent alumni survey ratings were 80.27% (AY 13-14), 81% (AY 12-13) and 78.80% (AY 11-12).</td>
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<tr>
<td>CMU Principal Survey</td>
<td>At least 90% of the principals will indicate CMU completers as adequately prepared or well prepared on the 4 point Likert</td>
<td>The three recent evaluations had 91.19% (AY 14-15), 92.93% (AY 13-14) and 90.35% (AY 12-13). The 90% was heuristically determined.</td>
</tr>
<tr>
<td><strong>MDE Teacher Effectiveness Labels</strong></td>
<td>At least 90% of the completers (for whom the effectiveness labels are available from the State) will receive a rating of &quot;effective&quot; or &quot;highly effective&quot; on the 4-point scale i.e. “1-Highly Effective”, “2-Effective”, “3-Minimally Effective”, and “4-Ineffective”.</td>
<td>According to the State, over half of the districts surveyed within Michigan (53.6%) reported that student growth accounted for 20-29% of teachers’ and administrators’ final ratings. Hence, this measure is an important indicator of completers’ impact on P-12 students. Statewide, in 2013-14, 97.3% of teachers were rated “effective” or “highly effective”. Hence, the 90% was set as the lower bound.</td>
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