

- 4.3 Content Accuracy
- 4.5 Content Abstraction
- 4.6 Content Relevance
- 4.7 Content Interconnections
- 4.8 Content Societal Impact

InTASC Category III: Instructional Practice (InTASC Standards 6-8):

- 2.1 Lesson Sequence
- 2.2 Lesson Importance
- 2.3 Lesson Assessments
- 2.4 Lesson Investigation
- 2.5 Lesson Resources
- 3.1 Implementation Questioning
- 3.3 Implementation Modification
- 3.4 Implementation Timing
- 3.5 Implementation Connections
- 3.6 Implementation Safety
- 4.4 Content Assessments

InTASC Category IV: Professional Responsibility (InTASC Standard 9):

- 2.6 Lesson Reflection

The following NSTA SPA standards were also added to the UTOP instrument; only student teachers completing the BSED Secondary Education, Science (Biology, Chemistry, Earth Science, General Science, Physics) and the MAT-S Teaching Science With Certification prMCIDf-5(at)-3(io)7(n)] TETQq0.00

interpretation section of this assessment file (i.e., item d.). These examples illustrate use of data in Section 4 Findings, Implications, and Use of Data.

2. Data Sources and Methods

The UTOP evaluation form is used for two formal evaluations during student teaching in all undergraduate and graduate Secondary Mathematics Education and Science Education initial teacher preparation programs. A copy of the UTOP is provided as Appendix A at the end of this evidence file. This evidence file contains UTOP data results from Fall 2020 to Spring 2023 (i.e., three cycles of data). Data results are updated in this evidence file at the conclusion of each academic year.

The UTOP is used for two formal evaluations during student teaching for the secondary education mathematics and science education programs. These programs are affiliated with the UTeach program at the University of Texas at Austin and use the UTOP, an instrument developed by the UTeach program. The primary purpose of the UTOP is to provide targeted feedback to a candidate regarding their performance related to discipline-related best practices and the InTASC Standards. The UTOP is provided to student teachers through the university's learning management system. The scoring rubric is available at the university's website.


3 = Observed an adequate amount / Demonstrated adequately [Target performance]

4 = Observed often / Demonstrated well

5 = Observed to a great extent / Demonstrated to a great extent

According to the training guide, each value on the rating scale corresponds to two attributes of the candidate's performance—the frequency of the occurrence of the indicator, and the quality of the implementation of that indicator—though only one of these attributes may be appropriate for a given lesson.

The Professional Education Programs (PEP) Director serves as the primary instructor for all student teaching courses and sections. Before posting individual grades, PEP staff verify all student teaching requirements have been successfully completed by each candidate, including a passing score on the UTOP (CAEP Standard R1 and Standard Component R3.3).

At the completion of each semester, the UTOP data are extracted from the university's LMS (Learning Management System) and archived in Business Objects, a university supported reporting tool. The data are disaggregated by program and results are added to Assessment 4 of the current version of each program review report for all undergraduate and graduate 

The number of program graduates and response rates related to the data reported are listed in the left column of the tables in Section 5 Data at the end of this evidence file.

The number of programs graduates by program and semester are listed in the table below. The data presented below only represent candidates in the following programs which adopted the UTOP instrument: BSEd Secondary Education, Mathematics, BSEd Secondary Education, Sciences (Biology, Chemistry, Earth Science, General Science, Physics), and MAT-S Teaching Science with Certification. All other NAU initial teacher preparation programs use the NIET Aspiring Teacher Rubric for the student teaching evaluation (see Evidence File R1.1_EF02_Student_Teaching_Evaluation_Aspiring Teacher Rubric

for a single student, so that data point was not considered because there was not a pattern across multiple semesters.

Results Patterns Across AYs 2020-2021, 2021-2022, and 2022-2023

The following strengths and areas for improvement were identified:

Strengths (patterns of average scores around 4.5 or higher at mid-term)

Organizing classroom appropriately such that students can work in groups easily and get to lab materials as needed, and the teacher can move to each student or student group (Classroom Organization, InTASC Standard 3)

Accurate written and verbal content information (Content Accuracy, InTASC Standard 4)

Using appropriate resources (e.g., presentation tools, visual organizers, calculators, lab equipment, manipulatives, worksheets, etc.) to implement the lesson (Lesson Resources; InTASC Standard 7)

Implementing safe, ethical, and environmentally appropriate lab procedures and/or classroom activities (Implementation Safety; InTASC Standard 8)

Reflecting critically about their practice after the lesson including recognizing strengths and weaknesses related to planning, structure of the lesson, and instructional decision-making during the lesson (Lesson Reflection; InTASC Standard 9)

Content Knowledge was a strength (Content Knowledge: InTASC Standard 4)

Areas for Improvement (patterns of average scores below 3.0 at mid-term)

Communicating to students how the content fits into the big picture of the discipline and making it clear why the concepts are significant and important to learn (Content Relevance; InTASC Standard 5)

Connecting math and science concepts across the disciplines to help generalize the content and make it more coherent (e.g., math lesson on graphing quadratic equations connects to related physics principles) (Content Interconnections; InTASC Standard 5)

Discussing the content topic in relation to history, current events, or relevant "real-world problems" (Content Societal Impact; InTASC Standard 5)

Results Disaggregated for Race/Ethnicity and Gender

secondary education mathematics and sciences programs. The results, across all of the data cycles, also suggested that the UTOP indicators and corresponding InTASC Standard where secondary education mathematics and science candidates are struggling the most at the mid-term evaluation are related to InTASC Standard 5, Application of Content.

< These data results were shared internally with the Initial Teacher Preparation (ITP) Coordinating Council in Fall 2021 and Fall 2022, respectively, and with Cooperating Teachers (key stakeholders) through new items added to the instrument cooperating teachers complete. The additional items regarding these evaluation results were piloted in Fall 2021 and fully implemented in Spring 2022. The raw data results and data analysis from these additional items as well as open ended comments provided by Cooperating Teachers have been provided to ITP Coordinating Council members and program coordinators to review further and determine if any instructional or program improvements are needed and if so, what curriculum changes should be made. For a full discussion of these Cooperating Teacher feedback items, please see evidence file Evidence File R5.3_EF342_ Clinical Partners and Stakeholders Meetings and Feedback.

In addition, at the conclusion of each fall and spring semester, program level assessment files (i.e., Assessment 4) for all secondary education mathematics and science programs are updated as appropriate with UTOP results. Use of data results are noted in the interpretation section of this assessment file (i.e., item d.) and the Assessment 4 file is submitted as part of the formal program review process as a supplemental document for the Arizona Department of Education program review process.

While student teachers performed well at mid-term during the past two academic years for the areas of Content Significance and Content Accuracy (InTASC Standard 4, Content Knowledge), data indicated several areas for improvement related to InTASC Standard 5, Application of Content, including:

- Communicating to students how the content fits into the big picture of the discipline and making it clear why the concepts are significant and important to learn (Content Relevance; InTASC Standard 5)
- Connecting math and science concepts across the disciplines to help generalize the content and make it more coherent (e.g., math lesson on graphing quadratic equations connects to related physics principles) (Content Interconnections; InTASC Standard 5)

The UTOP has five performance levels (or scales), with a "human average" score of "3" indicating the target performance. Scores in the tables below should be interpreted based on this benchmark and indicate the average scores candidates achieved on the rubric rows that comprise each InTASC category. The overall mean score for each program shown in the last column indicates the average score of each rubric row. The UTOP Observation Protocol evaluation indicators and results are presented in relation to InTASC Standards in the data tables below.

In all cases below, the response rate is 100%.

