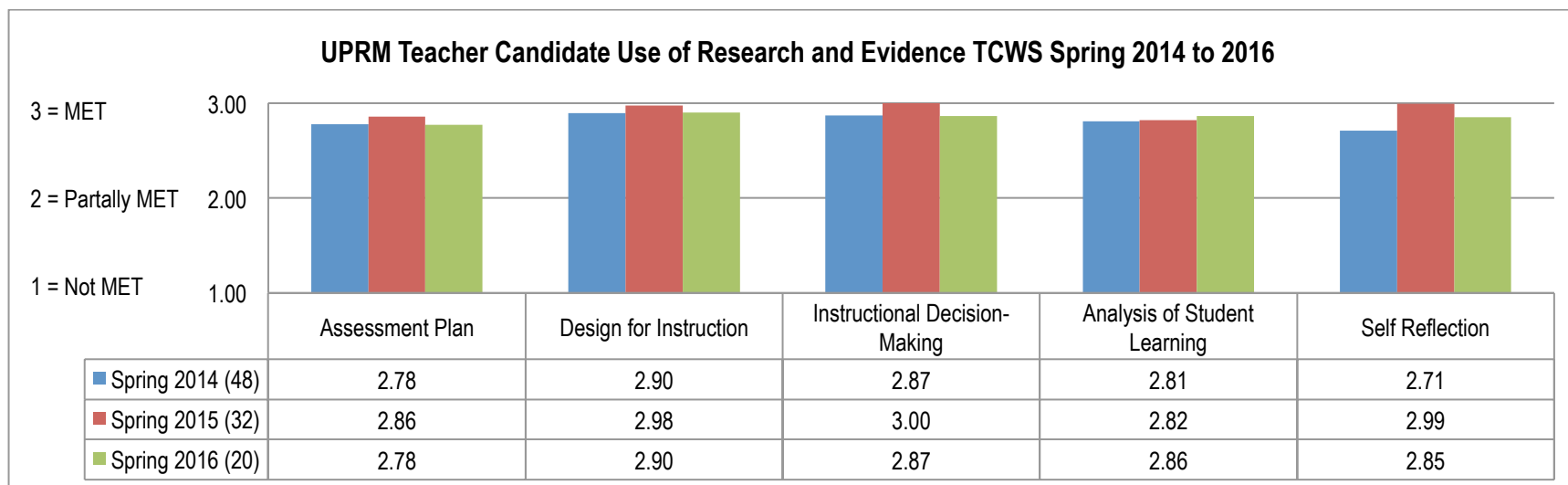# Research and Evidence in the Teacher Candidate Work Sample (TCWS)

In the TCWS, UPRM teacher candidates must fully document the planning, execution, and student learning evaluation for a specific standards-based unit of instruction. The documentation of the process includes the context, individual differences, learning goals, instruction plan, pre and post assessment, student learning analysis, instructional decision-making process, and a final reflection on how to improve teaching practice in order to enhance student learning. The TCWS is fundamentally a classroom action research project. As such, the TCWS is how the UPRM TPP ensures that its teacher candidates not only use research and evidence to better understand the teaching profession, but learn to conduct action research in their own classroom. There are rubrics for each of the seven TCWS standards (see 1.2.2 TCWS Manual with Standards Alignment for instructions, rubrics, and details). For Electronic Portfolio examples see http://uprm.edu/p/eppcaep/electronic_portfolios.

UPRM Teacher Candidate Use of Research and Evidence TCWS Spring 2014 to 2016

3 = MET   3.00

2 = Partally MET   2.00

1 = Not MET   1.00

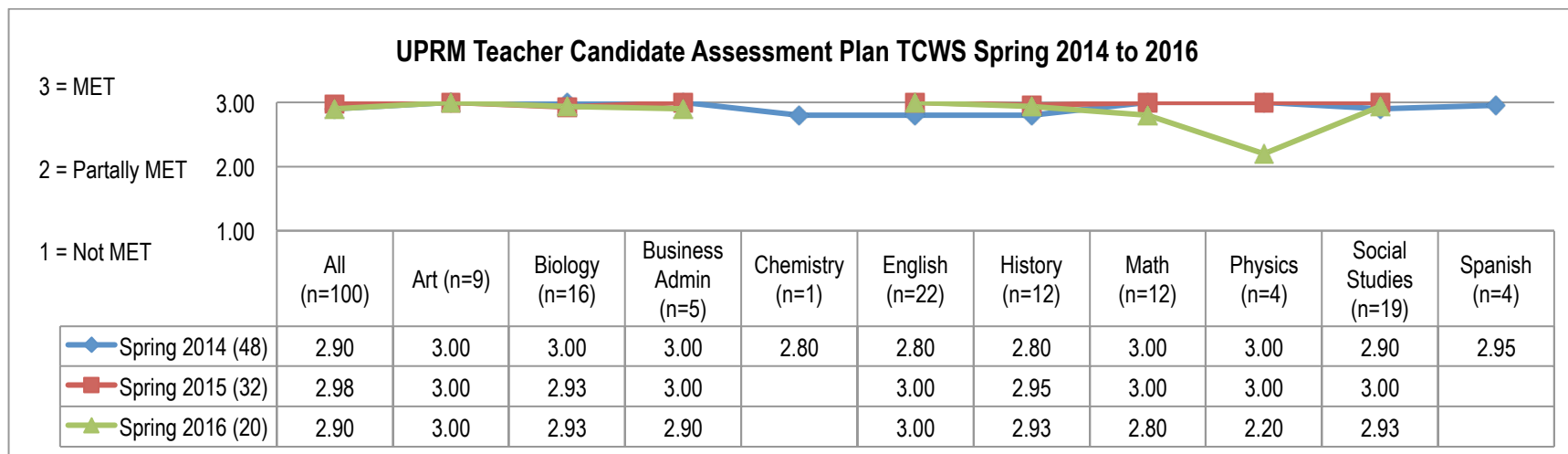|	Assessment Plan	Design for Instruction	Instructional Decision-Making	Analysis of Student Learning	Self Reflection
Spring 2014 (48)	2.78	2.90	2.87	2.81	2.71
Spring 2015 (32)	2.86	2.98	3.00	2.82	2.99
Spring 2016 (20)	2.78	2.90	2.87	2.86	2.85

The previous chart shows average UPRM Teacher Candidate scoring on the five TCWS standards that most directly relate to the use of research and evidence to develop an understanding of the teaching profession over the spring semesters of 2014, 2015 and 2016. The following graphs will compare relative performance on these standards across licensure areas for each of the 2014, 2015 & 2016 spring semesters.

The TCWS Assessment Plan Standard

The candidate uses multiple assessment modes and approaches aligned with learning goals to assess student learning before, during and after instruction. With respect to this standard, the candidate's task is:

> Design an assessment plan to monitor student progress toward learning goal(s). Use multiple assessment modes and approaches aligned with learning goals to assess student learning before, during, and after instruction. These assessments should authentically measure student learning and may include performance-based tasks, paper-and-pencil tasks, or personal communication. Describe why your assessments are appropriate for measuring learning.

See page 16 of the TCWS Manual with Standards Alignment (1.2.2) for the indicators used to measure whether a candidate's TCWS meets the standard. The existing manual lists five indicators, but aligning the assessment plan with learning goals and instruction is a strong measure of content knowledge. Over the past three spring semesters 88% of the candidates have met the alignment criteria (page 3 in 1.1.2c). See page 6 of 1.1.2c for candidate score distribution (89% to 93% fully meet each criteria) on the remaining four assessment indicators.
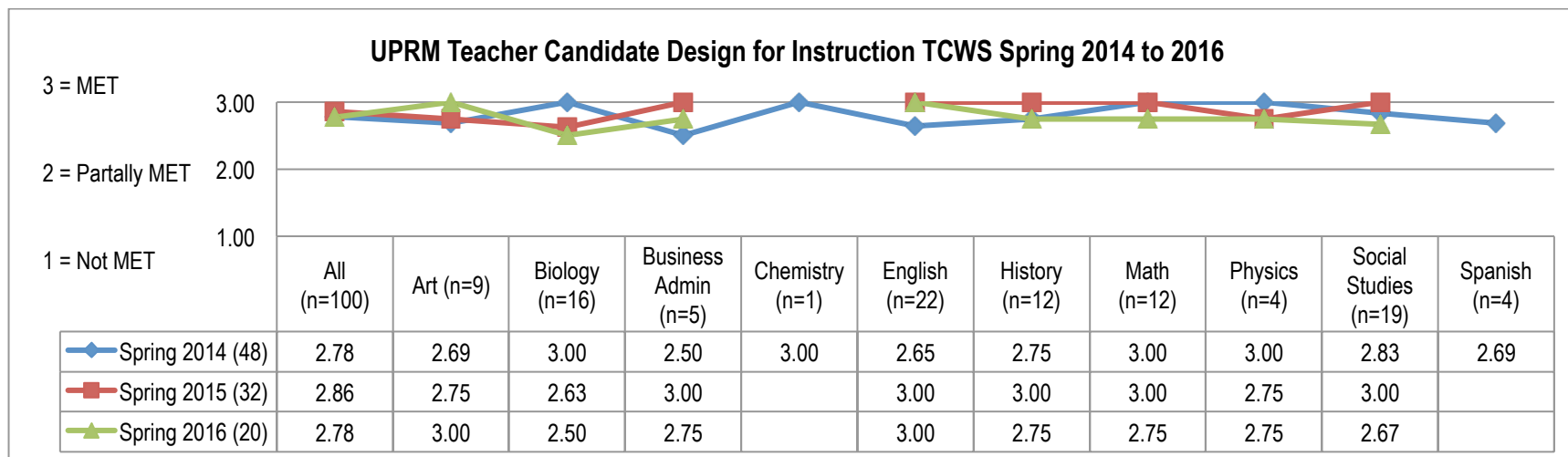
UPRM Teacher Candidate Assessment Plan TCWS Spring 2014 to 2016

3 = MET   3.00

2 = Partally MET   2.00

1 = Not MET   1.00

	All (n=100)	Art (n=9)	Biology (n=16)	Business Admin (n=5)	Chemistry (n=1)	English (n=22)	History (n=12)	Math (n=12)	Physics (n=4)	Social Studies (n=19)	Spanish (n=4)
Spring 2014 (48)	2.90	3.00	3.00	3.00	2.80	2.80	2.80	3.00	3.00	2.90	2.95
Spring 2015 (32)	2.98	3.00	2.93	3.00		3.00	2.95	3.00	3.00	3.00	
Spring 2016 (20)	2.90	3.00	2.93	2.90		3.00	2.93	2.80	2.20	2.93	

Note: There was only one physics teacher candidate in Spring 2016.

The TCWS Design for Instruction Standard

The candidate designs instruction for specific learning goals, student characteristics and needs, and learning contexts. With respect to this standard, the candidate's task is:

> Describe how you will design your unit instruction related to unit goals, students' characteristics and needs, and the specific learning context.

See page 14 of the TCWS Manual with Standards Alignment (1.2.2) for the indicators used to measure whether a candidate's TCWS meets the standard. The existing manual lists six indicators, but accurately representing content goals and instruction is more a measure of content knowledge designing for instruction. Over the past three spring semesters 87% of the candidates have met the accurate content representation criteria (page 4 in 1.1.2c). See page 5 of 1.1.2c for candidate score distribution (90 to 96% fully meet each criteria) on the remaining five design for instruction indicators.
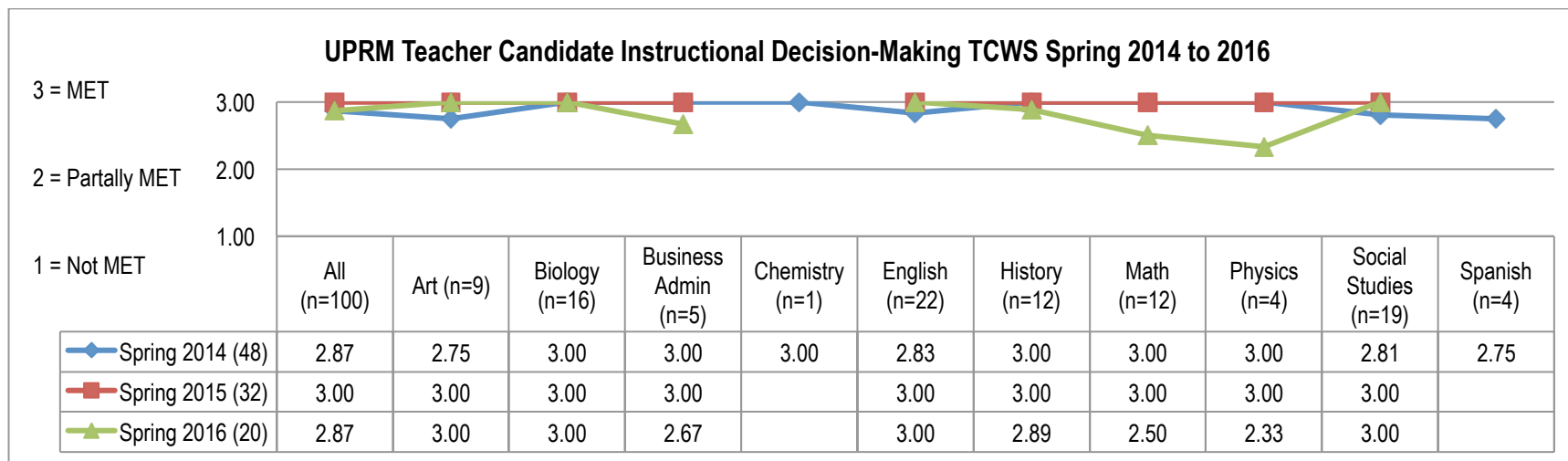
UPRM Teacher Candidate Design for Instruction TCWS Spring 2014 to 2016

3 = MET

3.00

2 = Partially MET   2.00

1.00

1 = Not MET

	All (n=100)	Art (n=9)	Biology (n=16)	Business Admin (n=5)	Chemistry (n=1)	English (n=22)	History (n=12)	Math (n=12)	Physics (n=4)	Social Studies (n=19)	Spanish (n=4)
Spring 2014 (48)	2.78	2.69	3.00	2.50	3.00	2.65	2.75	3.00	3.00	2.83	2.69
Spring 2015 (32)	2.86	2.75	2.63	3.00		3.00	3.00	3.00	2.75	3.00	
Spring 2016 (20)	2.78	3.00	2.50	2.75		3.00	2.75	2.75	2.75	2.67	

The TCWS Instructional Decision-Making Standard

The candidate uses on-going analysis of student learning to make instructional decisions. With respect to this standard, the candidate's task is:

> Provide two examples of instructional decision-making based on students' learning or responses.

See page 15 of the TCWS Manual with Standards Alignment (1.2.2) for the indicators used to measure whether a candidate's TCWS meets the standard. There are three indicators listed in the manual. See page 5 of 1.1.2c for candidate score distribution (89 to 93% fully meet each criteria) on the three instructional decision-making indicators.
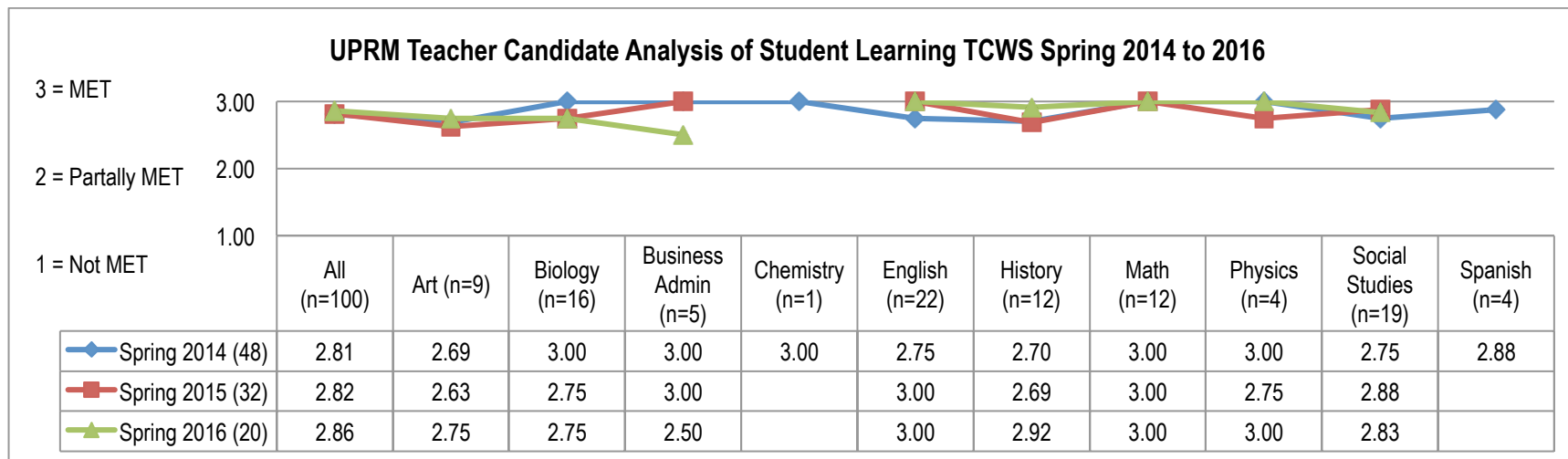
UPRM Teacher Candidate Instructional Decision-Making TCWS Spring 2014 to 2016

3 = MET   3.00
2 = Partially MET   2.00
1.00
1 = Not MET

	All (n=100)	Art (n=9)	Biology (n=16)	Business Admin (n=5)	Chemistry (n=1)	English (n=22)	History (n=12)	Math (n=12)	Physics (n=4)	Social Studies (n=19)	Spanish (n=4)
Spring 2014 (48)	2.87	2.75	3.00	3.00	3.00	2.83	3.00	3.00	3.00	2.81	2.75
Spring 2015 (32)	3.00	3.00	3.00	3.00		3.00	3.00	3.00	3.00	3.00	
Spring 2016 (20)	2.87	3.00	3.00	2.67		3.00	2.89	2.50	2.33	3.00	

Note: There was one physics and two math teacher candidates in Spring 2016.

The TCWS Analysis of Student Learning Standard

The candidate uses assessment data to profile student learning and communicate information about student progress and achievement. With respect to this standard, the candidate's task is:

Analyze your assessment data, including pre/post assessments and formative assessments to determine students' progress related to the unit learning goals. Use visual representations and narrative to communicate the performance of the whole class, subgroups, and two individual students. Conclusions drawn from this analysis should be provided in the "Reflection and Self-Evaluation" section.

See page 17 of the TCWS Manual with Standards Alignment (1.2.2) for the indicators used to measure whether a candidate's TCWS meets the standard. There are four indicators listed in the manual. See page 7 of 1.1.2c for candidate score distribution on the four analysis of student learning indicators. With almost one of three candidates scoring below the target Met on the clarity and accuracy of presentation criteria and close to one of five scoring below Met on interpretation of data, these areas will need more attention in the future. The interpretation of assessment data is clearly an essential skill for competent teachers. The clarity and accuracy of presentation may seem less germane to the classroom for some, so supervisors will need to link this skill to clarity of understanding the data and to working with colleagues in order to persuade candidates of its importance.

UPRM Teacher Candidate Analysis of Student Learning TCWS Spring 2014 to 2016

3 = MET

2 = Partially MET

1 = Not MET

	All (n=100)	Art (n=9)	Biology (n=16)	Business Admin (n=5)	Chemistry (n=1)	English (n=22)	History (n=12)	Math (n=12)	Physics (n=4)	Social Studies (n=19)	Spanish (n=4)
Spring 2014 (48)	2.81	2.69	3.00	3.00	3.00	2.75	2.70	3.00	3.00	2.75	2.88
Spring 2015 (32)	2.82	2.63	2.75	3.00		3.00	2.69	3.00	2.75	2.88	
Spring 2016 (20)	2.86	2.75	2.75	2.50		3.00	2.92	3.00	3.00	2.83	

Note: There was one business administration teacher candidate in Spring 2016.

The TCWS Reflection and Self-Analysis Standard

The candidate analyzes the relationship between his or her instruction and student learning in order to improve teaching practice. With respect to this standard, the candidate's task is:

Reflect on your performance as a teacher and link your performance to student learning results. Evaluate your performance and identify future actions for improved practice and professional growth.

See page 18 of the TCWS Manual with Standards Alignment (1.2.2) for the indicators used to measure whether a candidate's TCWS meets the standard. There are five indicators listed in the manual. See 1.1.2c, pages 8 and 9, for annual average candidate performance and candidate score distribution on the five reflection and self-analysis indicators.

In summary, UPRM TCWS show that candidates carry out classroom research, use assessment to measure student learning progress, reflect on their teaching effectiveness, and adjust their instruction to become more effective classroom teachers during the spring semesters of 2014, 2015, and 2016. Moreover, some candidates perform their classroom research at graduate level (see exemplary portfolios http://uprm.edu/p/eppcaep/electronic_portfolios).