

Common Metrics: The Use of Data for Program Improvement

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Agenda

- Overview of NExT initiative
- Overview of common metrics framework
- Common metrics factor analyses
- Technical aspects of survey administration
- Enhancing program improvement
- Accreditation challenges
- Questions and discussion

NExT Overview

- 14 colleges and universities working together to transform how teachers are recruited, prepared, placed, and supported, using data to drive continuous improvement.
- The NExT institutions have program specific goals in each of these areas.
- NExT sites have formal relationships with P-12 partners and work together to meet the established goals.

Higher Education Partners

Valley Partnership

- Minnesota State University, Moorhead
- North Dakota State University
- Valley City State University

Saint Cloud State University

University of Minnesota, Twin Cities

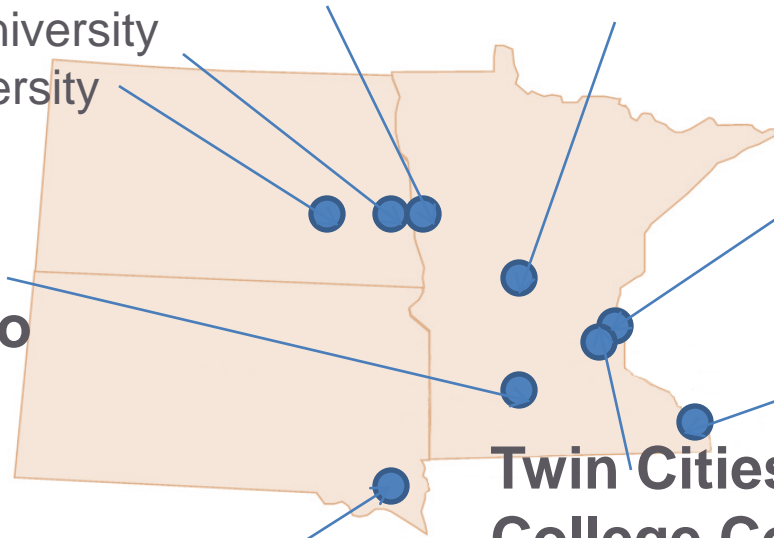
Minnesota State University, Mankato

Winona State University

University of South Dakota, Vermillion

Twin Cities Private College Consortium (TC2)

- Augsburg College
- Bethel University
- Concordia University–St. Paul
- Hamline University
- St. Catherine University
- University of St. Thomas



The NExT Common Metrics Framework

- Development of a valid and reliable set of common survey instruments
- Decision-making by consensus across 14 IHEs
- Alignment of items across four surveys administered at different points in time
- Use of psychometrics analyses to guide survey revisions

Surveys

Entry Survey

- Who are the teacher candidates?
- What encouraged them to become teachers?

Exit Survey

- How do candidates feel about their preparation?
- How will we contact them after graduation?

Transition to Teaching

- What are graduates' perceptions about their preparation and effectiveness after the first year of teaching?

Supervisor Survey

- What are the supervisors' perceptions of the graduates' effectiveness as first-year teachers?

Data Governance Recommendations

- Designed to guide responsible use and sharing of common metrics data with various internal and external audiences
- Created by subcommittee of IHE representatives and approved by entire common metrics work group

MINTERC

Initial Factor Analytic Studies

Transition to Teaching Survey 2008

- Teacher preparation diversity scale
- Exploratory principal axis & Varimax rotation
- 2 factors identified:
 - Special Needs
 - Cultural Diversity

NExT Initiative Factor Analyses

- Conducted by Hezel Associates
- Produced over the span of the project on all four surveys
- Revisions based on factors analytic data (i.e., strong vs weak items, issues with collinearity, number of items needed to support a factor structure, etc.)

Factor Analytic Techniques

- Principal axis factor analysis (exploratory) with varimax rotation conducted to evaluate underlying structure of items for each part
- Assumptions (determinant, KMO, Bartlett) tested to ensure that factor analyses were appropriate for these data.
- Kaiser criterion was used to determine how many factors to retain in each analysis.

2014 Exit Survey Reliability Analysis

PART	SCALE	CRONBACH'S ALPHA
A	Part A2	.82
	Advising	.83
	Program Quality	.79
B	Part B	.98
	Instructional Practice	.95
	Learning Environment	.94
	Diverse Learners	.93
	Technology & Resources	.87
	Professionalism	.91
C	Part C1 & C6	.90
	Cooperating Teacher	.94
	University/College Supervisor	.91

2014 TTS Reliability Analysis

PART	SCALE	CRONBACH'S ALPHA
B	Part B	.97
	Instructional Practice	.96
	Learning Environment	.93
	Diverse Learners	.91
	Professionalism	.89
	Technology & Resources	.81
C	Part C	.87
	School Environment	.85
	Resources	.76
D	Part D	.82
	Teacher Preparation Program	.89
	Teaching Profession	.88

2014 Supervisor Survey Reliability Analysis

SCALE	CRONBACH'S ALPHA
New Teacher Performance	.98
Learning Environment (Factor 1)	.96
Instructional Practice (Factor 2)	.97
Diverse Learners (Factor 3)	.92
Professionalism (Factor 4)	.87
Curriculum-Aligned Instruction (Factor 5)	.89
Instructional Technology (Factor 6)	.90

Technical Aspects

- Administration

- Survey Tools

- Qualtrics, Survey Monkey, Others, Paper, etc.

- Methods

- Discussing Surveys
 - Course Lists, Special Events, etc.

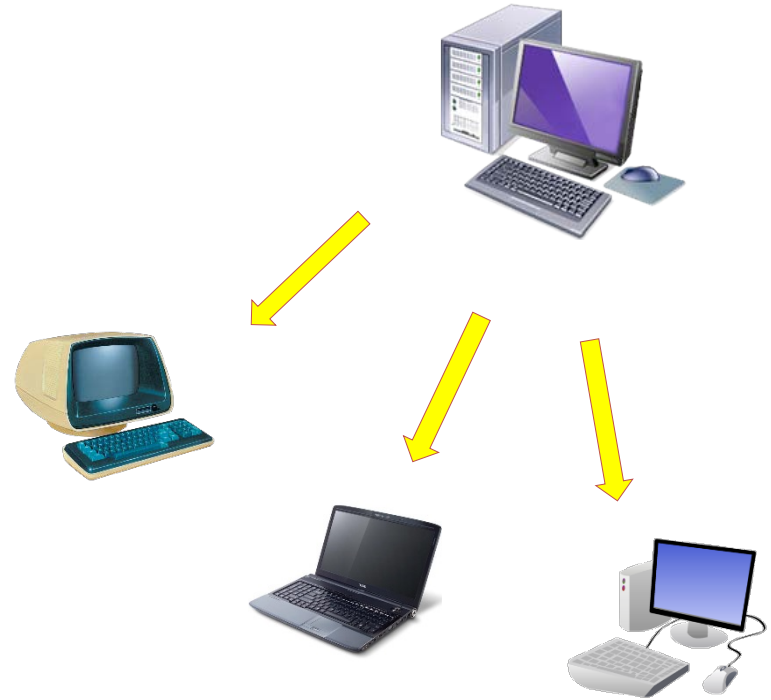
- Target Populations

- Names, Cohorts, Demographic Information



Technical Aspects

- Qualtrics
 - Look and Feel (logos)
 - Collaboration
 - Relatively easy
 - Shared effort
 - IHEs retain autonomy
 - Clean data!
 - Panels and Embedded Data
 - Reminders



Technical Aspects

- Collaboration
 - Create Survey
 - Copy Survey
 - Enter e-mail/account of collaborator(s)
 - Identify Permissions
 - Collaborate
 - Collaborator Copies Survey
 - Collaborator Begins Administration



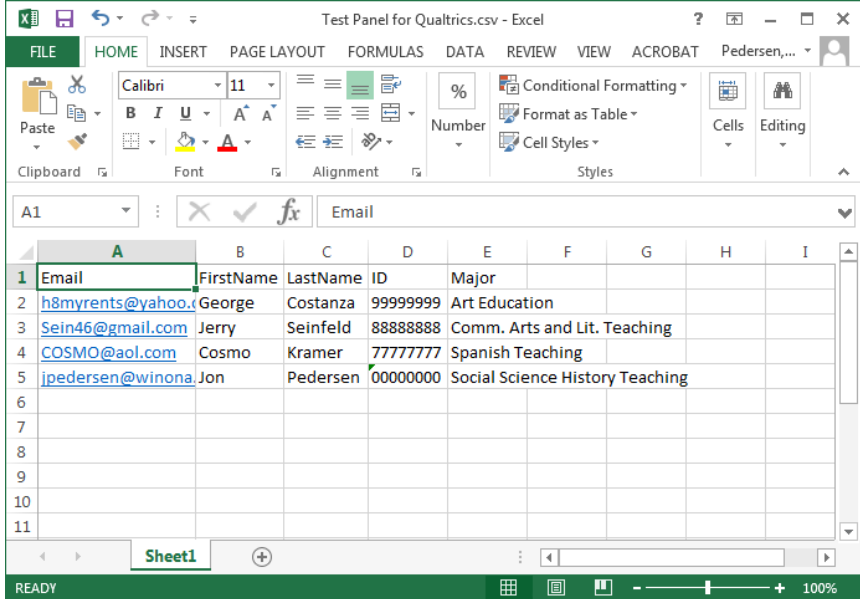
Technical Aspects

- Messaging
 - Mention Smart Phones
 - Use Panels for Sophisticated Mailings
 - Schedule Multiple Mailings/Reminders
 - Conduct Targeted Follow-up



Technical Aspects

- Panels
 - List of the Target Population
 - Unique Links
 - Targeted Reminders
 - Stored Information
 - Demographics
 - Major
 - Messaging Information
 - Other

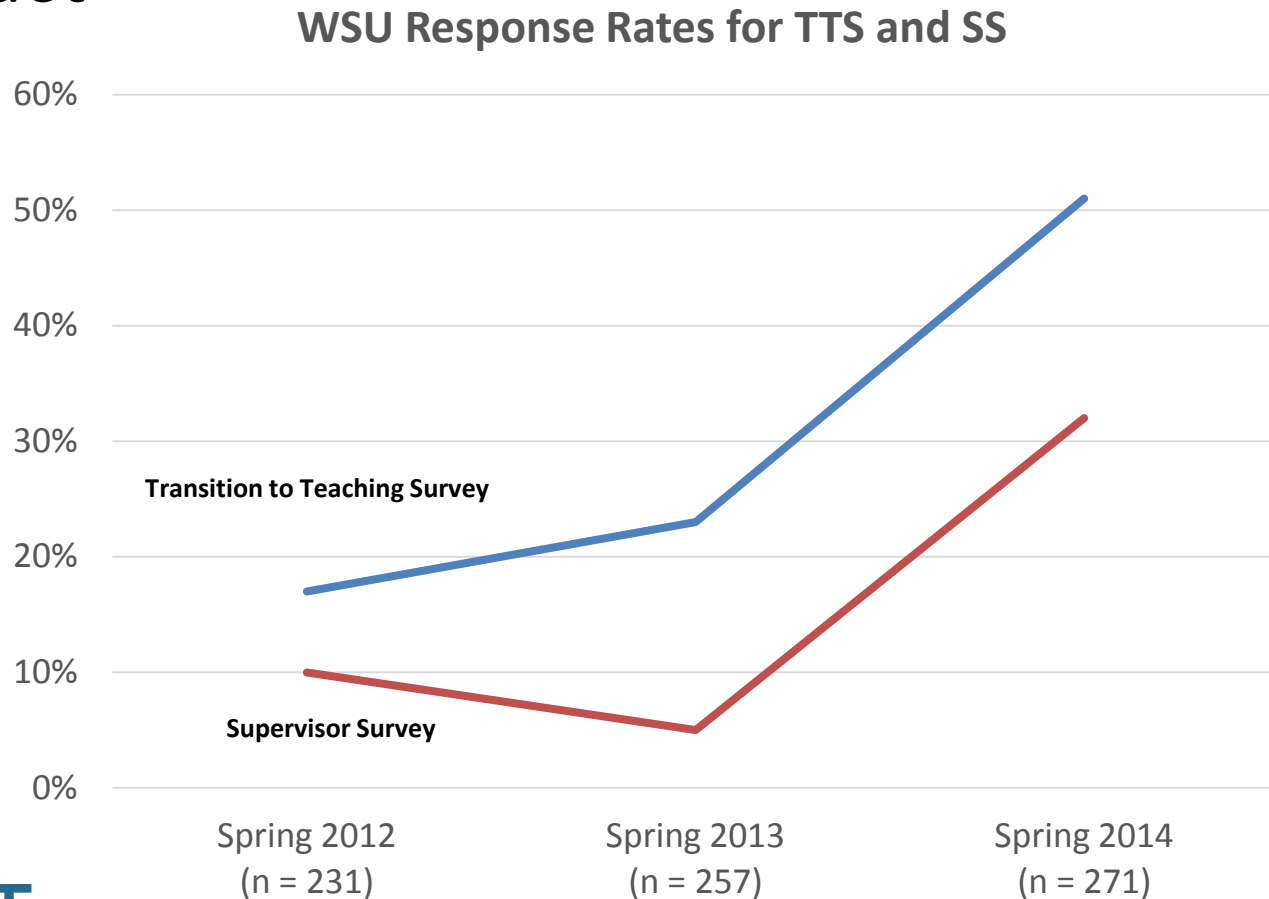


The screenshot shows an Excel spreadsheet titled "Test Panel for Qualtrics.csv - Excel". The spreadsheet contains a table with the following data:

	A	B	C	D	E	F	G	H	I
1	Email	FirstName	LastName	ID	Major				
2	h8myrents@yahoo.com	George	Costanza	99999999	Art Education				
3	Sein46@gmail.com	Jerry	Seinfeld	88888888	Comm. Arts and Lit. Teaching				
4	COSMO@aol.com	Cosmo	Kramer	77777777	Spanish Teaching				
5	jpedersen@winona.edu	Jon	Pedersen	00000000	Social Science History Teaching				
6									
7									
8									
9									
10									
11									

Technical Aspects

- Impact



Common Metrics Instruments Enhance Program Improvement

- Single instrument
- Across aligned instruments
- Over time
- Beyond the instruments
- Among institutions

Studying Results Across Instruments – NDSU

		Disagree		Tend to Disagree		Tend to Agree		Agree	
		n	%	n	%	n	%	n	%
Exit Survey									
Effectively teach the subject matter in my licensure area.	NDSU; n=81	0	-	2	2.5%	41	50.6%	38	46.9%
	NExT Aggregate; n=1661	22	1.3%	94	5.7%	640	38.5%	899	54.1%
Select instructional strategies to align with learning goals.	NDSU; n=81	0	-	4	4.9%	36	44.4%	41	50.6%
	NExT Aggregate; n=1659	13	0.8%	97	5.8%	674	40.6%	869	52.4%
Transition to Teaching Survey									
Effectively teach the subject matter in my licensure area.	NDSU; n=42	0	-	1	2.4%	13	31.0%	28	66.7%
	NExT Aggregate; n=671	6	0.9%	38	5.7%	231	34.4%	396	59.0%
Select instructional strategies to align with learning goals and standards.	NDSU; n=42	0	-	1	2.4%	20	47.6%	21	50.0%
	NExT Aggregate; n=671	9	1.3%	44	6.6%	268	39.9%	350	52.2%
Supervisory Survey									
Effectively teach the subject matter in my licensure area.	NDSU; n=31	0	-	1	3.2%	10	32.3%	20	64.5%
	NExT Aggregate; n=318	1	0.3%	6	1.9%	84	26.4%	227	71.4%
Select instructional strategies to align with learning goals and standards.	NDSU; n=31	0	-	4	12.9%	8	25.8%	19	61.3%
	NExT Aggregate; n=316	0	-	16	5.1%	89	28.2%	211	66.8%

Studying Results Across Instruments – USD

		Disagree		Tend to Disagree		Tend to Agree		Agree	
		n	%	n	%	n	%	n	%
Exit Survey									
Effectively teach the subject matter in my licensure area.	USD; n=105	1	1.0%	9	8.6%	49	46.7%	46	43.8%
	NExT Aggregate; n=1661	22	1.3%	94	5.7%	640	38.5%	899	54.1%
Select instructional strategies to align with learning goals.	USD; n=106	3	2.8%	5	4.7%	61	57.5%	37	34.9%
	NExT Aggregate; n=1659	13	0.8%	97	5.8%	674	40.6%	869	52.4%
Transition to Teaching Survey									
Effectively teach the subject matter in my licensure area.	USD; n=30	1	3.3%	0	-	13	43.3%	16	53.3%
	NExT Aggregate; n=671	6	0.9%	38	5.7%	231	34.4%	396	59.0%
Select instructional strategies to align with learning goals and standards.	USD; n=31	0	-	1	3.2%	22	71.0%	8	25.8%
	NExT Aggregate; n=671	9	1.3%	44	6.6%	268	39.9%	350	52.2%
Supervisory Survey									
Effectively teach the subject matter in my licensure area.	USD; n=16	0	-	0	-	6	37.5%	10	62.5%
	NExT Aggregate; n=318	1	0.3%	6	1.9%	84	26.4%	227	71.4%
Select instructional strategies to align with learning goals and standards.	USD; n=16	0	-	1	6.3%	4	25.0%	11	68.8%
	NExT Aggregate; n=316	0	-	16	5.1%	89	28.2%	211	66.8%

Studying Results Over Time

Lowest ratings from new teachers:

(Source: Transition to Teaching Survey)

- effectively teach the subject matter in my licensure area.
- identify clear subject matter learning goals for students.
- integrate a variety of media and educational technologies into instruction.
- design long-range instructional plans that meet curricular goals.
- design instruction and learning tasks that connect core content to real-life experiences for students.
- Assessment in general, including standardized tests, and using data*
- design and teach lessons that promote students' abilities to develop solutions to abstract and global problems.
- meet diverse student needs (special education, gifted and talented, and ELL).*
- Use community and home resources

Highest ratings from new teachers:

(Source: Transition to Teaching Survey)

- understand processes of inquiry and ways of knowing that are central to the subjects I teach.*
- strategically use a variety of assessments to monitor student learning.
- Classroom management and communicating with students
- collaborate with teaching colleagues.
- value professional development opportunities to improve teaching.*
- access the professional literature to expand my knowledge about teaching and learning.*

*also identified by 2011-2012 cohort



Program Response:

To address the need for educational technology skills, the curriculum in EDUC 451 has been revised to provide a stronger focus on educational technology. iPads and interactive white boards were also purchased and integrated into the curriculum.



Initiatives that Worked:

In addition to an embedded field experience, the Vanderbilt curriculum has been integrated into Classroom Management for Diverse Learners, increasing candidate classroom management skills.

NEXT

Network for Excellence in Teaching



**BUSH
FOUNDATION**

UMN – Assessment Improvement

Based on Exit, TTS, Employer Survey and edTPA

Improve How Assessment Standards are Met: Example Standards

- The teacher uses assessment data to diagnose gaps in students' knowledge and skills.
- The teacher adjusts teaching strategies based on student assessment data.

Strategies	Outcome (one year)
All programs – shared data and best practices, provided more edTPA Practice	<ul style="list-style-type: none">• Improved in the Exit and TTS Surveys in each assessment question
Example programs – edTPA became a graded assignment. Assessment added to methods courses (articles, peer and instructor feedback in practice)	<ul style="list-style-type: none">• Improved in edTPA – at or above the US mean in each assessment category (5)

Among the Institutions

- Recruiting Diverse Candidates
- Supporting Graduates
- Strengthening Field Experiences
- Other Common Instruments

Addressing Accreditation Expectations

Relationship to CAEP Standard Four – Program Impact

Impact on P-12 Student Learning and Development

4.1. The provider documents, using multiple measures, that program completers contribute to an expected level of student-learning growth. Multiple measures shall include all available growth measures (including value-added measures, student-growth percentiles, and student learning and development objectives) required by the state for its teachers and available to educator preparation providers, other state-supported P-12 impact measures, and any other measures employed by the provider.

Addressing Accreditation Expectations

Relationship to CAEP Standard Four – Program Impact

4.1. Impact on P-12 Student Learning and Development – South Dakota

- **Student Learning Objectives** (SLOs) provide summative effectiveness ratings based in part on Student Growth, defined as a positive change in achievement between two or more points in time.
- Within the South Dakota model, SLOs are not just a pre-test/post-test measurement of student achievement. They promote reflective teaching practices through a formal, collaborative process.
- Within the SLO process, specific, measurable student growth goals represent the most important learning that needs to occur during the instructional period. SLOs are aligned to applicable state or national standards and reflect school and district priorities.
- At the end of the instructional period, the SLO results are used to determine the student growth rating that both contributes to the teacher's summative effectiveness rating and provides an additional mechanism to generate feedback to guide professional growth.

Addressing Accreditation Expectations

Relationship to CAEP Standard Four – Program Impact

Indicators of Teaching Effectiveness

4.2. The provider demonstrates, through structured and validated observation instruments and **student surveys**, that completers effectively apply the professional knowledge, skills, and dispositions that the preparation experiences were designed to achieve.

- State-approved supervisory observation instruments and procedures.

Addressing Accreditation Expectations

Relationship to CAEP Standard Four – Program Impact

Satisfaction of Employers

4.3. The provider demonstrates, using measures that result in valid and reliable data and **including employment milestones such as promotion and retention**, that employers are satisfied with the completers' preparation for their assigned responsibilities in working with P-12 students.

Supervisor Survey (after first year of teaching)

- *Focuses on InTASC and Minnesota Standards of Effective Practice*

University of MN – Twin Cities Campus

- *Developing a Survey in the 4th or 5th Year of Employment*

Addressing Accreditation Expectations

Relationship to CAEP Standard Four – Program Impact

Satisfaction of Completers

4.4 The provider demonstrates, using measures that result in valid and reliable data, that program completers perceive their preparation as relevant to the responsibilities they confront on the job, and that the preparation was effective.

Relationship to CAEP Standard Four

Program Impact

Exit Survey and Transition to Teaching Survey

- Captures information at program completion and during the first year of teaching
- Captures perceptions of Preparedness and Program Effectiveness
- Focuses on InTASC and Minnesota Standards of Effective Practice
- Does not fully address indicators of teacher effectiveness

Challenges in Practice

Relationship to CAEP Standards

Minnesota, North Dakota and South Dakota

- *Build partnerships with K-12 schools*
- *Identify role of state organizations*
- *Implement state legislation*
- *Use data sharing regulations
(contracts/statutes)*

Addressing Accreditation Expectations Common Metrics/CAEP

Next Steps

- Roll out surveys to state IHEs (MN, ND and SD)
- Continue to build the aggregate
- Continue longitudinal data tracking
- Continue to ensure reliability and validity of surveys
- Develop data agreements and/or legislation to allow for data sharing with K-12 partners
- Find resources to support this work

Questions, Comments & Discussion

