



## Overview: ENMU's Use of the ETS Proficiency Profile

### **Brief Description of the Instrument**

The ETS *Proficiency Profile*, a nationally-normed test of general knowledge, assesses four core skill areas (critical thinking, reading, writing and mathematics) in the context of humanities, social sciences and natural sciences. Formerly titled the *Measure of Academic Proficiency and Progress* (MAPP), the *Proficiency Profile* is normally administered to first semester freshmen (in fall) and to seniors (in spring semester). The freshmen provide a baseline score and measure of high school preparation; the seniors provide a measure of learning “gains,” academic program effectiveness and accountability to stakeholders and state funding agencies.

The ETS *Proficiency Profile* allows institutions to examine learning “gains” by their students for accreditation and institutional study and improvement. Colleges and universities can also conduct research, such as cross-sectional and longitudinal studies, using ETS Proficiency Profile data to determine how much students are learning and how the institution can improve their learning outcomes. Institutions can also match freshmen and senior students by major, by ACT or GPA, or other measures, to gauge general education outcomes, track progress by major, and implement improvements in instruction and learning.

### **ENMU's Administration of Nationally-Normed General Knowledge Tests**

#### **Testing 2006-2008**

From 2006 to 2008, the ETS MAPP exam was administered to “rising juniors” (students who had completed 60-90 hours of college-level work) as part of their graduation requirements. Since junior year tended to be a period of transfer between colleges or from a two-year to a four-year campus, the population of “rising juniors” proved to be a difficult population to track. Further, general knowledge of transferring juniors did not reflect ENMU academic curriculum. Subsequently, the protocol of testing of “rising juniors” was changed to senior testing. Additionally, modification to the ETS MAPP made the test appropriate for freshmen and seniors and provided an internal institutional measure of learning gains as well as a nationally normed assessment.

#### **Testing 2009-2010**

In 2009, ETS introduced an online testing option for the MAPP test. ENMU used the online testing administration with freshmen students, inviting instructors teaching Freshman Seminar (a mandatory course for entering freshmen) to volunteer their classes for testing. All testing was conducted by volunteer members of the Assessment Committee in campus computer labs. Students could see their scores as soon as they completed testing. They could print out their scores and discuss them with their faculty advisors, if they wished to.

In spring 2010, seniors enrolled in capstone courses from all four colleges were contacted to take the MAPP test on Assessment Day, April 7, 2010. Snacks were provided at the start of two testing sessions (morning and afternoon). Again, testing was conducted online. Remote log-in and proctoring was available to distance students. Testing was conducted by staff and faculty volunteers. The top 15 senior scorers received \$50 Barnes & Noble gift cards and were congratulated by the University president.

**Testing 2015-2016**

Testing of freshmen was also conducted in fall 2015; testing was required of all first-time freshmen at afternoon and evening sessions. By this time, ETS has introduced some minor changes to the test and renamed it *Proficiency Profile*.

Testing of seniors followed the 2010 pattern; seniors who were enrolled in capstone courses (generally signaling their last semester of attendance) were sent letters informing them of this graduation requirement. Testing was conducted with the assistance of the Testing Center on campus, and testing sessions was offered weekday afternoons, evenings, and online (using remote proctoring). Seniors achieving scores above the national norm were publicly congratulated in the student newspaper. As a recognition of their achievement, the fee for the graduation cap and gown of these students was paid by the Assessment Committee.

**Results**

Tables 1 and 2 present the average values for the ETS *Proficiency Profile Assessment* (PPA) given to freshmen and senior cohorts during two testing periods, 2009-2010 (Cohort 1) and 2015-2016 (Cohort 2).

	Freshmen n = 165 (Fall 2009) [0 hours]		Seniors n = 212 (Spring 2010) [at least 90 hours]		Senior to Freshmen Change		
	ENMU Mean	Peer Mean	ENMU Mean	Peer Mean	ENMU	Peer	ENMU-Peer
Critical Thinking	107.61	109.7	113.46	112.4	5.9	2.7	3.2
Reading	111.72	115.5	118.76	118.7	7	3.2	3.8
Writing	110.6	112.9	115.35	114.8	4.8	1.9	2.9
Mathematics	110.01	112.1	112.67	114.4	2.7	2.3	0.4
Humanities	110.42	112.8	115.58	115.2	5.2	2.4	2.8
Social Sciences	108.79	111.5	114.78	114	6	2.5	3.5
Natural Sciences	110.61	113.4	116.52	115.9	5.9	2.5	3.4
<b>Total</b>	<b>428.07</b>	<b>437.2</b>	<b>446.18</b>	<b>447.3</b>	<b>18.11</b>	<b>10.1</b>	<b>8.01</b>

PPA freshmen and seniors scores for cohort 1  
Table 1

	Freshmen n = 444 (Fall 2015) [0 hours]		Seniors n = 298 (Spring 2016) [at least 90 hours]		Senior to Freshmen Change		
	ENMU Mean	Peer Mean	ENMU Mean	Peer Mean	ENMU	Peer	ENMU-Peer
Critical Thinking	107.06	109.7	110.92	112.4	3.86	2.7	3.2
Reading	111.5	115.5	116.83	118.7	5.33	3.2	3.8
Writing	109.71	112.9	112.97	114.8	3.26	1.9	2.9
Mathematics	110.5	112.1	113.2	114.4	2.7	2.3	0.4
Humanities	110.37	112.8	114.07	115.2	3.7	2.4	2.8
Social Sciences	108.29	111.5	111.99	114	3.7	2.5	3.5
Natural Sciences	110.34	113.4	114.65	115.9	4.31	2.5	3.4
<b>Total</b>	<b>426.59</b>	<b>437.2</b>	<b>440.3</b>	<b>447.3</b>	<b>13.71</b>	<b>10.1</b>	<b>3.61</b>

PPA freshmen and seniors scores for cohort 2  
Table 2

Both cohorts showed positive growth in total scores between the freshmen and senior years relative to the peers (+8 and +3 relative to the peers). This suggests that ENMU students gained more in the measured areas than would be expected at an average college in the Peer group. Both freshmen and senior students for both cohorts scored low (freshmen at 13% and 10% and seniors at 36% and 14%) relative to the PPA Peers.

ENMU conducted further study on the freshmen in the PPA cohort, examining their ACT score, ethnicity, gender, and first-generation status. A regression of the freshmen’s PPA total score versus numerous predictors show that ACT scores were by far the best predictors of how freshmen and senior students score on the PPA. Other factors such as ethnicity, gender and first generation status only affect the PPA scores through their correlation with student’s entering academic preparation (indirectly measured by the ACT score). While the peer cohorts selected by ETS does not report overall ACT, ENMU’s overall composite ACT score of 20.2 (ENMU freshmen who were tested) is most likely lower than the average for the students tested at the PPA peer institutions. It is not clear if the performance of ENMU freshmen on the PPA is above or below what is expected, normalized to entering academic preparation.

Table 3 below reports the peer cohort selected by ETS for comparison (Comprehensive Master’s I and II, public and private). This peer cohort data (2010-2015) is the comparison for testing years reflecting in Tables 1 and 2.



**2015 Comparative Data Guide**  
**Entering Freshman (No hours completed),**  
**Master's (Comprehensive) Colleges and Universities I and II—Institution List**  
*Data includes students from domestic institutions who tested between July 2010 through June 2015.*

Alabama A&M University, AL  
 Alabama State University, AL  
 Alcorn State University, MS  
 Aquinas College (MI), MI  
 Azusa Pacific University, CA  
 Baldwin Wallace University, OH  
 Bemidji State University, MN  
 Bethel University, TN  
 Bradley University, IL  
 Brenau University, GA  
 Cabrini College, PA  
 Cairn University, PA  
 California University of Pennsylvania, PA  
 Campbell University, NC  
 Capital University, OH  
 Cheyney University of Pennsylvania, PA  
 Citadel, The, SC  
 Clarion University of Pennsylvania, PA  
 College of Charleston, SC  
 College of New Jersey, The, NJ  
 Concordia University (CA), CA  
 Concordia University Chicago, IL  
 Concordia University Wisconsin, WI  
 Coppin State University, MD  
 Eastern New Mexico University, NM  
 Edinboro University of Pennsylvania, PA  
 Florida Gulf Coast University, FL  
 Florida Polytechnic University, FL  
 Henderson State University, AR  
 La Salle University, PA  
 Lamar University, TX  
 Lindenwood University, MO  
 Loyola University New Orleans, LA  
 Maharishi University of Management, IA  
 Mansfield University, PA  
 Mary Baldwin College, VA  
 Massachusetts Maritime Academy, MA  
 Mercy College, NY  
 Minnesota State University Moorhead, MN  
 Minnesota State University, Mankato, MN

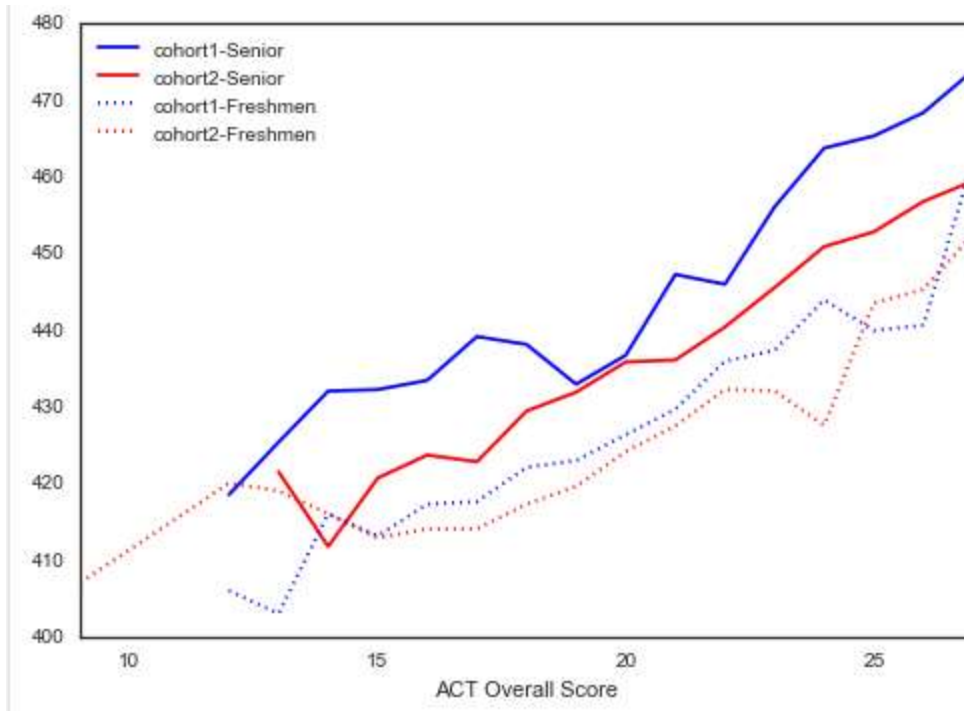
Neumann University, PA  
 Norfolk State University, VA  
 Northern Michigan University, MI  
 Pfeiffer University, NC  
 Point Loma Nazarene University, CA  
 Prairie View A&M University, TX  
 Quinnipiac University, CT  
 Rivier University, NH  
 Shenandoah University, VA  
 Slippery Rock University of PA, PA  
 South Carolina State University, SC  
 Southeast Missouri State University, MO  
 Southwestern College, KS  
 Stephen F. Austin State University, TX  
 Tarleton State University, TX  
 Texas A&M University Kingsville, TX  
 Texas Wesleyan University, TX  
 Thomas More College, KY  
 Touro College, NY  
 Tusculum College, TN  
 Union University, TN  
 University of Central Arkansas, AR  
 University of Charleston, WV  
 University of Colorado, CO  
 University of Houston - Victoria, TX  
 University of Illinois at Springfield, IL  
 University of Maryland - Eastern Shore, MD  
 University of Massachusetts Dartmouth, MA  
 University of South Alabama, AL  
 University of South Florida - St. Petersburg, FL  
 University of Southern Indiana, IN  
 University of the Cumberlands, KY  
 University of West Alabama, AL  
 University of Wisconsin - Stevens Point, WI  
 University of Wisconsin - Stout, WI  
 Washburn University, KS  
 Western Texas College, TX  
 Wilkes University, PA  
 William Carey University, MS  
 Winthrop University, SC

Total Number of Institutions	Total Number of Students
80	55,769

Only those institutions testing 30 or more students in a college class were included in the analyses for that college class.

PPA Comprehensive Master I and II Comparison Group (Peers)  
 Table 3

The following table provides the mean PPA scores for the two freshmen and senior cohorts as a function of student ACT score. It appears that on average, cohort 2 (2015-16) students scored lower on the PPA. This suggests that the cohort 2 students gained less (between freshmen and senior years) than cohort 1 (2009-10) students, though their ACT scores were slightly lower than their 2015-16 peers.



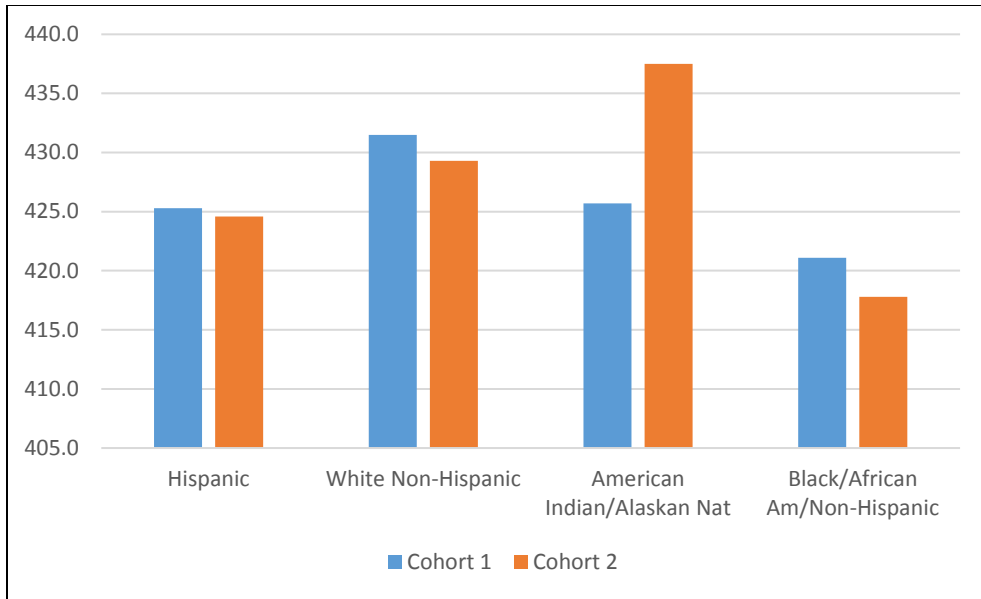
Mean PPA scores a function of ACT score  
Graph 1

Cohort 1 scored significantly higher on the PPA than cohort 2 (446.2 versus 440.3). The mean ACT scores for students taking the exam increased between the 2009-2010 and 2015-2016 cohorts (improvement for freshmen is .33 and for seniors is .72.) and the proportion of transfer students taking the PPA increased from freshmen to senior year (see the proportion taking the PPA with ACT scores, i.e. proxy for transfer proportion) but seems to be fairly constant between the two cohort groups.

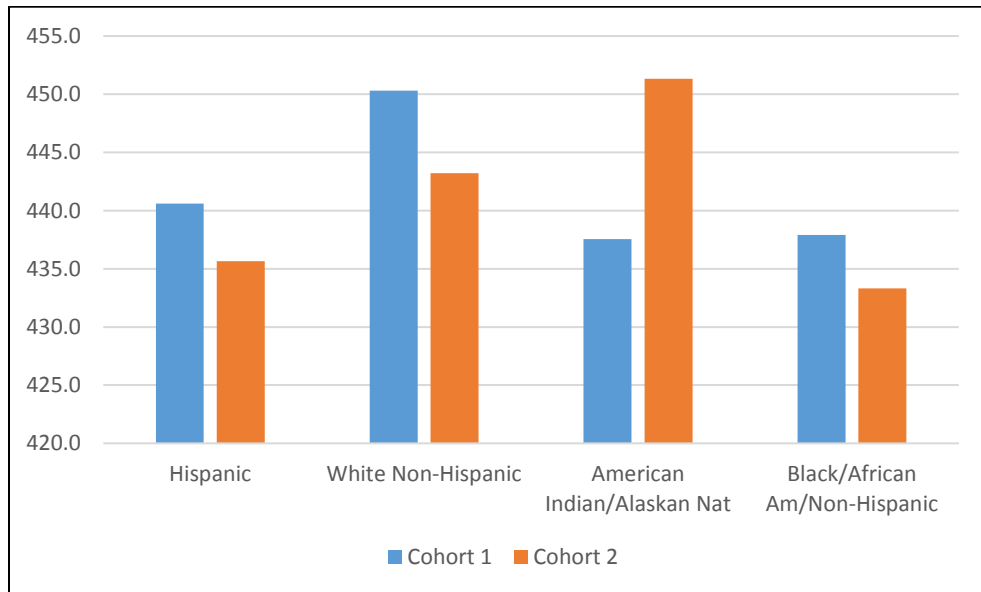
Year	ACT Mean	Proportion taking PPA with ACT score
Freshmen 2009	20.17	93%
Freshmen 2015	20.51	90%
Seniors 2010	20.50	62%
Seniors 2016	21.22	61%

Mean ACT scores for students taking PPA  
Table 4

Looking at the mean PPA score for the four highest senior ethnicities suggests that most ethnicities scored lower on the PPA between the two cohorts.



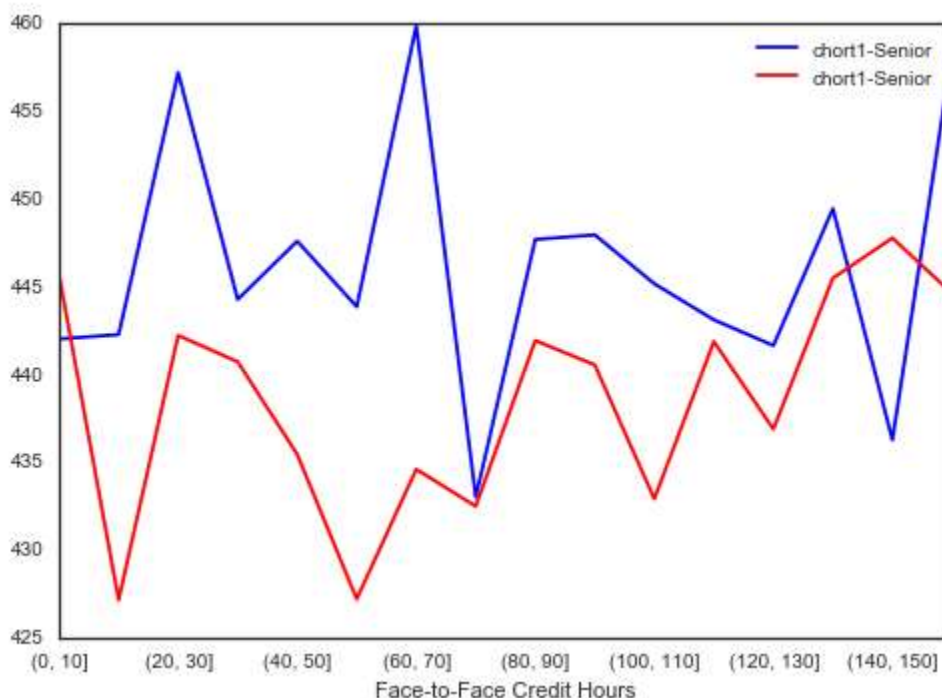
Mean PPA scores for freshmen by ethnicity  
Graph 2



Mean PPA scores for seniors by ethnicity  
Graph 3

In the graph 4 below, PPA scores are shown as a function of number of hours taken face-to-face. This attempts to determine if the fact that students are taking more hours online is having a negative effect on how they score on the PPA. Again the seniors from Cohort 2 outperform their peers from Cohort 1. The graph suggests that those students taking more face-to-face hours (for Cohort 1) are performing a little better than those taking fewer hours, but it seems to be a small effect overall.

ENMU Senior Performance on PPA based on Face-to-Face Credit Hours



### Planned Future Research on Measuring General Knowledge Competencies

One of ENMU’s faculty researchers for this analysis discussed the results with ETS staff and was advised to consider using a cadre of faculty who would read each PPA question and estimate the proportion of students who will answer each question correctly. During that process, ENMU will assess how well various content/skills tested in PPA are covered in the general education courses. After the data is collected, we will compare their estimates with how ENMU students are scoring on each PPA question. For those areas where the PPA results are consistent with faculty perceptions, faculty would try to identify changes in general education curriculum that can potentially improve student competencies in each area.

### Institutional Use of the Proficiency Profile Assessment Data

#### ◆ Thinking through the Data

ENMU’s use of PPA has evolved over time. Initially, faculty were more interested in student performance in discipline-specific (end-of-program) outcomes assessment than scores on a nationally normed general knowledge test. There was also discussion of some national research documenting ethnic bias in nationally-normed testing instruments. While some “break-outs” of seniors by majors were prepared, the results tended to be unreliable, with numbers that were too small for adequate comparison or cohorts that included a high portion of transfer versus native students, raising the question of what “general knowledge” was being tested, ENMU’s or the sending institution’s. The “high scorers” approach to this analysis was

equally unpredictable. In the 2010 senior testing, for example, the highest score was earned by a traditionally aged male history major; the second highest score was earned by a non-traditional female Education major.

However, the collection and study of PPA data raised faculty awareness of how ENMU's student profile positions ENMU students relative to peers and to national averages. While it is fairly self-evident, these observations bear repeating: students come to ENMU under-prepared relative to peers, burdened by financial and rural at-risk factors. They graduate performing at or slightly above their peers.

#### ◆ **Study and Revision of General Education**

The period of 2009 to 2016 was one of active study and revision of the University's general education curriculum. Responding to a state mandate to reduce bachelor's degree programs to 120 hours, the faculty turned their attention to the categories of general education that were most valuable to students as well as studying the categories most expendable to student learning outcomes. Using data from various instruments including PPA and NSSE, faculty reduced the numbers of hours required for general education. Led by the State Department of Public Education, a similar process to reduce general education credit hours in the Teacher Education general education core are underway. Although PPA data may not have directly influenced these decisions, the dialog around general knowledge testing raised awareness of the interaction of general education core learning and discipline-specific content mastery in significant ways. Since academic department assessment plans examine both "general education" and "discipline-specific" outcomes for student learning, this holistic view of learning was a benefit to the campus discussion.

#### ◆ **Affirmation of Mission**

Emerging from the dialog around the PPA, testing outcomes, and related discussions of students' general knowledge was a renewed affirmation of ENMU's mission. In the words of the University president, ENMU's mission can be summed up very simply—to provide the best possible education to the students who come to us—not the students that the institution wishes would come; not the students that faculty were when they were in college; not students at a Research I institution in a large urban area. This awareness of what ENMU students bring and what they gain demonstrates an ENMU education produces a measureable gain for ENMU student learning, conferring a tremendous value to the students we serve.