

UNIVERSITY OF SAINT MARY MAE & MAT FINDINGS

Course Assignments and Final Portfolio used to Measure Outcomes

Course assignments link directly to the graduate program outcomes. Rubrics used for scoring the assignments rate level of performance on specific outcome(s). Summary statistics by graduate program show a range of performance means on various assignments linked to each outcome.

Final Portfolios provide evidence of outcome mastery at graduation and are evaluated based on criteria that measure each outcome. Portfolio means (*M*) and standard deviations (*SD*) represent subscores linked to each outcome with $n=40$ for Master of Arts in Education and $n=111$ for Master of Arts in Teaching. Data were analyzed from Spring 2004-Fall 2005 MAT graduates and from Spring 2004-Summer 2005 MAE graduates.

Students in both the MAE and MAT programs achieve outcomes at a high. As shown in the following table, the mean performance on course assignments was at least 91.6%. Professional Portfolios mean sub-score for outcomes was at least 4.3 on a 5 point scale, with 4.0 and above rated as outstanding, indicating evidence *exceeded* expectations.

Graduate Program Outcome (see Section 1 for complete outcome)	Program	Course Assignments Range of Means	Portfolio Sub-score Mean 2004-2005 (out of 5 pts) MAE $n=41$; MAT $n=111$	
			Mean	SD
#1: Draw from their knowledge of education theory and research to support the formal and informal education processes that impact P12 students learning and the learning environment	MAE	91.6—97.2	4.43	0.56
	MAT	93.9—97.9	4.84	0.28
#2: Demonstrate knowledge of diverse learners, including all forms of exceptionalality, and create instructional opportunities that meet the needs of all learners	MAE	NA	4.27	0.50
	MAT	94.9—98.9	4.78	0.54
#3: Critically reflect on ethical and moral implications of actions as they relate to all learners.	MAE	91.6—97.0	4.34	0.48
	MAT	93.9—99.1	4.35	1.36
#4: Apply their knowledge of curriculum content and design to support learners' construction of knowledge	MAE	92.4—96.0	4.44	0.55
	MAT	95.7—97.7	4.83	0.55
#5: Implement appropriate instructional models, strategies, and technologies to enhance the learning of all students	MAE	92.4—96.0	4.49	0.51
	MAT	97.0—98.9	4.82	0.57
#6: Utilize measurements and evaluation accurately and systematically to monitor and promote learning	MAE	94.8—96.0	4.29	0.46
	MAT	97.0—97.9	4.78	0.54
#7: Apply quality principles of leadership, including skills of effective communication, collaboration and motivation to shape change and improve the learning community	MAE	91.6—97.0	4.55	0.52
	MAT	93.8—97.0	4.83	0.55
#8: Demonstrate the ability to be reflective practitioners by identifying a problem, examining research, advocating solutions, implementing a plan, and measuring and evaluating outcomes.	MAE	91.6—97.2	4.49	0.50
	MAT	93.8—97.1	4.80	0.54

Philosophy of Teaching and Learning

Students complete a statement of their Philosophy of Teaching and Learning upon entry to and exit from the graduate education programs. Their essays are evaluated using a rubric that includes five (5) Look-Fors, or characteristics that align with professional dispositions, National Board for Professional Teaching Standards (NBPTS), and graduate program outcomes.

“Look Fors”	Professional Beliefs & Values
1. High expectations for all learners	Fostering the learning of all students
2. Meeting the affective and academic needs of each individual learner	Respecting and honoring diversity and global perspectives
3. Building a school climate that is safe, respectful, and that promotes community and collaboration	Providing leadership in shaping change within learning communities
4. Teacher knowledge of strategies, tools, methods, theories, and principles of teaching and understanding when and how to apply that knowledge	Promoting student learning utilizing assessments, technologies, and best instructional practices
5. Teacher as a reflective practitioner who continually assesses and questions the impact of instruction on student learning	Performing critical analysis and reflective practice
	Encouraging and modeling self-assessment

Each Look-For is scored on whether it is evident (1) or not (0). A total score is computed by summing scores across the 5 Look-Fors. The same procedure is used for the Pre (entry) and Post (exit) essays. A paired *t*-test was used to analyze total pre-post scores, and individual Look-For pre-post scores.

The total score mean represents the average number of Look-Fors, or dispositions represented when candidates began the program (pre) and when they completed the program (post). When examining individual Look-Fors, the greatest increases were in high expectations and reflective practice. Meeting needs of all learners and building a safe and respectful climate were evident for a majority of candidates when they entered the program. Yet, they made significant gains in reflecting these dispositions by the end of their program. Increase in teacher knowledge differed depending upon program. MAE students had high evidence when entering and did not yield significant gains. MAT students showed little evidence of teacher knowledge upon entry and gained significantly by the end of the program. Overall the program had a significant, positive influence on the development of the candidates’ professional beliefs and values as reflected in their written philosophy of teaching and learning, regardless of gender (MAT $F(160)=2.95$, $p=0.9$) or teaching level (MAT $F(160)=1.02$, $p=0.4$)

Philosophy of Teaching and Learning
MAE *n*=33 MAT *n*=160

Look-Fors	MAE <i>M</i> -pre	MAE <i>M</i> -post	MAE <i>t</i> value	MAE one-tail <i>p</i>	MAT <i>M</i> -pre	MAT <i>M</i> -post	MAT <i>t</i> value	MAT one-tail <i>p</i>
1. High Expectations	0.50	0.82	3.53	<0.01	0.47	0.96	11.22	<0.01
2. Meeting Needs	0.79	0.94	2.39	<0.01	0.60	0.98	9.65	<0.01
3. Building Climate	0.65	0.85	2.93	<0.01	0.56	0.98	10.32	<0.01
4. Teacher Knowledge	0.82	0.94	1.44	<0.08	0.37	0.93	13.31	<0.01
5. Reflective Practitioner	0.50	0.79	3.27	<0.01	0.11	0.77	16.98	<0.01
Total	3.24	4.38	6.21	<0.01	2.11	4.63	21.48	<0.01

Program Influence on Teaching and Learning

The MAT students’ knowledge and use of research-based instructional strategies are tracked from entry into the program through post graduation. They rate the strategy on a 0-3 point scale with 0 as “No Knowledge – You have not heard of the teaching practice or tool before” to 3 as “Great Use – You use the practice or tool weekly.” Comparing responses between students

entering ($n=117$) with responses for those completing ($n=35$) the program, use of all but 4 strategies increased significantly.

Instructional Strategy	F	Prob.
Cooperative Learning Groups	1.074	0.302
Student Portfolios	7.107	0.009
Computers	7.003	0.009
Problem Based Learning	3.976	0.048
Thematic Learning	2.284	0.133
Service Learning	10.923	0.001
Structured Rubrics	2.428	0.121
Graphic Organizers	6.309	0.013
KWL Charts	11.866	0.001
Reflective Assessments	13.160	0.000
Mnenomics	10.761	0.001
Think-Pair-Share	7.322	0.008
Multiple Intelligences	9.477	0.002
Use of Manipulatives	0.832	0.363
Double E Seating	42.000	0.000

Exit Surveys

Upon completing the MAE education program, graduates were asked to indicate the degree to which they believed the program impacted their integration of learning outcomes and influenced their leadership and professional practice. All responses were measured on a likert scale, with 1=minimal influence, 2=moderate influence, and 3=strong influence. Summary statistics follow.

	Assessment	Collaboration	Communication Skills	Curriculum	Research & Analysis	Ethical, Political & Legal Issues
<i>M</i>	2.81	2.63	2.94	2.69	2.75	2.88
<i>SD</i>	0.40	0.62	0.25	0.48	0.45	0.34

	Differentiated Instruction	Diverse Learners	Technology	Leadership	Exceptional Learners	Problem Solving
<i>M</i>	2.63	2.56	2.69	2.81	2.75	2.94
<i>SD</i>	0.81	0.73	0.48	0.40	0.45	0.25

MAE graduates ($n=16$) perceived the program as having a strong impact. Influence of the program on professional knowledge and practice was assessed on categories represented in course and program requirements aligned with national standards for professional practice. Means for all were in the strong influence range, above 2.5. Graduate perception of technology preparation is a strategic area for inquiry within the graduate education program assessment priorities. Candidates identified a moderate to strong influence of the program on their ability to integrate instructional technologies into professional practice ($M = 2.69$, $SD = 0.48$).