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Advocating the Implementation of Mastery Learning in Higher Education to Increase Student Learning and Retention

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Abstract

The purpose of this paper was three-fold: (1) to review mastery learning and criterion-based assessment; (2) to advocate extending these concepts to higher education; and (3) to invite MSERA members to join in research projects examining mastery learning in higher education. The authors used Guskey's (2001) definition of mastery learning from his paper on the educational contributions of Benjamin Bloom. The essential elements were the feedback, corrective, and enrichment process; and congruence among instructional components. The theoretical framework for this paper is presented as an annotated bibliography of mastery learning.. The authors advocated extending the principles of mastery learning and criterion-referenced assessment to higher education to increase both student learning and student retention. A heuristic for creating a congruent classroom assessment with objectives and questions matching in content and cognitive level is presented in the Appendix.

Advocating the Implementation of Mastery Learning in Higher Education to Increase Student Learning and Retention

Definitions of mastery learning vary widely. The authors of this paper used the definition presented in Guskey's (2001) paper on the educational contributions of Benjamin Bloom. Guskey described the conceptualization of "Mastery Learning" by Bloom (cited in Guskey, 2001)

> With this in mind, Bloom outlined an instructional strategy to make use of this feedback and corrective procedure. He labeled the strategy "Learning for Mastery" (Bloom, 1968), and later shortened it to simply, "Mastery Learning." By this strategy, the important concepts students are to learn are first organized into instructional units, each taking about a week or two of instructional time. Following initial instruction on the unit concepts, a quiz or assessment is administered. Instead of signifying the end of the unit, however, this assessment is used primarily to give students information or feedback on their learning. To emphasize this new purpose, Bloom suggested calling it a formative assessment, meaning "to inform or provide information." A formative assessment identifies for students exactly what they have learned well to that point and what they need to learn better. ….Included with the formative assessment are explicit suggestions to students on what they should do to correct their learning difficulties….In other words, the correctives are "individualized."….With the feedback and corrective information gained from a formative assessment, each student has a detailed prescription of what more needs to be done to master the concepts or desired learning concepts of the unit. (pp. 9-10)

The essential elements were: (1) the feedback, corrective, and enrichment process; and (2) congruence among instructional components or alignment. The theoretical framework for this presentation was in the form of an annotated bibliography of publications on mastery learning over the last three decades. Most of these theoretical and research studies were targeted toward K-12 students. A search for research on mastery learning in higher education was performed using both the ERIC database and Google Scholar. These studies were included in the annotated bibliography. The authors also referenced the use of mastery learning beyond public schools and universities (e.g., military training, corporate workshops).

Theoretical Framework

Annotated Bibliography

Mastery Learning

Aviles, C. B.(1999). *A quantitative study of mastery learning instruction versus non-mastery Instruction in an undergraduate social work class.* U. S. Department of Education. (ERIC Document Reproduction Service No. ED453697)

Mastery learning is a behavioral instructional method using additional learning time and repeated testing opportunities to increase student learning. A quasi-experimental group design with repeated measures was used to contrast mastery learning and nonmastery

Aviles, C. B. (2001). *Mastery learning in higher education: A bibliography*. (ERIC Document Reproduction Service No. ED448654)

This bibliography includes materials from academic departments related to mastery learning. The materials listed are related to the investigation, performance, and

implementation of mastery learning in higher education. The bibliography lists 184 sources.

Aviles, C.B. (2005). *A qualitative study of social work instructor and student reactions to mastery learning instruction.* U. S. Department of Education (ERIC Document Reproduction Service No. ED449412).

Social work instructor and student reactions to mastery learning were examined using qualitative methods. Mastery learning utilizes additional learning time and repeated testing opportunities to increase student learning. Students rated how helpful seven instructional elements of mastery learning were and described what they liked and disliked about the instructional elements. Good example of research on mastery learning.

Aviles, C.B. (2005). *A study of mastery learning versus non-mastery learning instruction in an undergraduate social work policy class*. U.S. Department of Education. (ERIC Document Reproduction Service No. ED449413)

While successful in higher education, mastery learning has not been studied in social work. Mastery and non-mastery instruction involved similar amounts of instructor time, but the mastery instructor reported increased classroom time efficiency and coordination between teaching and testing.

Cortright, R.N., Collins, H. L., & DiCarlo, S.E. (2005). Peer instruction enhanced meaningful Learning: Ability to solve novel problems. *Advances in Physiology Education, 29* (2), 107-111. (ERIC Document Reproduction Service No. EJ689585)

The authors tested the hypothesis that peer instruction enhances meaningful learning or transfer, defined. The student's ability to solve novel problems was significantly

enhanced following peer instruction. This is a good description of a simple experimental design carried out in a classroom.

Easton, L.B. (2007). Walking our talk about standards. *Phi Delta Kappan, 88* (5), 391-394. (ERIC Document Reproduction Service No. EJ751119)

This author writes from the public school perspective. The author argues that if schools truly were based on standards, they would look much different than they do now. The author also emphasizes the use of rubrics as a way of making mastery of standards a viable concept. The article includes a useful description of rubrics.

Engelmann, S.(2007). Student-program alignment and teaching to mastery. Journal of Direct Instruction, 7 (1) 45-66. (ERIC Document Reproduction Service No. EJ788674)

Teachers must have an understanding of what mastery is and how to achieve it in their students. However, teachers cannot teach to mastery without referencing the performance of their students. Teaching to mastery is built upon effective student/program alignment.

Gentile, J.R., & Lalley, J.P. (2003). *Standards and mastery learning: Aligning teaching and assessment so all children can learn*. U.S. Department of Education. (ERIC Document Reproduction Service No ED473455)

This book describes the concept of mastery learning in the classroom and the various foundations upon which it is built. Five chapters discuss varied aspects of mastery learning. A source for practical ideas for classroom application.

Gentile, J.R. (2004). Assessing fundamentals in every course through mastery learning. *New Directions for Teaching and Learning, 100*,15-20. (ERIC Document Reproduction Service No. EJ761145)

The author presents a brief narrative description of the importance of requiring mastery of fundamentals as the baseline for evaluation regardless of the level of the class involved. Formative assessment for mastery learning is seen as being more important than summative evaluation of accountability testing.

Guskey, T.R. (2001). *Benjamin S. Bloom's contributions to curriculum, instruction, and school learning.* Paper presented at the Annual Meeting of the American Educational Research Association, Seattle, WA. (ERIC Document Reproduction Service No. ED457185)

This article includes good historical information about Bloom's original conception of mastery learning. Criterion-referenced assessment with varied cognitive levels is described as being an integral part of mastery learning.

Guskey, T. R. (2005). *Formative classroom assessment and Benjamin S. Bloom: Theory, reseach, and implications*. Paper presented at the Annual Meeting of the American Educational Research Association. Montreal, Canada. (ERIC Document Reproduction Service No. ED490412)

: Closing achievement gaps is presented as an issue of reducing variation in students' achievement, and reviews the work of renowned educator Benjamin Bloom. Bloom argued that to reduce variation in students' achievement and to have all students learn well, we must increase variation in instructional approaches and learning time. The key element in this effort is well constructed, formative classroom assessments.

Guskey, T.R. (2005). A historical perspective on closing achievement gaps. *NASSP Bulletin, 89,* (644), 76-89.(ERIC Document Reproduction Service No.EJ747983)

The author reviews the work of Benjamin S. Bloom and mastery learning for an audience of building principals and educational leadership. A practical approach.

Hagerty, G. & Smith, S. (2005). Using the web-based interactive software ALEKS to enhance college algebra. *Mathematics and Computer Education, 39* (3)183-194 (ERIC Document Reproduction Service No. EJ769574)

This study explored the effectiveness of using Assessment and Learning in Knowledge Spaces, an online interactive learning system, in teaching a college algebra course. Students working with ALEKS online worked at their own pace, enhancing mathematical ideas they already knew and building on this knowledge in a mastery learning environment.

Ironsmith, M., & Eppler, M.A.(2007). Mastery learning benefits low-aptitude students. *Teaching of Psychology, 34* (1), 28-31.(ERIC Document Reproduction Service No. EJ755392). :

The authors tested the effects of instructional method (lecture vs. mastery) and aptitude (high, medium, low GPA levels) on students' academic performance and achievement motivation goals.

Kenkel, S., Hoelscher, S., & West, T. (2006). Leading adolescents to mastery. *Educational Leadership, 63* (7), 33-37. (ERIC Document Reproduction Service No. EJ745576)

This article provides an excellent description of how mastery learning changed a community culture of low expectations for working class students, and opened the way for more appropriate teaching methods for at-risk middle-schoolers. The authors describe the teaching modifications and accommodations.

Krank, H.M., & Moon, C.E. (2001). Can a combined mastery/cooperative learning environment positively impact undergraduate academic and affective outcomes? *Journal of College Reading and Learning, 31* (2),195-208 (ERIC Document Reproduction Service No EJ626244)

The researchers applied instructional strategies derived from the concept of mastery learning and cooperative learning to 104 undergraduate social science students enrolled in three sections of a required course. Finds significant effects for the combined mastery/cooperative learning condition, showing greater change in self-concept and higher achievement compared to either mastery learning alone or cooperative learning alone.

Kreiner, D.S. (2006). A mastery-based approach to teaching statistics online. *International Journal of Instructional Media, 33* (1), 73. (ERIC Document Reproduction Service No. EJ749765)

The paper describes a mastery-based approach to teaching an online introductory statistics course and presents data suggesting that the course is effective. Faculty who are considering developing a similar online course should be aware that the instructor must invest a large amount of time to develop course materials and to provide prompt feedback to students. Yes, giving student feedback is time consuming!

Lee, C.D., & Kahnweiler, W.M. (2000). The effect of a mastery learning technique on the performance of a transfer of training task. *Performance Improvement Quarterly, 13* (3) 125-39 (ERIC Document Reproduction Service No EJ629799)

These researchers evaluated the effect of using the mastery learning techniques of self-directed feedback, reinforcement, and remediation of knowledge on the performance of a work-related task involving transfer of training. Supports the hypothesis that mastery learning would have a positive effect on transfer of knowledge from the classroom to a work-related task.

.Luyben, P.D., Hipworth, K., & Pappas, T. (2003). Effects of CAI on the academic performance

and attitudes of college students. *Teaching of Psychology*, *30*, (2), 154-158. (ERIC Document Reproduction Service No. EJ761478)

This study used a within-subjects, crossover design to compare the effects of CAI that included fluency training with traditional study (TS) conditions on test performance and attitudes toward CAI. The study data suggest that CAI procedures that use elements of both mastery learning and fluency training may help to improve academic performance and attitudes.

Motamedi, V., & Sumrall, W.J.(2000). Mastery learning and contemporary issues in education. *Action in Teacher Education, 22* (1) 32-42.(ERIC Document Reproduction Service No. EJ609052)

: This article examined the historical background of mastery learning, discussing computer assisted instruction (CAI), cooperative learning, and constructivist learning as related to mastery learning. Comparisons between cooperative and mastery learning are made.

Saurino, P., & Saurino, D.R. (2006). A multiliteracies model for middle grades. *Middle Grades Research Journal, 1* (1) 49-66. (ERIC Document Reproduction Service No. EJ800214)

Content analyses, regular classroom observations, and interviews, were used to document a framework for multi-literacies implementation. If young adolescents are to succeed, they must be free to explore and develop deeper levels of consciousness than those required to recall facts, to perform on uniform tests.

Sooyoung, K. (2005). *The relationship between enactive mastery experiences and online-course self efficacy (OCSE).* Paper presented at the Academy of Human Resource Development International Conference (AHRD). (ERIC Document Reproduction Service No. ED492291)

This study examined the relationship between mastery experiences (with computers, the Internet, training, online courses, and hybrid course experiences) and online course self-efficacy (OCSE). A total of 94 mid-Illinois university students participated in the research. Pearson's correlation and multiple regression analyses were employed. learning instruction for 137 undergraduates in 4 sections of an introductory social work course.

Thompson, J.A., & Grabau, L.J. (2005). A la carte grading: Providing students opportunities to determine their own paths to success. *Journal of Natural Resources and Life Sciences Education, 33*, 92-97 (ERIC Document Reproduction Service No EJ756019)

Mastery learning was investigated in higher education in this study. For two large enrollment introductory courses in Agronomy at the University of Kentucky the authors implemented a mastery learning approach. Students were required to complete a minimum number of assignments then were given the option to complete additional work that could be substituted for other completed assignments. Students did not choose to complete additional assessments that could demonstrate learning and improve their course grade.

APPENDIX A:

HEURISTIC FOR CREATING A CLASSROOM ASSESSMENT

Classroom Assessment Construction Project

Part I: Planning

1. Identify unit of instruction to be taught and assessed

Identify the Kentucky Core Content for Assessment content area for your assessment. You must use the content area/grade level in which you plan to be certified to teach.

Select the unit chapter for your test construction project. This should come from a textbook in the appropriate grade level and content area. The unit of study or chapter will constitute approximately 1/12 of the textbook.

Identify the content to be taught, the grade level, and the time frame for the instruction. Think carefully about what you want your students to learn. Identify at least five concepts from the unit that are important for the students to learn. Consult Kentucky's Core Content for Assessment and Student Performance Standards from KDE's website to help you determine important concepts in your content area/grade level.

2. Write the title and the purpose of the assessment that you will design

Specify the age and grade level of the students, the duration of the instruction (e.g., six weeks), and type of assessment (formative or summative).

3. Write the objectives for the unit of study

Write at least one specific learning outcome for your chapter/unit for each of the six levels of Bloom's taxonomy of educational objectives. This requires that you understand the meaning of the six levels and understand that specific learning outcomes require an action verb. The objectives should be written in terms of observable behavior that you can evaluate. Use the verbs listed with the Cognitive Objectives in Appendix G. (additional verbs on the handout). Note: This can be difficult, so just do your best.

Thus, each objective will contain one of your five concepts measured at one of Bloom's cognitive levels. You will use all six of Bloom's cognitive levels in writing your objectives (You will need to have at least six objectives.)

Write six to 12 instructional objectives.

A. Use the appropriate "Bloom verb" to indicate the cognitive level expected.
B. Use only one action verb per objective.
C. Include at least five concepts from your instructional unit.

4. Create a Table of Specifications for your classroom assessment

Example of a Table of Specifications (format). Note: You do not have to have a test item for each cell.The level that you choose to measure a concept will be determined by your objectives. If your objectives state that the student will be able to analyze (or other Bloom verb that

is at the level of analysis) Concept 1, then you must have a test item that measures Concept 1 at the level of analysis.

Table of Specifications (Sample)

The Table of Specifications assures the content validity of your assessment, that is, you assess what you teach.

Content	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Concept 1	2 (items 8, 13)	-	-	3(items10,13,16)	-	-
Concept 2	3(items3,14 ,17)	-	-	-	-	-
Concept 3	3(items 9,10,18)	2 (items 4 ,11)	3(items 5,12,21)	-	-	-
Concept 4	-	3(items 6,7,15)	-	-	-	-
Concept 5	-	-	2(items 9,20)	-	1 (item 22)	1 (item 23)
Total	8	5	5	3	1	1

Total number of items must equal 23. **After the items are written, you can add the item number to confirm that your items match your Table of Specifications.**

You must have at least one item in each of the cognitive categories. This makes sense because you wrote at least one objective in each of the six cognitive categories.

Part II: Create a 20-item multiple-choice test.

The test will include: (a) complete directions, (b) test items that are appropriate for the specific learning outcomes being measured, and (c) a scoring key. Each test item should be keyed to a specific learning objective (listed in the list of objectives).
One of the multiple-choice items will be an "**interpretive exercise**."

Part III. Open-Response/Restricted-Response Essay Items (paper-and-pencil)

Using the same topic and unit of instruction, create two (2) open-response items.
In asking the question, use the “Bloom verb” to indicate the cognitive level expected.
(These questions will be used to measure “higher-order” thinking.)

(See examples from CATS released items on KDE website)

A. Determine the responses desired from the students for each score-point level.

B. Create an analytic (not holistic) scoring rubric for each of the two questions.

Part III. Performance Assessment

The performance assessment can be either paper-and-pencil or a true "performance."

Using the same topic and unit of instruction, create one (1) performance assessment
to measure learning. Include the knowledge and thinking skills that will be required
for the student to complete the task. Design an analytic (not holistic) scoring rubric to be used in scoring the task.

A Bibliography: A list of books and other source materials used in completing the project should be included. This Bibliography should be in American Psychological Association (APA) style (see 5th edition of the style manual) and should include at least five references (no more than two Internet references).

The completed project will be an appropriate professional portfolio entry for Standard IV.

Please see the scoring rubric included with this assignment.

Bloom's Taxonomy: An Overview

Asking students to think at higher levels, beyond simple recall, is an excellent way to stimulate students' thought processes. Different types of questions require us to use different kinds or levels of thinking.

See a list of verbs for use in lesson plans and discussion questions that correlates to Bloom's levels of thinking.

According to Bloom's Taxonomy, human thinking skills can be broken down into the following six categories.

1. **Knowledge**: remembering or recalling appropriate, previously learned information to draw out factual (usually right or wrong) answers. Use words and phrases such as: how many, when, where, list, define, tell, describe, identify, etc., to draw out factual answers, testing students' recall and recognition.
2. **Comprehension**: grasping or understanding the meaning of informational materials. Use words such as: describe, explain, estimate, predict, identify, differentiate, etc., to encourage students to translate, interpret, and extrapolate.
3. **Application**: applying previously learned information (or knowledge) to new and unfamiliar situations. Use words such as: demonstrate, apply, illustrate, show, solve, examine, classify, experiment, etc., to encourage students to apply knowledge to situations that are new and unfamiliar.
4. **Analysis**: breaking down information into parts, or examining (and trying to understand the organizational structure of) information. Use words and phrases such as: what are the differences, analyze, explain, compare, separate, classify, arrange, etc., to encourage students to break information down into parts.
5. **Synthesis**: applying prior knowledge and skills to combine elements into a pattern not clearly there before. Use words and phrases such as: combine, rearrange, substitute, create, design, invent, what if, etc., to encourage students to combine elements into a pattern that's new.
6. **Evaluation**: judging or deciding according to some set of criteria, without real right or wrong answers. Use words such as: assess, decide, measure, select, explain, conclude, compare, summarize, etc., to encourage students to make judgments according to a set of criteria.

Bloom B. S. (1956). *Taxonomy of educational objectives, Handbook I: The cognitive domain.* New York: David McKay Co Inc.

Bloom's Taxonomy Verbs

Use these verbs in your lessons and discussion questions to ensure that students are thinking at higher levels.

Knowledge		Comprehend	
Count	Read	Classify	Interpret
Define	Recall	Cite	Locate
Describe	Recite	Conclude	Make sense of
Draw	Record	Convert	Paraphrase
Enumerate	Reproduce	Describe	Predict
Find	Select	Discuss	Report
Identify	Sequence	Estimate	Restate
Label	State	Explain	Review
List	Tell	Generalize	Summarize
Match	View	Give examples	Trace
Name	Write	Illustrate	Understand
Quote			

Apply		Analyze	
Act	Imitate	Break down	Focus
Administer	Implement	Characterize	Illustrate
Articulate	Interview	Classify	Infer
Assess	Include	Compare	Limit
Change	Inform	Contrast	Outline
Chart	Instruct	Correlate	Point out
Choose	Paint	Debate	Prioritize
Collect	Participate	Deduce	Recognize
Compute	Predict	Diagram	Research
Construct	Prepare	Differentiate	Relate
Contribute	Produce	Discriminate	Separate
Control	Provide	Distinguish	Subdivide
Demonstrate	Relate	Examine	
Determine	Report		
Develop	Select		
Discover	Show		
Dramatize	Solve		
Draw	Transfer		
Establish	Use		
Extend	Utilize		

Synthesize		Evaluate	
Adapt	Intervene	Appraise	Interpret
Anticipate	Invent	Argue	Judge
Categorize	Make up	Assess	Justify
Collaborate	Model	Choose	Predict
Combine	Modify	Compare & Contrast	Prioritize
Communicate	Negotiate	Conclude	Prove
Compare	Organize	Criticize	Rank
Compile	Perform	Critique	Rate
Compose	Plan	Decide	Reframe
Construct	Pretend	Defend	Select
Contrast	Produce	Evaluate	Support
Create	Progress		
Design	Propose		
Develop	Rearrange		
Devise	Reconstruct		
Express	Reinforce		
Facilitate	Reorganize		
Formulate	Revise		
Generate	Rewrite		
Incorporate	Structure		
Individualize	Substitute		
Initiate	Validate		
Integrate			

Bloom B. S. (1956). *Taxonomy of educational objectives, Handbook I: The cognitive domain.* New York: David McKay Co Inc.

RUBRIC FOR CLASSROOM ASSESSMENT CONSTRUCTION PROJECT

Content	Level 1	Level 2	Level 3	Level 4
Unit Title	**Unit title is missing. Purpose of test is missing.**	**Incomplete unit title/elements missing. Purpose of the test is missing or is unclear.**	**Complete unit title/age/grade/duration of unit. Purpose of test is missing or is unclear.**	**Title/age/grade/duration of unit. Purpose of the test is stated (e.g., formative or summative)**
Objectives	**Six to 12 objectives are present. Objectives contain more than one action verb. There is no evidence of Bloom's cognitive levels.**	**Six to 12 objectives are present. Objectives contain more than one action verb. Objectives are not tied to Bloom's cognitive levels.**	**Six to 12 objectives are present. Only one of Bloom's action verbs is used for each objective. There is NOT at least one objective for each of Bloom's cognitive levels.**	**Six to 12 objectives are present. Only one of Bloom's action verbs is used for each objective. There is at least one objective for each of Bloom's cognitive levels.**
Test Blueprint	**At least five concepts from the content are listed but there is NO match between the objectives and the Table of Specifications.**	**There are at least five concepts from the content taught in the unit. The Table of Specifications does NOT reflect the objectives. The number of questions that measure each concept at each cognitive level is NOT indicated. The total number of items is NOT indicated.**	**There are at least five concepts from the content taught in the unit. The Table of Specifications reflects the objectives. The number of questions that measure each concept at each cognitive level is NOT indicated. The total number of items (23) is NOT indicated.**	**There are at least five concepts from the content taught in the unit. The Table of Specifications reflects the objectives. The number of questions that measure each concept at each cognitive level is indicated. The total number of items (23) is indicated.**
Multiple-Choice Items (20)	**The items are not well written. No answers are provided. There is no connection between the Table of Specifications and the test items.**	**Some of items are well written and the answers are provided, but there is no connection between the Table of Specifications and the items.**	**Some of the items are well written and the answers are provided. There is a connection between the Table of Specifications and the items.**	**All of the items are well written and the answers are provided. There is a connection between the Table of Specifications and the items. There is at least one test item for each of Bloom's cognitive levels. Verb use is accurate.**
Open-Response Items (Restricted-Response Essay)	**The items are NOT clearly written and one or both of the items fail to measure one of Bloom's higher cognitive levels (reflected in the verb used). Rubrics are missing or are minimal.**	**The items are clearly written and each measures one of Bloom's higher cognitive levels (reflected in the verb used). Rubrics are missing or are minimal.**	**The items are clearly written and each measures one of Bloom's higher cognitive levels (reflected in the verb used). Rubrics are well written and clear. The items do NOT match the Table of Specifications and/or objectives.**	**The items are clearly written and each measures one of Bloom's higher cognitive levels (reflected in the verb used). Rubrics are well written and clear. The items match both the Table of Specifications and objectives.**

Performance-Based Assessment	**The expected performance is NOT well described in terms of the objectives and the Table of Specifications. The rubrics are missing or are minimal.**	**The expected performance is well described, but the item does not fit either the objectives or the Table of Specifications. The rubrics are complete and clear.**	**The expected performance is well described. The cognitive level measure is clear (reflected in the verb used). Student directions are clear. The rubrics are well designed and clearly presented. The item does not measure one of the objectives and does not fit the Table of Specifications.**	**The expected performance is well described. The cognitive level measured is clear (reflected in the verb used). Student directions are clear. The rubrics are well designed and clearly presented. The item is included in the Table of Specifications and measures one of the objectives.**
Internal Consistency between Objectives, Blueprint, and Test Items	**There is no match between objectives, Table of Specifications, and test items.**	**There is minimal match between objectives, Table of Specifications, and test items.**	**The test items match either the objectives or the Table of Specifications, but not both.**	**There is an obvious fit (reflected in verb usage) between the objectives, the Table of Specifications, and the test items. The construction is a thing of beauty!**
Test Properties	**No directions. Poor formatting of items. No answers provided.**	**Unclear directions. Satisfactory formatting. No answers provided.**	**Clear directions. Good formatting. Answers provided.**	**Excellent directions. Excellent formatting. Answers clear and correct.**
Bibliography	**Missing**	**Present but not in APA format and/or contains fewer than five items.**	**Present, in APA format, contains at least five items, but more than two are Internet references.**	**Present, in APA format, contains at least five items, no more than two are Internet references.**
Total Rating	**Not a passing grade**	**Passing**	**Satisfactory**	**Expected Mastery Level**