

# **USING RUBRICS AS A TEACHING TOOL FOR GUIDING BOTH ASSESSMENT AND IMPROVEMENT OF STUDENT LEARNING IN BUSINESS SCHOOLS**

Maria L. Bullen, Dominican University of California, maria.bullen@dominican.edu

Gregory S. Kordecki, Clayton State University, gregkordecki@clayton.edu

Elizabeth Capener, Dominican University of California, elizabeth.capener@dominican.edu

## **ABSTRACT**

The paper discusses how rubrics may be used to evaluate and assess student learning by providing an organized approach to determine student success on learning outcomes. In addition to its benefits in the assessment aspect of the process assurance of learning, rubrics can be a useful tool in guiding students to improve their learning by focusing on important criteria which will be measured. The paper provides an overview of some recent research on rubrics, including development of rubric designs focusing on critical and integrative thinking, and communications skills. The paper includes rubric designs used by the authors in accounting courses.

## **BENEFITS OF RUBRICS IN BUSINESS EDUCATION**

A key aspect of assessment is to help faculty gauge student learning in order to determine how well desired student learning outcomes have been met. Rubrics can provide an organized approach to assessing these outcomes at the course level—as well as at the business school and university levels. As reported by Bisoux (2013), the new accreditation “Standard 8- Curricula Management and Assurance of Learning—Giving context to assurance of learning” of the Association to Advance Collegiate Schools of Business (AACSB) focuses on “Curricula Management and Assurance of Learning.” AACSB momentum for Assurance of Learning (AACSB International, 2006; AACSB International Accreditation Coordinating Committee, 2007) started in the late 1990s, picked up more speed in the early 2000s, and has continued to have B-Schools focus on assurance of learning and meet its “Assurance of Learning Standards.” With many business schools seeking to attain or hold on to AACSB accreditation, meeting assurance of learning standards and the assessment concept of “rubrics” to help faculty gauge student learning has continued and taken on increased emphasis.

As important as rubrics are for evaluation and assessment purposes, however their use for improving learning should not be overlooked. In addition to the benefits of improved evaluation and assessment, providing students with the rubrics assessment instrument can also improve student learning by making students aware of the important criteria related to what they need to learn. When they can clearly see how they will be evaluated, it is more likely that they will focus on these important criteria which include the student’s ability to think critically and integrate their knowledge.

As noted in Kordecki (2007), “*Outcome-focused and Assessment-based*” are no longer terms exclusive to the purview of general education and selected liberal arts courses; the failure to encompass adequate exposure to individual expression in the teaching and learning process yields lemmings and nerds in industry where much of what is needed reduces to sound critical thinking and communication.” We suggest that with efforts in study of and application of teaching and learning innovations and tools such as rubric designs, business school educators can effectively help students transition to successful business professionals.

Working with accounting educators, the AICPA (2005) developed its “AICPA Core Competency Framework” which it maintains on its “Core Competency & Educational Competency Assessment” web site. Since the accounting body of knowledge is always changing—and accounting professionals may change their career focus within accounting, rather than traditional accounting subject matter distinctions,

the Framework focuses on skills which will have long-term value whether the accountant stays in one area of accounting or changes focus to another.

Although the competencies were written with future accounting professionals in mind, we believe that they apply to other business professionals as well. The competencies comprise the three areas of functional or technical competencies, personal competencies related to individual attributes and value, and broad business perspectives competencies which are the perspectives and skills relating to understanding of internal and external business contexts. The broad business perspective competencies include such skills as “Strategic/Critical Thinking,” the ability to link data, knowledge and insight together from various disciplines to provide information for decision-making, to be in tune with the “big picture” perspective and be able to communicate the vision, strategy, goals and culture of organizations, “Industry/Sector Perspective,” the ability through research and analysis to identify the economics accounting and broad business financial risks and opportunities in the business and “International/Global Perspective,” the ability to identify and communicate the variety of threats and opportunities of doing business in a borderless world. These and other competencies in the Broad Business Perspectives emphasize the types of higher level skills that can be addressed and assessed by quality rubric designs in accounting courses.

Another major impetus for utilizing teaching techniques such as rubric designs that will help assess multiple skills in accounting courses comes from the current focus on accounting education resulting from the recommendations of the Pathways Commission on Accounting Education in its final report “Charting a Strategy for the Next Generation of Accountants” issued in July, 2012 and available on the Commission’s web site. As noted on the site, “This report summarizes two years of collective effort by over 50 individuals representing a diverse array of stakeholders in a broadly defined accounting profession – encompassing public and corporate accounting, education, and government.” A joint venture of the American Accounting Association (AAA) and the American Institute of CPAs (AICPA), the Pathways Commission took the 2008 challenge of the U.S. Treasury Advisory Committee on the Auditing Profession (ACAP) to study the possible future structure of accounting education for the accounting profession in order to develop pathways to the profession.

As noted in the Pathways Commission Report (p. 10), “A fundamental premise adopted by the Pathways Commission was that the education of accounting professionals should be based on a comprehensive and well articulated vision of the role of accounting in the wider society—and that the development of useful business information, preparation, and attestation to informative financial information and the production of reliable data for management decision-making requires that those involved in the information chain have an education commensurate with the challenges and responsibilities inherent in their work.” The report made seven major recommendations—the fourth which was “Develop curriculum models, engaging learning resources, and mechanisms for easily sharing them, as well as enhancing faculty development opportunities in support of sustaining a robust curriculum.” Whereas the Pathways Commission Report was geared to the accounting profession, again we believe that it also has worthwhile wider implications for other disciplines in business schools, and for the integrative learning which ideally takes place in business schools.

As noted by Bishop-Clark & Dietz-Uhler (2012), rubrics which provide guidelines identifying various components and levels of student work are a proven way to apply criteria to evaluate student work--generally qualitative data, especially material generated by students in various course assignments ranging from papers and essays to presentations and team work. For meaningful reliability, these authors suggest establishing rules on coding such as having a minimum of at least two people reviewing the data and agreeing on its interpretations, and concluding that if reviewers or coders agree at least 80% of the time, then the interpretation of the coding is deemed reliable.

## EXAMPLES OF RUBRIC DESIGNS FOCUSING ON CRITICAL THINKING

The Washington State Critical Thinking Rubric (Washington State University Center for Teaching, Learning, & Technology, 2006), offers a good starting point for instructors on nailing down critical and integrative thinking. In their rubric entitled “Guide to Rating Critical & Integrative Thinking” they provide the following seven criteria to assess students’ work:

1. Identify problem, question, or issue
2. Consider context and assumptions
3. Develop own position or hypothesis
4. Present and analyze supporting data
5. Integrate other perspectives
6. Identify conclusions and implications
7. Communicate effectively

On each of the 7 criteria the instructor rates the student work on a scale from 1 to 6 as either “Emerging” (1 and 2), “Developing” (3 and 4) or “Mastering” (5 and 6). As an example for Criteria 3 “Develop own position or hypotheses,” an “Emerging” rating would be given when “Position or hypothesis is clearly inherited or adopted with little original consideration,” a

“Developing” rating would apply when “Position includes some original thinking that acknowledges, refutes, synthesizes or extends other assertions, although some aspects may have been adopted,” and a “Mastering” rating would apply when “Position demonstrates ownership for constructing knowledge or framing original questions, integrating objective analysis and intuition.” For Criteria 4 – Present and analyze supporting data” an “Emerging” rating would be given when “Data/evidence or sources are simplistic, inappropriate, or not related to topic,” a “Developing” rating would apply when “Appropriate data/evidence or sources provided, although exploration appears to have been routine,” and a “Mastering” rating would apply when “Information need is clearly defined and integrated to meet and exceed assignment, course or personal interests.”

The Washington State Critical Thinking Rubric was modified at Miami University’s Center for the Enhancement of Learning, Teaching, and University Assessment (Shore, C. and Taylor, B., 2013) into a “Critical thinking/integration paper rubric” comprising the following 8 criteria:

1. Identifies and summarizes the **problem/question** at issue (and/or the source’s position)
2. Identifies and presents the STUDENT’S OWN **perspective and position**
3. Identifies and considers OTHER salient **perspectives and positions** that are important to the analysis of the issue
4. Identifies and assesses the key **assumptions**.
5. **Comparison contrast** of views
6. Identifies and assesses the quality of **supporting data/evidence** and provides additional data/evidence related to the issue.
7. Identifies and considers the influence of the **context** on the issue.
8. Identifies and assesses **conclusions, implication, and consequences**.

The four rating criteria of this Miami University instrument are “Scant,” “Minimally Developed,” “Moderately Developed,” and “Substantially Developed.”

An example regarding the second criteria “Identifies and presents the STUDENT’S OWN **perspective and position**,” a “Scant” rating would be given if the student “Fails to acknowledge the existence of valid counter arguments,” a “Minimally Developed” rating would apply if the Student “Fails to acknowledge the possible validity of other positions,” a “Moderately Developed” rating would apply when the student “Recognizes that there are other valid points of view,” and the highest “Substantially Developed” rating would apply when the student “Recognizes counterarguments that might be made and responds to them.”

Another rubric entitled “Rubric for Analytical Writing Assessment” from Truman State University (2012) identifies the four criteria of “Critical Thinking,” “Organization,” “Style,” and “Mechanics” and provides for rating along a four-point scale from 0 to 3. As an example, for the “Critical Thinking” criteria a “0” rating would apply when the student “Demonstrates no real integration of ideas (the author’s or those of others) to make meaning,” a “1” would be appropriate when “Begins to integrate ideas (the author’s or those of others) to make meaning,” a “2” would apply when the student “Displays some skill at integrating ideas (the author’s or those of others) to make meaning,” and the highest “3” rating would be earned when the student “Is adept at integrating ideas (the authors or those of others) to make meaning.”

According to Bishop-Clark & Dietz-Uhler (2012), good rubrics reflect content analysis that should be not only deductive but also systematic, and also lead to findings that could fit into a theoretical or applied context. Accordingly, accounting and any applied social science is fruitful ground for rubrics. Bishop-Clark and a computer science team (2007) reports that an effective means of analysis is to code data included from students’ responses to essay questions—either on individual paper copies or by pasting responses into an Excel spreadsheet and then having separate coders entering their respective scoring codes. Naturally, there will be trade-offs on how much time to invest in this process to obtain inter-rater reliability.

Applications to the various disciplines can be tailored. Mason, et al. (2008) studied diagnostic skills of physics students by providing a problem for students to solve. Student solutions would then be scored on a rubric especially created for the study, including specific criteria for application of principles formulas, and approach to evaluation. This study has special appeal as it demonstrated use by having both the researcher and the student using the rubric to evaluate students’ solutions. In business school classrooms, it might prove to have class breakout activities of small groups of three to four students engaged in “peer-review” with the application of the rubric device.

### **SOME RECENT RESEARCH ON RUBRICS**

Recent research has investigated rubrics in various educational settings. Several interesting studies are discussed below. In a small study attempting to evaluate the growth and development in critical thinking skills in Managerial Accounting students, Decker and Ebersole (2007) found no difference in the performance of a student group evaluated by rubrics throughout the term, compared to a control student group evaluated using traditional measures. Those authors attribute these disappointing results to several factors. First, they used a 10 point scale, which may have made it difficult for students to differentiate performance at each level. Second, the rubric used language unfamiliar to students (clarity, breadth, relevance, precision, accuracy). Third, students reported the rubric was too complex to be effective. Finally, the rubric was used to evaluate performance on open-ended exam questions. Rubrics might be more appropriate for different assignment types. If students do not actively use the rubric, improved learning does not occur. Effective design is critical to the success of rubric use by students.

In another study Vandenberg et al. (2010) analyzed three sections of a financial accounting course requiring students to complete projects involving writing assignments. Students in two sections taught by one author were provided with rubrics for guidance, while students in the third control section taught by another author were just given the standard set of instructions. The authors found that on an overall basis, students in the section provided the rubrics scored significantly higher on two of the three sections of the project. However the results of a student survey conducted as part of the research showed that there was no statistical difference in students’ feelings about professor communication, project clarity and satisfaction with the project as a whole. The authors concluded that although the rubric may have helped the students perform better, the students themselves did not seem to realize this. The authors recognize the

limitations in the study related to having different instructors teach the students provided the rubric versus the control group—and suggest future changes to control for differences in teaching style by having all instructors participating in the research teach a semester without use of the rubric and then teach the next semester with the rubric. The authors also expressed intention to increase sample sizes in their future research to see if results confirm their preliminary results of increased student achievement through use of rubrics.

Durkee (2011) used a rubric to evaluate employing metaphor to develop critical thinking, research and writing skills in senior undergraduate accounting students and graduate accounting students. Using metaphor to explain accounting practice expands the student learning experience beyond mere learning of rules. In addition, using a metaphor requires students to consider accounting from another point of view, thus developing critical thinking skills needed in the work world. The rubric measured the students' ability to master the assignment from start to finish, including identifying the problem, gathering information, proposing strong solutions and communicating effectively. Using creative accounting strategies prepares students for success after graduation. Using a rubric was found to be an effective method for developing and assessing creative work in accounting.

The AICPA and other professional organizations identify skills needed for success in the accounting profession. These skills, along with the evolution of International Financial Reporting Standards (IFRS) and the ability to address ethical issues have greatly increased the expectations for student learning in the Introductory Accounting classes. Young and Warren (2011) use “challenge problems” scored using rubrics to evaluate the critical thinking skills of their students in the Introductory Accounting classes. The advantages to using rubrics were (1) a challenge problem requiring the student to transfer knowledge from one situation to another (critical thinking skill) is more like the real world problems students will face in their careers upon graduation, rather than a question with four choices, one of which is the “correct” answer (2) students received feedback on strengths and weaknesses in their critical thinking skills (3) faculty could be responsive to the requirements of professional organizations by quickly make a change to the introductory curriculum and evaluate what critical thinking skills needed to be addressed in subsequent courses. Rubrics add qualitative feedback benefitting both faculty and student.

## **IMPLICATIONS AND EXAMPLES OF OUR RUBRICS**

It is our hope that teaching business will be enhanced with the use of rubric guides.

In our paper and presentation we will share rubric designs used in our accounting courses (Appendix A). We hope to stimulate discussion and encourage future research relating to the use of rubrics at various levels of instruction and the development of rubric design instruments that may be used both in the classroom and for take-home assignments. We expect that increased interest in rubric designs will not only assist the faculty in grading students but will help the process of overall assurance of learning—as well as actually increase the learning of students in the important areas of critical and integrative thinking.

**APPENDIX A  
EXAMPLES OF RUBRIC DESIGNS**

**Grading Rubric for Accounting Essays & Discussion** Student: \_\_\_\_\_

Item: Assessment name/number \_\_\_\_\_ Date: \_\_\_\_\_

(Note: sufficient length is required—default score = 0) Evaluator: \_\_\_\_\_

<b>CRITERION</b>	<b>Rating Scale:</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Critical Thinking</b>	<i>Content Performance</i> (usually tied to specific paragraphs in student work)					
I	Identification and recognition of key items and concepts (generally Bloom scale of application and lower)					
II	Throughput, argument development, recording selection (generally Bloom scale of analysis or synthesis)					
III	Decision-making, judgment, output (generally Bloom scale of evaluation)					
<b>Communication Elements</b>	<i>Delivery Performance</i> (usually tied to overall student response)					
IV	Writing rules—grammar, punctuation, sentence clarity (items that generally would surface on Spell Check, but also correct usage and parallelism)					
V	Organization coherence—paragraph development, business application, readability by those in the discipline (diction, language, precision, tone, appeal—effective and efficient professional presentation style)					
<b>TOTALS</b>	Combination of five criteria					
<b>GRAND TOTAL RAW SCORE =</b>						

Scale Converter:	Raw Score, Converted Score				
A level work generally	20,100	19,95	18,93	17,90	
B level work generally	16,88	15,85	14,83	13,80	
C level work generally	12,78	11,77	10,75	9,73	8,71
D level work generally	7,69	6,67	5,65	4,63	3,60
F level work generally	2,40	1,20	0,0		

Next is a sample case followed by application of the rubric.

## Sample Assessment Instrument

Course: Managerial Accounting

Topic assessed: Cost volume profit analysis

In at least three separate strong paragraphs of minimum 100 words each, respond to the following questions:

- I. Define contribution margin per unit. Specify the general formula algebraically for cost volume profit (CVP) analysis for a business that wishes to determine the breakeven point in number of units of a single product to produce and sell. Provide examples of at least two cost items in a business that would be considered variable, and at least two cost items that would be considered fixed. Ignore income taxes.
- II. Management wishes to pursue CVP analysis vigorously for its overall planning. How would the general formula specified in I. above be modified for consideration of a targeting net income, income taxes, and multiple products? What are the constraints and limiting assumptions underlying the valid use of CVP?
- III. Management has approached you to assist in identifying alternative models or tools to CVP and help evaluate whether such alternatives may be superior in guiding their planning. Identify at least two approaches other than CVP that management might use to assist with business planning and defend your selections.

### A Sample Student Response

- I. Contribution margin is the same as gross margin and is defined as selling price less cost of goods sold. It tells you how much the company makes on its gross activities. It is not too difficult to calculate this. The general formula is  $\text{Breakeven X} = \text{Fixed costs} / \text{Contribution margin per unit}$ . Depreciation is always a variable cost, and so is salesman's commission. Examples of fixed costs are salaries of the chief executive officer and utilities.
- II. The formula now becomes  $\text{Breakeven X} = \text{Fixed Costs} + \text{Tax Effects} / \text{Weighted Average contribution margin per unit}$ . The tax effects have something to do with subtracting out a tax rate and trying to plug in some kind of income amount. I cut class on the day you discussed what was meant by weighted average, but I should get partial credit because I know the formula. Assumptions used for CVP generally include relevant range, stable pricing, clarity in definition of which costs fixed and variable, known product mix, uniform elasticity of demand, no change in inventories.
- III. Management should consider master budgeting for the basics of having resources ready for production, avoiding stockout, steady flow of planned sales, economic order quantity, and volume fluctuations. Master budgeting goes toward determining true cash needs and would involve cash budget or statement of cash flows on a pro-forma basis. Management should also look beyond current operations and engage in capital budgeting, looking forward several years for machine replacements, alternative markets, and the like. CVP is very good in the very short run, but management needs to take a holistic appraisal of where the company stands and plan for the long run accordingly, hopefully with time value of money techniques.

**Grading Rubric for Accounting Essays & Discussion**

Student: I. M. Bright

Item: Assessment name/number Managerial/CVP

Date:     n/n/nn

(Note: sufficient length is required—default score = 0) Evaluator:

CRITERION	Rating Scale:	0	1	2	3	4
<b>Critical Thinking</b>	<i>Content Performance</i> (usually tied to specific paragraphs in student work)					
I	Identification and recognition of key items and concepts (generally Bloom scale of application and lower)			2		
II	Throughput, argument development, recording selection (generally Bloom scale of analysis or synthesis)			2		
III	Decision-making, judgment, output (generally Bloom scale of evaluation)				3	
<b>Communication Elements</b>	<i>Delivery Performance</i> (usually tied to overall student response)					
IV	Writing rules—grammar, punctuation, sentence clarity (items that generally would surface on Spell Check, but also correct usage and parallelism)				3	
V	Organization coherence—paragraph development, business application, readability by those in the discipline (diction, language, precision, tone, appeal—effective and efficient professional presentation style)			2		
<b>TOTALS</b>	Combination of five criteria			6	6	
<b>GRAND TOTAL RAW SCORE = 12</b>						

IV.

Scale Converter:	Raw Score, Converted Score
------------------	----------------------------

V.

VI.

A level work generally	20,100	19,95	18,93	17,90
------------------------	--------	-------	-------	-------

B level work generally	16,88	15,85	14,83	13,80
------------------------	-------	-------	-------	-------

C level work generally	12,78	11,77	10,75	9,73	8,71
------------------------	-------	-------	-------	------	------

D level work generally	7,69	6,67	5,65	4,63	3,60
------------------------	------	------	------	------	------

F level work generally	2,40	1,20	0,0
------------------------	------	------	-----



The following example is of a more detailed rubric design.

**Accounting Thinking and Written Communication Skills Rubric**

Student: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Word Count: \_\_\_\_\_ Sufficient length is required Course: *Acct* Section: \_\_\_\_\_ Date: \_\_\_\_\_

Performance Element /Rating	Unsatisfactory (0)	Weak (1)	Marginal (2)	Good (3)	Outstanding (4)
<b>Content, Structure</b> ✓ Knowledge scope, depth ✓ Argument development ✓ Organization, coherence, and evaluation	<input type="checkbox"/> Fails to address the important requirements of the assignment in quantity and quality  <input type="checkbox"/> Displays little knowledge; makes factual errors; fails to develop conclusions  <input type="checkbox"/> Provides little substance and order to sequencing, unity, paragraph development, and supporting analysis	<input type="checkbox"/> _  <input type="checkbox"/> _  <input type="checkbox"/> _	<input type="checkbox"/> Fulfills some important content or displays peripheral knowledge  <input type="checkbox"/> Develops limited premises, and alternatives leading to conclusion  <input type="checkbox"/> Provides limited focus in building order and connection for relevance and comparative synthesis	<input type="checkbox"/> _  <input type="checkbox"/> _  <input type="checkbox"/> _	<input type="checkbox"/> Exceeds requirements and displays superior range in quantity and quality  <input type="checkbox"/> Demonstrates superior understanding In argument development  <input type="checkbox"/> Demonstrates strong, clear, consistent organization development and evaluation
<i>Element Total</i>	_____	_____	_____	_____	_____ <i>factor weight (fw)</i>
<i>Times rating =</i>	_____	_____	_____	_____	_____
<b>Holistic Delivery</b> ✓ Diction, Language, and tone	<input type="checkbox"/> Uses words inappropriate to context; negative emphasis; biased language; conveys condescending or rude tone	<input type="checkbox"/> _  <input type="checkbox"/> _	<input type="checkbox"/> Uses words generally appropriate to context and avoids biased language; generally conveys professional tone	<input type="checkbox"/> _  <input type="checkbox"/> _	<input type="checkbox"/> Selects appropriate words and language for context; builds goodwill; conveys confidence  <input type="checkbox"/> Consistently chooses relevant voice, person,number, tense, and verbs;

Performance Element /Rating	Unsatisfactory (0)	Weak (1)	Marginal (2)	Good (3)	Outstanding (4)
✓ Precision, voice, and appeal <input type="checkbox"/> Uses vague, awkward wording, passive voice, weak linking verbs, many unnecessary words or contractions, ineffective presentation style			<input type="checkbox"/> Generally chooses precise, concrete wording, active voice, strong verbs; avoids unnecessary words, contractions; uses effective presentation style		<input type="checkbox"/> uses efficient and effective words and presentation style
<i>Element Total</i>	_____	_____	_____	_____	_____ <i>factor weight (fw)</i>
<i>Times rating =</i>	_____	_____	_____	_____	_____
<b>Writing Rules</b> ✓ Sentence clarity and parallelism  <input type="checkbox"/> Exhibits frequent fragments, run-ons, comma splices, and word omissions; errors in subject-verb agreement, pronoun and verb forms  ✓ Grammar comp, punctuation <input type="checkbox"/> Exhibits errors #s, symbols, caps, hyphens, sp, italics, commas, apostrophe, & punctuation		<input type="checkbox"/> _  <input type="checkbox"/> _	<input type="checkbox"/> Generally uses sentence structure for clarity with appropriate completeness, grammar, and patterns  <input type="checkbox"/> Generally uses correct grammar components including punctuation	<input type="checkbox"/> _  <input type="checkbox"/> _	<input type="checkbox"/> Consistently uses sentence structure and patterns to support appropriate relationships among ideas  <input type="checkbox"/> Consistently uses correct grammar to support argument content
<i>Element Total</i>	_____	_____	_____	_____	_____ <i>factor weight (fw)</i>
<i>Times rating =</i>	_____	_____	_____	_____	_____

## REFERENCES

- AACSB International – The Association to Advance Collegiate Schools of Business. (2006). *Eligibility procedures and accreditation standards for business accreditation*. Tampa, FL:
- AACSB International Accreditation Coordinating Committee (2007) AACSB Assurance of Learning Standards: An Interpretation. AACSB White Paper No. 3, currently with standards on web site of Association to Advance Collegiate Schools of Business (AACSB) [www.aacsb.edu](http://www.aacsb.edu).
- American Institute of Certified Public Accountants (AICPA), Educational Executive Committee. (2006). *Education requirements for entry into the accounting profession*. New York, NY: AICPA.
- Bishop-Clark, C., Courte, J., Evans, D., & Howard, E. (2007). A quantitative and qualitative investigation of using Alice programming to improve confidence, enjoyment and achievement among non-majors. *Journal of Educational Computing Research*, 37(2), 193-207.
- Bishop-Clark, C. & Dietz-Uhler, B. (2012). *Engaging in the scholarship of teaching and learning*, Stylus Publishing, LLC, Sterling, VA: 2012, ISBN: 978-1-57922-471-4.
- Bisoux, T. (2013) 15 That's the number of new accreditation standards that AACSB International's Blue Ribbon Committee has drafted," *BizEd* (March/April 2013), 28-35.
- Decker, J., & Ebersole, M. (2007). THE USE OF SCORING RUBRICS IN MANAGEMENT ACCOUNTING. *Academy Of Educational Leadership Journal*, 11(2), 31-43.
- Durkee, D. A. (2011). TEACHING WITH METAPHOR: THE CASE OF ALICE IN GAAP LAND. *Academy Of Educational Leadership Journal*, 15(1), 39-56.
- Kerby, D., & Romine, J. (2010). Develop Oral Presentation Skills Through Accounting Curriculum Design and Course-Embedded Assessment. *Journal Of Education For Business*, 85(3), 172-179.
- Kordecki, G. (2007). Using rubrics to improve critical thinking and written communication. *Insights to a Changing World*, 2007(4), 45 - 53.
- Martell, M., & Calderon, T.G. (2005). *Assessment in the Disciplines – Assessment of Student Learning in Business Schools*. Tallahassee, FL: Association for Institutional Research.
- Mason, A., Cohen, E., Yerushalmi, E., & Singh, C. (2008). Identifying differences in diagnostic skills between physics students: Developing a rubric. *Physical Education Research Conference*, 1064, 147-150.
- Pathways Commission on Accounting Education (2012). Charting a Strategy for the Next Generation of Accountants," retrieved from [www.pathwayscommission.org](http://www.pathwayscommission.org)
- Shore, C. and Taylor, B. (2013), "Critical thinking/integration paper rubric," Miami University Center for the Enhancement of Learning, Teaching and University Assessment (2013), Retrieved from <http://www.units.muohio.edu/celt/assessment/basics/rubrics.php>
- Truman State University (2013), "Rubric for Analytical Writing Assessment," retrieved from [http://search.truman.edu/index.asp?cx=014461363627659374908%3Apdnd\\_x3x2hi&cof=FORID%3A11&q=Rubric&sa=Search](http://search.truman.edu/index.asp?cx=014461363627659374908%3Apdnd_x3x2hi&cof=FORID%3A11&q=Rubric&sa=Search)

Vandenberg, A. Stollak, M., Mckeag, L. and Obermann, D. (2010). GPS in the classroom: using rubrics to increase student achievement. *Research in Higher Education Journal* 9, pp. 1-10.

Young, M., & Warren, D. (2011). Encouraging the Development of Critical Thinking Skills in the Introductory Accounting Courses Using the Challenge Problem Approach. *Issues In Accounting Education*, 26(4), 859-881.

Washington State University Center for Teaching, Learning, & Technology (2006) "Guide to Rating Critical & Integrative Thinking," Retrieved from [www.wsu.edu](http://www.wsu.edu)