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Introduction

Researchers define learning in many different ways, but all agree learning causes a permanent change in human behavior. "Learning is a process that leads to a change in a learner's disposition and capabilities that can be reflected in behavior."[2] The purpose of writing this *DETC Occasional Paper* is to illustrate how the principles of learning can facilitate the design of effective instruction. Instructional design and learning principles are related to each other. The Instructional Designer must be knowledgeable regarding how human beings learn and appropriately measure that learning. This is the central goal of course design. Applying the principles of learning is a major contributing factor to effective course design. Appropriate use of grading rubrics determine the extent to which learning took place.

Grading Rubrics is also comprehensively discussed in this paper.

Part 1 - Principles of Learning

As human beings, we each have our own views on how we learn, and these perceptions are reflected in our experience and observation of the environment around us. There are four types of learning principles that are common in all types of instructional design.[2] The principles are a) contiguity, b) repetition c) reinforcement, and d) social-cultural principles of learning.

A. Contiguity: According to contiguity theory, learning materials and the expected response must be presented at the same time.[2] "The stimulus situation must be presented simultaneously with the desired response." In an example by Gagne *et. al.*[2] the goal of a soldier in a learning situation is to reassemble his or her weapon without aid. A novice instructor might begin with presenting the soldier an illustrated

diagram of the weapon and then asking him or her to reassemble the weapon according to the diagram. The objective, however, is to reassemble the weapon without any type of aid. The learning outcome is "**reassemble your weapon**,"[2] and the response would be to reassemble the weapon without consulting the diagram. Although the diagram could serve as an aid, it needs to be removed in order to coordinate contiguity between the stimulus and the response.[2] A simpler example could be given by illustrating car parts on a computer screen and asking the student to click on the oil filter. In this case, the stimulus is the oil filter and the expected response is clicking on it. The objective of instruction in this example would be having the student identify a picture of an oil filter.

B. Repetition: According to principle of repetition, the learning materials and their expected outcomes are required to be repeated many times for improved learning and for knowledge retention.[2] Different situations require a different number of repetitions to acquire mastery learning. For example, in an English as a Second Language (ESL) class, a student is learning to pronounce a word without his or her native accent. By repetition, he or she is able to say the word properly. Repetition may lead the student to come closer to acceptable pronunciation, but it does not contribute to long-term learning. Ormrod[4] asserts rehearsal or repetition of a learning task can help to store the materials in memory for a short time, but it does not enhance learning. Rehearsal or review of the materials with intermittent gaps such as weekly, monthly or yearly, enhances learning and retention in people of all ages.[4] Course designers can require students to practice the end of chapter exercises before taking the graded exams. This can be done by assigning outside readings and encouraging the completion of practice exercises in the textbook.

C. Reinforcement: Learning a new task is enhanced each time the learner is rewarded for his or her performance. This reward can be internal or external. When students learn materials that are enjoyable to learn, the reward is internal. Rewarding students for learning new tasks is considered an external reward. Self-motivated students are those students who learn because of their intrinsic motivation to learn.[2] Instructional Designers need to consider motivational factors to promote learning when designing courseware. By including computer-graded quizzes at the end of each learning segment, designers can provide students with feedback about their progress, which can lead to satisfaction. This satisfaction will serve as the incentive to complete the next quiz and thus, the student has an incentive to complete the entire course. For some students, the satisfaction gained from the timely completion of assigned tasks is incentive enough to complete the course, therefore course completion becomes the intrinsic reward.

D. Social-Cultural Principles of Learning: Most studies on how we learn have focused on the way students learn from instructional models and have failed to observe the social-cultural needs of students. For example, the need for picture illustrations, frequency of graphical presentations, and the rate of instructions are all used to predict the learning and retention of knowledge.[2] The social-cultural needs of students were not included in the course design until recently. Recent research suggests the inclusion of social-cultural needs of students is as necessary as any other factor to promote learning. Instructional designers can promote social-cultural principles of learning by including situational questions in essay and multiple-choice exams when designing course materials. These types of questions can ask students to relate real life experiences, such as geographic location, work environment, and their own learning experience, with their textbook knowledge. By relating real life work experience to textbook knowledge, students can establish relevance to the learning requirements.

Knowledge of learning principles and learning outcomes will enhance instructional designers' capabilities in designing courses. Instructional designers' knowledge of different types of learning outcomes and the effective use of action verbs to measure those outcomes will make instructional materials effective and efficient. Detailed descriptions of each type of learning and outcome assessment accompanied by lists of appropriate action verbs required to write and measure those outcomes are provided below.

Types of Learning and Outcome Assessment

Designers must know what the required learning outcomes are expected of students before writing learning objectives. By incorporating Bloom's Taxonomy of Learning into course learning objectives,[2] we can write clear, concise, and measurable learning objectives. Extensive research has been conducted on learning outcomes. The most widely used research is reported in Robert Gagne's categories of learning outcomes.[7] Each category is measured by different sets of action verbs. Instructional designers write learning objectives and after developing a prototype, write the assessment items according to predefined learning objectives. Below is the list of different learning categories. These categories are: 1) verbal information 2) intellectual skills, 3) cognitive strategies, 4) attitudes, and 5) psychomotor skills. Almost all learning objectives can be placed into one of these categories. Gagne, et al.,[2] asserts the mental activities required for students to achieve outcomes in each category are qualitatively different. Below is a brief description of each learning category, along with a few examples of action verbs used to write learning objectives for each category.

1. Verbal Information

The first type of learning is verbal information**.** This type of learning is also known as declarative knowledge. Examples of verbs used to measure declarative knowledge are "define" and "describe." These verb examples are used in the "comprehension" and "application" section of *Bloom's Taxonomy of Learning*. Declarative knowledge is a low level of learning in Bloom's Taxonomy, as it only recalls prior knowledge and reflects acquisition of surface knowledge. Although it is listed in the low category, it is necessary in all content areas because students can gain higher-order knowledge by first gaining the prerequisite knowledge in this stage. At Columbia Southern University (CSU), the use of these kinds of verbs is minimized when writing course objectives because a higher-order learning from students is expected.

2. Intellectual Skills

The second type of learning outcome is intellectual skill. The outcomes of the majority of instructional objectives in educational institutions involve intellectual skills. This is different from declarative knowledge because students are tested not only on their recall, but also on how to apply knowledge to new situations that are not covered in the assigned instructions. Students incorporate prior knowledge into new knowledge to construct ideas. Smith and Ragan[7] assert that proving a geometric theorem is an example of attainment of intellectual skills, because students apply several rules to solve problems in geometric theories. Examples of verbs used to measure intellectual skill objective include **apply, arrange, compare, combine, integrate, modify, calculate, analyze, synthesize, and evaluate.** Intellectual skills contain five sub-categories: a) discrimination, and b) concept, c) principles, d) procedures, and e) problem solving.

a) Discrimination: Students' ability to perceive that one item either matches or differs from another item is called **discrimination**. In this type of learning, students are required to differentiate between different objects or groups of people. Bloom's taxonomy uses verbs such as **distinguish, discriminate** and **differentiate** to test "discrimination" learning.[5] For example, "children learn to discriminate between their Mother's face and all other faces."[7] When learning a foreign language, students are required to distinguish between sounds that are known to them with unknown sounds.

b) Concept: Concept is the knowledge that helps us in perceiving the environment around us. Concept has two sub-categories: 1) concrete concept and, 2) defined concept.[7]

1. **Concrete Concept:** According to Smith and Ragan,[7] a concrete concept involves students' ability to classify things into categories by their physical characteristics such as "visual, auditory, tactile, olfactory, or gustatory." When students learn concrete concepts, they can categorize examples of those concepts. Bloom taxonomy uses verbs such as "identify" to measure a concrete concept.[5] For example, identify a circle, triangle, or trapezoid.

2. **Defined Concepts:** Defined concepts represent students' ability to classify things according to their characteristics. Smith and Ragan[7] assert "the terms *Democracy*, *Marxism*, *Anarchy* are defined concepts." In answering questions that measure defined concepts, students must be able to do more than simply state the definition of a concept. Students who master the skills of defined concepts are able to classify concepts they were not exposed to in lessons. For example, given the option to select the best scenario out of multiple scenarios, students should be able to pick the correct scenario instead of merely defining it. Instructional packages that teach students to determine teachers' reaction to students' actions can be

used to elaborate this concept. Students using this instructional package should be able to determine "negative reinforcement," "positive reinforcement," or "punishment" instead of simply defining these terms.[7] Verbs used in measuring defined concepts include **classify** and **categorize.** For example, classify herbivorous and carnivorous, categorize classify negative reinforcement and positive reinforcement.[5]

Testing processes become more rigorous for higher levels of leaning, and the expectation of learning level increases as students progress through higher levels of learning.[3] A discussion regarding teaching principles, procedures, and problem solving and examples of verbs used to measure the objectives in these learning categories is continued in the following section.

c) Principles: Principles are combination of "if/then" statements.[7] For example, "if the gas is heated, then it expands," or "if the subject is plural, then a plural verb form is used." Additional examples of "if/then" statements can be found in this sentence: "If the demand for pizza goes up, then the demand for beverage will also go up; if the subject is male, then use 'he,' and if the subject is female, then use 'she' pronoun." These types of "if/then" statements are used to teach rules and principles mainly in science, math, English, and economics courses. Objectives in this category express the course designers' expectation that students can use the principles to predict or forecast events. Objectives intended to measure principles should clearly demonstrate the designer's expectations. Students should use their prior knowledge to solve new problems.[7] Bloom uses verbs such as **apply, predict, connect,** and **classify** to test this type of learning.[5] For example, students will "**predict** what will happen to a balloon if it is left in a hot car all summer afternoon, they will explain the reasons why a filled balloon shrinks when left in the freezer."[7] Similarly, students should be

able to predict the demand for soft drinks and beer when they see a change in demand for pizza.

d) Procedures: Smith and Ragan[7] assert procedures state the order in which certain steps should be taken. In math and science courses, many skills are built upon combinations of prerequisite skills. Math instructions are directed at the learning of procedural rules. For example, calculating the average of a string of numbers is one type of procedure. Students calculate the sum of integers by adding them, and then divide the sum by the number of integers to find the average of those integers. Knowledge of addition and division are prerequisite skills for calculating the average. Teaching and training in many situations, such as in service fields, military, and business, require learning outcomes that are procedural. Trainees are taught to complete certain portions of their jobs and are expected to transfer knowledge to other parts of their jobs.[7] Procedural knowledge is required in both application and analyzing skills. Bloom uses **apply, calculate, solve, examine, order, classify** in testing this level of learning.[5]

e) Problem Solving: Problem solving is the last type of intellectual skill to be discussed, and is demonstrated through students' ability to select and apply multiple rules in a specific manner. Smith and Ragan[7] describe this type of learning as "domain specific problem solving." Students solve problems only after acquiring the necessary prior knowledge or prerequisite skills to solve domain specific problem. For example, the domains of physics, law, computer science, and mathematics all require students to choose from a number of possible rules, and to apply those rules or the combination of rules to solve previously unencountered problems. Once students are able to solve problems in a specific domain, they can apply those skills to solve problems in similar types of domains. Smith and Ragan[7] clarify problem solving with these examples:

Nursing students acquire problem solving ability when they learn to write nursing-care plans for patients who have a unique set of physical problems, medications and other treatments. Graduate students learn domain-specific problem solving skills when they determine a methodology to utilize to research a specific question. Students of marketing who plan an advertising campaign for a particular product are acquiring domain-specific problem solving abilities. Developing the design plans for a new restaurant is the application of domain-specific problem-solving skill for an interior design student.

When responding to questions that require problem-solving skills, students must determine the goal of the problem, and break questions into smaller segments to discover ways to answer each sub-segment of the goal. They analyze and evaluate their responses to discover if the goal to answering the question has been achieved, and continue this process until the goal is achieved. Problem solving skills include skills of analysis and synthesis, meaning students are required to break the major goals into smaller parts to put individual parts together. Bloom's learning category verbs to measure problem-solving skills include **assess, arrange, divide, analyze, synthesize, determine, compute, analyze, develop,** and **evaluate**.[5]

In summary, **Intellectual Skills** are hierarchical. This means intellectual skill builds on one another. Students are required to discriminate clearly among items before they can interpret concepts. They will use knowledge they gain in the learning of concepts before they can learn rules. They will use the knowledge of rule learning and use rules and combinations of several rules to solve domain specific problems.[7] Course Designers' knowledge of learning hierarchy and the proper arrangement and utilization of learning hierarchy will be an outstanding tool to design and develop course study guides. Proper attainment of

intellectual skill includes many competency levels of Bloom's taxonomy[5] and the appropriate uses of verbs to measure these competency labels will help the instructional designers to produce quality study guides.

3. Cognitive Strategy

Cognitive strategy is the third category of learning outcomes**.** Students use cognitive strategy for the monitoring of comprehension. It is taught mentally and is detached from the content area because students may skim through the assigned reading materials, read the highlighted materials, and solve problems in their unique ways. Cognitive strategies are reflected through students' problem solving tasks. Verbs used to test students cognitive strategies include **create, adopt, organize, and elaborate**.[7]

4. Attitudes

People have various attitudes toward the environment they live in, and because of this, their behavior differs toward objects, people, and situations. According to Smith and Regan,[7] attitudes shape behaviors. For example, one person's attitude toward being helpful to others causes that person to offer help when the need arises. But a person without a helping attitude will avoid helping others. Attitude dictates behavior. People with the attitude of resolving conflicts with peace and individual respect will choose to avoid disdaining remarks to opponents. Verbs used in testing attitudes include **choose, select,** and, **appreciate.** For example, after the completion of a lesson, students will choose to resolve conflicts without violence. After touring the National Museum of Art, students will learn to appreciate American Art.

5. Psychomotor Skills

Precise physical movements coupled with precise mental activities are classified as Psychomotor Skills.[8] A novice golfer may keep knees bent, back straight, eyes on the ball, and then swing and strike the ball. The golfer may repeat these steps several times until mastery of the golf swing is achieved, and after enough practice, can complete all these steps automatically without the constant mental reminder. Learning to drive a manual transmission car involves several processes, such as: depress the clutch to shift gear, and release the clutch and depress accelerator simultaneously. A novice driver may have to repeat these steps until he or she becomes an expert in driving. Expert drivers do not repeat these steps verbally but automatically complete these steps when driving. Smith and Ragan[7] assert that "driving a golf ball, hitting a baseball, aiming at an airplane from a bobbing ship" are all examples of psychomotor skills.

Principles of Learning Summary

In summary, the knowledge of different levels of learning and the use of the verbs that measure the attainment of that knowledge will help curriculum designers select and use appropriate types of verbs to write performance objectives. This knowledge also will aid designers in writing appropriate test questions to measure predefined objectives. Predefined learning objectives inform students what is expected of them and thus help them to set learning expectations. Students also appreciate the relevance of test questions to these predefined learning objectives because their test results reflect what they achieved in coursework. Attainment of learning can be measured through grading rubrics.

Part 2 - Outcome Assessment through Rubrics

When the type and extent of the learning is determined, the measurement of this learning can be accomplished via a variety of methods. We will now focus on one particular tool or method of assessment, the use of rubrics. The definition and value of rubrics, guidance on constructing rubrics, and examples of rubrics used at Columbia Southern University are discussed below.

Rubrics are defined as established guidelines presented in a matrix fashion that afford students an understanding of the expectation of completing an assignment, and professors with assignment evaluation. A rubric allows students and course professors to: 1) Know and understand by what criteria the work will be evaluated; 2) Evaluate the difference between poor and good work; 3) Determine whether the assessments of the professor are valid and reliable; and 4) Describe how both the student and professor can prepare themselves for an excellent outcome (Rubrics.com).

Studies indicate most professors who use rubrics for their assignments and the students who use them are very pleased. Goodrich[10] indicates rubrics appeal to professors and students for many reasons, including:

1. Rubrics are tools that can be used for both teaching and assessment. They can improve student performance, as well as monitor it. This is done by making professor's' expectations clear and by showing students how to meet these expectations. The result is often marked improvements in the quality of student assignments and in learning.

2. Rubrics are useful in helping students evaluate their own assignments, and especially in the spotting and solving of problems.

3. Rubrics greatly aid in the reducing the amount of time needed to evaluate and grade student assignments. Professors often find that when students follows the rubrics, there is less need for criticism of the assignment, but when criticism is needed, the key words in the material covered by the rubric, that are lacking in the assignment, can just be restated.

4. Rubrics, and the use of rubrics in the assessment process, provide students with valuable feedback about their strengths and weaknesses.

The typical rubric contains four or five columns. The column on the left contains the major elements that are to be achieved in the completed assignment, and the maximum number of points assigned to each element. These elements are presented in rows. The columns to the right indicate the various levels at which the elements are achieved. These columns include:

1. The range of points that can be assigned.

2. The conditions of achievement that must be met for the achievement to be considered successful at the established level of points for that column.

3. A description or standard of how the criteria must be met.

4. Descriptive statements that describe each level of the performance.

5. Specific, examples or indicators for at each level of the performance (rubrics.com).

Since each element in the left column is different, each requires separate conditions and standards for achievement. These conditions and standards and the range of points for each are listed in the columns

by level of degree low to high or high to low. They are placed on the same row as the element they represent.

The development and building of a rubric matrix requires careful thinking about the assignment. Beauchamp, *et. al.*[1] indicate that the following steps be followed in the building of a rubric. First, determine the answers to the following questions:

    A. What are the specific tasks and subtasks of the assignment?

    B. What are the cognitive/thinking skills and demonstrated representations of learning of the assignment?

    C. What is the rubric's purpose? Is this a qualitative or quantitative rubric? Is the rubric for student feedback or to provide a grade or both?

    D. What are your ranking descriptors going to be? Remember to use neutral rating words to avoid negative connotations.

    E. Did you consider and build in a full range of skills and knowledge with clear indicators of each level of performance?

Beauchamp, *et al.*[1] also provide a model that can be used in the building of rubric. This model follows:

Creating the Rubric Itself:

	(1) Weak	(2) Basic	(3) Proficient	(4) Strong
Assessment Outcomes	Little or no evidence of the outcome	Beginning of or some evidence of the outcome	Detailed and consistent evidence of the outcome	Highly creative, inventive, mature presence of outcome
Outcome 1				
Outcome 2 etc.				

Beauchamp, *et. al.*[1] also suggest the use of an online rubric building tool that can be found at: http://www.2learn.ca/construct/rubric/tlcrubric.html.

Columbia Southern University uses rubrics for both writing and discussion boards assignments. These rubrics are valued by professors and students for reasons mentioned above. However, a major factor of

the rubrics' popularity with professors is the reduction in grading. The Columbia Southern University rubrics are used for both grading purposes and student feed back.

At CSU, all courses are designed on a standardized format with the same course template utilized for all courses. Because of this standardization, the same writing and discussion board rubrics are used for each course. The following are the rubrics that are used in the CSU Courses:

Table 1: Writing Assignment Grading Rubric

	Unacceptable	Acceptable	Good	Excellent	Score
Thesis 10 points	**0-5 points**Difficult to identify at all, may be bland restatement of obvious point.	**6-7 points** May be unclear (contain many vague terms), appear unoriginal, or offer relatively little that is new; provides little around which to structure the paper. Paper title and thesis do not connect well or title is unimaginative.	**8 points** Promising, but may be slightly unclear, or lacking in insight or originality. Paper title does not connect as well with thesis or is not as interesting.	**9-10 points** Easily identifiable, plausible, novel, sophisticated, insightful, crystal clear. Connects well with paper title.	

	Unacceptable	Acceptable	Good	Excellent	Score
Structure 15 points	**0-8 points** Unclear, often because thesis is weak or non-existent. Transitions confusing and unclear. Very little or very weak attempt to relate evidence to argument; may be no identifiable argument, or no evidence to relate it to. More description than critical thinking.	**9-11 points** Generally unclear, often wanders or jumps around. Few or weak transitions, many para-graphs without topic sentences. Quotes appear often without analysis relating them to the topic, or analysis offers nothing beyond the quote.	**12-13 points** Generally clear and appropriate, though may wander occasionally. May have a few unclear transitions, or a few paragraphs without strong topic sentences.	**14-15 points** Evident, understandable, appropriate for thesis. Excellent transitions from point to point. Work displays critical thinking and avoids simplistic description or summary of information.	
Use of Sources (Including in-text citations) 20 points	**0-11 points** Very few or very weak sources. General failure to support statements, or evidence seems to support no statement. Quotes not integrated into sentences; "plopped in" in improper manner. Does not properly use in-text citations.	**12-15 points** Sources used to support some points. Points often lack supporting evidence, or evidence used where inappropriate (often because there may be no clear point). Quotes may be poorly integrated into sentences. In-text citations used with minor errors.	**16-17 points** Sources used to support most points. Some sources do not support point, or may appear where inappropriate. Quotes well integrated into sentences. Paraphrasing of sources properly used throughout. Demonstrates an in depth understanding of the topic. Excellent use of in-text citations. In-text citations represent all source listed on the reference list.	**18-20 points** Primary source information used to support every point. Excellent integration of quoted material into sentences. Paraphrasing of sources properly used throughout. Demonstrates an in depth understanding of the topic. Excellent use of in-text citations. In-text citations represent all source listed on the reference list.	

	Unacceptable	Acceptable	Good	Excellent	Score
Logic and Argumentation 15 points	**0-8 points** Ideas do not flow at all.	**9-11 points** Logic may often fail or argument is unclear.	**12-13 points** The paper is clearly analytical or argumentative. Paper usually flows logically and makes sense.	**14-15 points** The paper is clearly analytical or argumentative. All ideas in the paper flow logically. If argumentative, the argument is identifiable, reasonable, and sound.	
Mechanics 10 points	**0-5 points** Serious problems in sentence structure, grammar, and diction. Frequent major errors in citation style, punctuation, and spelling. May have many run-on sentences and comma splices.	**6-7 points** Problems in sentence structure, grammar, and diction (usually not major). Some errors in punctuation, citation style, and spelling. May have some run-on sentences or comma splices.	**8 points** Sentence structure, grammar, and diction strong despite occasional lapses; punctuation and citation style often used correctly. Some (minor) spelling errors; may have one run-on sentence or comma splice.	**9-10 points** Sentence structure, grammar, and diction excellent; correct use of punctuation and citation style; minimal to no spelling errors; absolutely no run-on sentences or comma splices.	

	Unacceptable	Acceptable	Good	Excellent	Score
Reference List/ Resources 15 Points Maximum	**0-8 points** Resources are not properly formatted and are inadequate. Less than five resources provided.	**9-11 points** Reference List is properly APA formatted. Some minor citation errors exist. Popular sources predominate, lack of professional sources, some resources over five years old.	**12-13 points** Properly formatted with minor errors, some professional sources used.	**14-15 points** Predominance of sound primary authorities, recent journals. APA formatted without errors, accessible references, 5+ sources.	
APA Style(Not including in-text citations) 15 Points Maximum	**0-8 points** Is not APA formatted and contains numerous formatting errors.	**9-11 points** APA style but numerous errors in cover page, margins, indention, font size, page enumeration, format, or headers.	**12-13 points** APA style with a few minor errors. Includes proper cover page, introduction, and conclusion. Font size is 10-12 pts., double spaced, margins 1 inch, proper headings and page numbering.	**14-15 points** Publishable in style. Includes proper cover page, introduction, and conclusion. Font size is 10-12 pts., double spaced, margins 1 inch, proper headings and page.	
Lack of Originality Deduction (Max 40 pts. If over 40 pts., process as plagiarized paper)	Total Points				
	Deduct points based on the percentage of the paper that is comprised of non-original work that has been pasted into the paper in blocks. For example, 20% of the paper has been copied and pasted in large blocks of text from other sources, deduct 20 points.				
	Net Percentage Grade				

Table 2 Discussion Board Grading Rubric

Criteria	Points			Score
Relevance of Response/ Answer to Discussion Board Assignments (48%)	Well thought out responses. Expresses opinions and ideas clearly; Responses are thorough and offers ample insight into the topic leading to further discussion. 33 - 48	Well thought out responses.Expresses opinions and ideas clearly; answers most of the assigned questions. Responses offers insight into the topic leading to some further discussion. 17 - 32	Response is unclear or doesn't answer the assigned question. There is little evidence of thought. Responses are short in length and offer no further insight into the topic. 0 - 16	
Mechanics of Posting (20%)	Posts rarely contain grammar or spelling errors. Writes in complete sentences. 14 - 20	Posts regularly contain grammar and spelling errors OR sentences are often not complete. 7 - 13	Poor spelling, grammar or incomplete sentences appear in most posts which appear to be hastily written. 0 - 6	
Quality of Comment Post to other Student/ Professor (20%)	Each response is clear, relevant, well thought out, respectful and pertinent to the discussion. 14 - 20	Responds to students but response lacks evidence of clear, focused thought and does not offer value to the discussion. 7 - 13	Response is poorly written and irrelevant to the discussion. 0 - 6	
Timeline of Post (12%)	Posts span a three week period or more. 12		All postings span less than a three week period. 0	
		Total Points – Percentage Grade		

Rubrics Summary

Rubrics are tools that professors can use for feedback and assessment. They establish assignment guidelines that are arranged in matrix fashion consisting of four or five columns. The utilization of rubrics has been found to be very helpful to both students and professors. Students like the rubrics because they know in advance what they must do to achieve a certain grade on an assignment, and also because the rubric can be used as a self-assessment tool prior to submitting their assignment for evaluation. Professors find that the rubrics help them in the evaluation of an assignment and the providing of feedback. Both tasks are made much easier and can be accomplished in a shorter amount of time through the utilization of rubrics.

The formation of rubrics requires thought and preparation as the assignment's tasks and demonstrated learning must be considered. CSU utilizes rubrics for its writing and discussion board assignments. The utilization of rubrics at CSU has proven to be very popular among faculty and students.

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Prior to joining CSU, Mr. Islam worked at Regions Banks Corporate Offices in Birmingham, Alabama, as an Instructional Designer. His previous experiences include analysis, design, development, implementation and evaluations of courses for online learning environment at the University of South Alabama, where he developed workshops to train professors using technology software to teach multimedia courses. He also served as a part-time faculty member at the University of South Alabama.

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Dr. Joseph Manjone

Dr. Joseph "Joe" Manjone is the Provost at Columbia Southern University. He has held this position since coming to Columbia Southern University in March of 2000. Dr. Manjone has also served as Dean of Continuing Education and faculty member at the United States Sports Academy; Director of Continuing Education at the University of Alabama in Huntsville, from which he retired; Chair of Physical Education and Athletics at Frostburg State University; and, Program coordinator and faculty member at both Shepherd and Lander Universities. He started his career in higher education as an athletic staff member and physical education professor at the Pennsylvania State University, University Park in 1967. Dr. Manjone has co-authored three books, written numerous articles published in refereed journals, and has presented on many occasions at professional meetings. As Provost at Columbia Southern University, Joe is responsible for curriculum, learning assessments and faculty development. He is also responsible for the coordination of the reaccreditation SER and evaluation that were recently successfully completed by CSU.

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