The Development of a Discussion Rubric for Online Courses:

Standardizing Expectations of Graduate Students in Online Scholarly Discussions

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Abstract

This paper reports on the design and evaluation of a rubric for assessing discussions in online graduate level education courses. The aims of the research were twofold. The first goal was to develop a discussion rubric that provides guidance to graduate students participating in online courses that are heavily discussion based. The second goal was to evaluate the efficacy of the rubric in student comfort with the expectations for the course and the quality of the discussions. Qualitative and quantitative course evaluations from four sections of an online graduate course are utilized to report on the effectiveness of the rubric upon implementation. Student average grades also show a statistically significant increase with the implementation of the rubric.

Keywords: Assessment, higher education, online course development, online learning, rubric development

Online learning continues to represent a rapidly developing method of instructional delivery. Educators and researchers are frequently adapting methods based on the advancement of technology and the outcomes of ongoing research on the effectiveness of content delivery. Yet, the demands for online learning options at all levels continue to increase and educators struggle to find the balance between the growing demand, the changing interface of online delivery, and best practices for optimal learning outcomes.

This study derives from the need for better student guidelines in online discussion-based classes. Jara and Mellar (2010) and Martinez-Ar-guelles et al. (2010) point out that student feedback should be the central consideration in determining the quality and standards of teaching and learning in higher education for both conventional classrooms and online learning. This study is a direct response to student feedback collected in graduate level online courses. Both formal evaluations/feedback and student grades are considered.

Theoretical Framework

The course that is the basis for this study is an asynchronous online graduate level course focused on secondary education at a small midwestern university. The asynchronous online learning environment lends itself to unique possibilities for social and cognitive construction of meaning. When there is an emphasis on interactive writing in this type of course, students are allowed to take their time with written responses, complete their ideas and thoughts in their writing, and have a specific audience to target their responses.

Such interactive online writing provides the benefits of writing oneself into understanding, as well as a social milieu that elicits thoughtful contributions, and provides timely, contextually-appropriate feedback. Thus complex ideas are generated and meanings are negotiated. (Lapadat, 2006)

In order to maximize learning through this type of interpersonal interaction and encourage the exchange of ideas, the course in this study required weekly discussions in which students would contribute ideas from assigned readings. The requirements of the discussion included responding to at least two peer contributions.

Participation in these weekly discussions typically accounted for 50% or more of the course grade in each course. This generally resulted in a strong commitment from students to earn the maximum amount of points in the discussions. Therefore, students had a vested interest in ensuring their contributions met the requirements of the course.

Assessment methods have been identified as hugely important in the learning process. In fact, Boud (1995) identified assessment methods and requirements as the most influential factor on student learning. Assessment of online learning is a topic of great importance as online courses become more normalized (Reeves, 2000). Online learning has grown exponentially and online courses continue to be in high demand (Allen & Seaman, 2008). The quality of these courses has been scrutinized (Reeves, 2000; Savenye, 2004) and the nature of the assessment practices equally questioned (Moallem, 2005). Many of these courses are comprised, at least partially, of online discussions. While constructivist-learning environments require that students are aware of what is expected of them from the onset of the course (Comeaux, 2005), currently there is a lack of meaningful rubrics for asynchronous online discussions (Reeves, 2000; Yang et al., 2011)

This study demonstrates the need for clear assessment practices for online discussions, especially in courses that rely heavily on discussions as part of the learning process. The paper outlines steps that an instructor took to develop and implement a rubric for online discussion formats, as well as the impact of the rubric over a year and four course sections.

Reflections on the Instructional Design Process

During the first few years of the course, guidelines for student participation in discussions were outlined in the course syllabi and included suggestions for frequency of contributions and guidelines for mutual respect. The following excerpts from the syllabi exemplify the guidelines.

> The quality of your participation is what matters. You should plan on posting your own thoughts and then responding to the ideas and thoughts of at least 2 other participants every week. This will typically require you to log into the discussion multiple times throughout the week. I encourage you to be thoughtful in your responses and bring in examples from your own experiences. I also encourage you to be supportive and helpful to the other students in the

class. We don't have to agree with each other but there is a level of respect that is required for the discussions to be productive and avoid destructiveness. This level of respect is a little bit trickier in the online format than it is in the typical classroom where you can read expressions and hear tone. Please keep that in mind in all responses.

While the excerpt presented above from the course on secondary education indicates the importance of "quality," being "thoughtful," and bringing in examples from the students experience, much of the paragraph is about keeping the interactions positive and ensuring an encouraging community.

> …deliberate attempts to reflect on our personal professional-practical knowledge will enhance the experience of all participants in the course. By collaboratively sharing our experiences and using them as a bridge to our developing understanding of educational issues and course assignments, we can synthesize and create knowledge. Sharing also helps build trust and a sense of community in the class. Please draw on your personal and professional experiences in your reflections, class discussions, projects, and papers. Simply put, your opinion and experiences matter and should be used to guide your own learning and influence those in your learning community (in this case the online blackboard community).

Although this excerpt gives a little more detail about the value of the interactive discussion experience in relation to how knowledge will be built in the class, it still does not give specific ideas about what should be included in a discussion contribution or what constitutes a "quality" or "thoughtful" contribution. Additionally, of more immediate importance to students, it does not provide information as to how points will be assigned or taken away from a contribution.

Inclusion of and reflection on actual classroom experiences is emphasized in the following excerpt. This gives participants some guidance as to the content expected in the contributions.

> It is expected that every participant has some practitioner knowledge in the classroom and therefore has experience from which to relate the theories and ideas. Reflection and analysis of these experiences and appropriate planning in response will be emphasized. … You will have an opportunity to think about what you have done or seen in the past, how

it worked or didn't work based on the needs of adolescent learners and what you will do in the future with this knowledge. You will also benefit from having others respond to your ideas in online discussions and hearing other's experiences.

Students are guided to think critically and participate thoroughly in the following section, although it is not clear what content to think critically about or how to demonstrate critical thought in contributions. Nor is it clear what thorough participation is.

> Participation in the online discussion is crucial to demonstrating your progress and deepening your understanding. The course is most beneficial to you when you think critically and participate thoroughly. Likewise, everyone benefits in the class when the discussants are engaged in the process. The online environment allows us to be flexible with our time and location, while focusing on enriching "conversation". I hope for thoughtful interactions, leading to fun and engaging discussions.

Again "thoughtful" is used to describe the discussions without qualification.

While these descriptions included in the syllabi represented attempts by the instructor to offer guidance in course discussions, students frequently questioned the loss of points, the expectations for "thoughtful" and "meaningful" contributions, and the definition of a quality response. The instructor frequently fielded emails questioning lost points in discussion threads, and in review of both formal and informal evaluations for the courses, it was clear that students felt the need for more guidance on the content of the online discussion contributions. Examples of informal student feedback for the discussion assignments frequently included comments such as:

> Sometimes I wasn't sure whether I was posting too much or not enough on discussion topics …

> I … would have liked more structure or clearer expectations [for discussion contributions].

> How long [should the contributions be]? What depth?

> …something besides just a number grade. [how do we] know we were on track on discussions? …give us some more guidelines.

It became clear that students needed guidelines specific to the expectations for weekly discussions.

To respond to this need, the instructor consulted other faculty about the expectations for their online courses and the requirements for participation. Most instructors indicated they had high expectations for frequency and quality of contributions, but when probed further to establish the criteria for quality, most were not able to articulate with clarity what specifically they were expecting. One instructor shared a syllabus she created for one of her graduate level online courses that included a detailed outline of what constituted three different levels of scholarly contribution to online course discussions at the graduate level (Figure 1 on the next page). In addition, there was a list of rubric criteria to which students should pay attention (Figure 2 on the following page).

The instructor of the courses in this study recognized the value of the guidelines offered by this outline given the feedback she had received from students in her online courses. With the permission of the owner she adapted this complex definition into a rubric for student participation in online discussion. The instructor first carefully considered each description within the outline. Although the descriptions represented various levels of quality, it would be necessary to decide on appropriate categories. To do this she combined the different descriptors into clusters that belonged to the same trait in the work. For instance, the first line of each quality level is about the students' responses to the original posting typically about an assigned reading (for details about the process used for creating a rubric see Stiggins, et al., 2006). They are listed here in increasing level of quality from marginal to excellent:

- offers a basic response to each required original posting assignment in a timely manner
- offers an extended response to each required original posting assignment in a timely manner
- offers an extended response to each required original posting assignment in a timely manner, often generating thoughtful conversations among others

It was decided that these belonged in Category 2: Scholarship and Research, because this is appropriate criteria for the description of Scholarship and Research. Specifically, student responses to original postings are expected to demonstrate the student's ability to "clarify the course content for him/herself". These criterion also applied to Category 3: Personal/Practical Knowledge, because students are also expected to make connections between course content and professional experience and personalize ideas and concepts, using practical experience to highlight under-

Figure 1.Description of three levels of scholarly contributions as outlined in original syllabus.

Marginal Participation:
- offers a basic response to each required original posting assignment in a timely manner
- provides a personal response to at least five other students' original postings (in the whole class discussion forum) and to most of the original postings in other forums (i.e., eBase group and small group discussions)
- responds in some way to those students who have posted to your posting
- follows the threads of each week's online discussions and activities, evidencing four course site log-ons per week with five hours online time, on average;
- shows evidence of having read the course readings by providing at least a summary of the basic concepts
- original postings and responses to peers demonstrate a critical analysis of points made (versus a summary of what was written);

Average Participation
- offers an extended response to each required original posting assignment in a timely manner
- provides a personal and/or professional responses to at least five other students' original postings (in the whole class discussion forum) and to all of the original postings in other forums (i.e., eBase group and small group discussions)
- responds in some way, at times substantively, to those students who have posted to your posting
- follows the threads of each week's online discussions and activities, evidencing five course site log-ons per week with seven hours online time, on average;
- shows evidence of having read and reflected on the course readings by applying one or more of the basic concepts to one's professional life
- original postings and responses to peers demonstrate a critical analysis of points made (versus a summary of what was written);

Excellent Participation
- offers an extended response to each required original posting assignment in a timely manner, often generating thoughtful conversations among others
- provides professional and/or scholarly responses to more than 5 other students' original postings (in the whole class discussion forum) and to all of the original postings in other forums (i.e., eBase group and small group discussions), at times, giving perspective-altering comments
- responds in some way, often substantively, to those students who have posted to your posting
- follows the threads of each week's online discussions and activities, evidencing six course site log-ons per week with ten hours online time, on average;
- shows evidence of having read, reflected, and applied the course readings by analyzing two or more of the basic concepts to one's professional life
- original postings and responses to peers demonstrate a critical analysis of points made (versus a summary of what was written);
- offers a personal response to each required online posting in a timely manner and in following through with assigned leadership tasks shows exceptional leadership skills (as defined in this course), typically requiring more than 5 course site log-ons per week, on average;
- shows evidence of having read and responded to peer postings and, whether within an assigned eBase group or in a broader posting environment, weaving in references to shared and individually-sought readings.

standing of the discussion in the response to the original postings. At this point it was recognized that Categories 2 and 3 seemed to describe the expectations for student responses to the original postings, and it was decided to combine those two categories in the rubric leaving just three categories: Category 1 - Timeliness of Response/Initiative, Category 2 - Scholarship and Personal/Practical Knowledge, and Category 3 - Supportive, Substantive, and Challenging Feedback.

Figure 2: Rubric criteria from original syllabus.
Rubric categories

The following categories clarify expectations for the extent and breadth of your online participation.

Category 1: Timeliness of Response/Initiative – indicative of active, consistent engagement with course members. (5 points)

Category 2: Scholarship and Research - indicative of extent to which a student can clarify course content for himself/herself, research substantively, and use others' work in a professional manner. When using quotes and/or allusions to course material and/or other related research page numbers (in the case of course materials) or brief citations (in the case of outside material) are included. (5 points)

Category 3: Personal-Practical Knowledge – indicative of extent student is making connections between course content and professional experience: meaning making and personalizing of ideas and concepts, using practical experience to highlight understanding of the discussion. (5 points)

Category 4: Supportive, Substantive, and Challenging Feedback – indicative of student contributions to develop a collaborative learning experience by providing a combination of supportive, substantive, and challenging comments to others that contribute to critical reflection within the Learning Community. (5 points)

The instructor continued to combine the different descriptors from each level (marginal, average, excellent) into clusters. In some cases the wording was altered to better fit the needs of her course. For instance the second descriptor indicates a specific number of required responses. They are listed here in increasing level of quality from marginal to excellent:

- provides a personal response to at least five other students' original postings (in the whole class discussion forum) and to most of the original postings in other forums (i.e., eBase group and small group discussions)
- provides a personal and/or professional responses to at least five other students' original postings (in the whole class discussion forum) and to all of the original postings in other forums (i.e., eBase group and small group discussions)
- provides professional and/or scholarly responses to more than 5 other students' original postings (in the whole class discussion forum) and to all of the original postings in other forums (i.e., eBase group and small group discussions), at times, giving perspective-altering comments

It was decided to broaden the criteria to fit the needs of various classes. Thus the statements were changed to include any number as specified by the instructor. It could vary by class or even

discussion at the discretion of the instructor. The resulting statements were:
- provides a personal response to the least required peer postings
- provides a personal and/or professional/ scholarly replies to the least required peer postings
- provides professional and/or scholarly replies to more than the least required peer postings

These were placed in Category 3 - Supportive, Substantive, and Challenging Feedback, which describes responses to peer contributions.

The Product

This process continued until the instructor felt she had a substantial rubric that would offer guidance to online students in their discussion contributions and clearly described the expectations for contributions. Not all of the information provided in the original author's syllabus was relevant to the discussion expectations so some items were not included in the rubric development. The quality levels were renamed to suit the preference of the instructor and point values were included for each row (Figure 3 on the next page).

Because of the importance of the discussion to the online learning process (Lapadat, 2006) the expectation was that students would engage in the online environment multiple times throughout the week. For this reason, the instructor included a mid-week deadline for initial contributions/responses to the original posting. This gave

Figure 3. Final rubric

Online discussion and response participation rubric				
	Minimal	**Basic**	**Proficient**	**Points**
Timeliness indicative of active, consistent engagement with course members	Late		On time	2 pts
Scholarship indicative of extent to which a student can clarify course content for himself/herself, research substantively, and use others' work in a professional manner.	-offers a minimal response to each required original posting assignment	-offers an extended response to each required original posting assignment	offers an extended response to each required original posting assignment, often generating thoughtful conversations among others	4 pts
Personal/practical knowledge indicative of extent student is making connections between course content and professional experience: meaning making and personalizing of ideas and concepts, using practical experience to highlight understanding of the discussion.	- shows evidence of having read the course readings by providing at least a summary of the basic concepts in original response to the prompt(s) -provides a personal response to the least required peer postings -replies to peers may be limited to a summary of what was written or materials read	- shows evidence of having read and reflected on the course readings by applying one of the basic concepts to one's professional life in original response to the prompt(s) -provides a personal and/or professional/ scholarly replies to **the least required** peer postings -replies to peers go beyond the minimum summary and make connections to professional examples	- shows evidence of having read and reflected on the course readings by applying multiple of the basic concepts to one's professional life in original response to the prompt(s) -provides professional and/or scholarly replies to **more than the least required** peer postings - replies to peers demonstrate a critical analysis of points made	4 pts

students time to read and react to each other's postings. They were given the rest of the week to respond to their peers and interact with those who responded to their original contributions. In order to encourage students to participate in this way, it was decided to include points (20%) for meeting those deadlines (Timeliness). The other two categories (2 - Scholarship and Personal/ Practical Knowledge, and 3 - Supportive, Substantive, and Challenging Feedback) were each assigned 40% of the points for the discussion.

Implementation

Once the rubric was ready it was incorporated into the courses (one in the spring of 2012 and one in the summer 2012). Students were notified about the rubric in several ways. First, students were emailed weekly to provide updates and prepare them for the upcoming week. During the first weekly email, students were given instructions about participation in the discussions, and they were directed to the rubric for guidance. Second, the rubric was imbedded into every dis-

cussion assignment and used for grading. For the spring class, students were instructed to frame any questions about their grades on discussions around the rubric. For instance, if a student lost points in a discussion and believed it was an error, s/he was to indicate how s/he demonstrated the necessary requirements (as outlined in the rubric) for full credit. This enabled students to become familiar with the rubric and see how the discussions would be graded. The first few weeks were considered an adjustment period. Students who had questions were guided through the requirements and the use of the rubric. After a few weeks, the majority of the students were comfortable with the grading and the questions diminished. Below is an example of a student response to a prompt on the impact of standardized testing before and after the rubric was implemented.

Student 1: I do think that the large amounts of standards that are to be addressed in a year is directly related to the struggles that American students are having in regards to problem-solving skills. I am of the opinion that students

would benefit more if teachers could focus on depth rather than breadth of information, something that standards as they are currently written inhibit.

Student 2: One thing that I agree with from the readings is that assessments must be done in a variety of ways, not just through testing. As stated in the textbook, a single test should not be used as the only means of evaluation. In my content area, I am fortunate enough to be able to implement much of what was discussed in the readings such as the authentic assessments and project based learning. I find that my students benefit much more from this type of learning and are able to see how it can be transferred to the real world. To me, this is what evaluation/assessments is all about. It is the teacher gauging student learning and determining what needs to take place for future instruction. Furthermore, it is about understanding who your students are and how they learn best.

The rubric indicated that students needed to pull in both examples from their experiences and information from the readings. Student 1, who was completing the assignment without the guidance of the rubric, approached the question with mainly opinions. While in this class there is some emphasis on students' developing their own opinion based on their experience, they are required to back up their ideas with evidence from the readings in order to get full credit. Student 2, who was completing the assignment with the guidance of the rubric, began to pull in some evidence from the text. As time went on and with feedback from the instructor, students were able to develop this skill further and more completely back up their ideas with literature.

The feedback from students at the end of the spring semester did not reflect the same level of confusion about how discussion grades were calculated. The rubric seemed to provide students with the necessary guidance. Most of the narrative feedback was noteworthy in that it lacked comments asking for more guidelines on grades for the discussion board. In addition, at least one person actually mentioned the rubrics as helpful.

… I greatly appreciated your timely responses, updates and grading. This was a very organized course…. Your expectations were very clear in the syllabus and you provided rubrics which were very helpful.

However some confusion remained because of the wording in the third category on the rubric (see figure 3). By keeping the rubric open-ended as to the number of responses required, students frequently were unable or unsure how to achieve full credit.

If responding to 4 people is what it takes to get full credit, then say that. Please say what is expected in order to receive full credit and what that response should look like.

…just be up front. 'Do "x" amount if you want full points along with providing a quality response.'

I would like to see clearer expectations for the number of postings required for discussion boards.

While acknowledging the students' feedback, the instructor of the course remained reluctant to put a number in the rubric for full credit. By asking students to do more than the minimum, it places emphasis on the importance of their discussion posts, as opposed to simply stating, "respond to 3 peers for full credit". Stipulating a specific number can also discourage students from reading the discussion thoroughly. In some respect, this is similar in philosophy to not establishing a page limit for term papers for fear that students will simply work toward that limit and not think critically about what is an appropriate amount to write to comprehensively respond to the assignment. In this online course context, the overriding goal is for students to engage in the discussion as long as it takes for them to develop a content knowledge base and build meaning of the material. Therefore, in order to make the requirements clearer for students in the summer course, an additional excerpt was added in the syllabus and bolded to draw students' attention to it. The excerpt gave clear expectations for the discussions and placed them in context with the rubric, which was used every week.

IMPORTANT: Discussions/Participation is worth about FIFTY PERCENT of your grade.

How to EARN full credit in discussions/participation:

1. **Become familiar with the discussion rubric**
2. **Be thoughtful in your responses and incorporate examples when appropriate**
3. **Do MORE THAN THE MINIMUM. Responding to the contributions of 2 peers is REQUIRED as the minimum in the discussions. Doing the minimum does NOT guarantee full credit. In order to earn full credit you will have to MORE than the minimum (consult the rubric).**

To further ensure that students interacted with the information, a notation was added to the weekly email directing students to the excerpt.

Important note please read through the section in the syllabus that describes how your contributions to the discussions will be graded, as well as looking over the rubric. A great amount of your grade comes from your participation in these discussions. Understanding how this works will make a big difference in your satisfaction with the course.

Adding these additional clarifications to the syllabus and weekly email for the summer class seemed to satisfy students' need for guidance and successfully directed students to the rubric. The course evaluations did not include comments about the lack of guidance on discussions or the number of posts required. In addition, many students went beyond the minimum and engaged in rich discussions with multiple classmates.

Quantitative Data

Examination of the quantitative data is supportive of the evidence in the qualitative feedback. Students are asked to rate their courses from 1 – 5 (five being the highest) on a variety of criteria. While none of the items on the evaluation directly ask about the clarity of grading on discussions, there are three items about the course objectives included in the evaluation that could indirectly reflect students' experiences with clear guidelines on grades, as relevant to this study.

1. The instructor provides clear course objectives
2. The course has clear objectives
3. The grading system for the course is clear

Before the rubric was implemented, the mean rating in the spring and summer course evaluations on the above items ranged from 3.5 – 4.3 (see table 1). After implementing the rubric for the following spring course, the range of ratings increased within that particular course. This increase in ratings was maintained after the implementation of the syllabus excerpt.

Table 1. Means for student evaluation of course objective items

Course Evaluation Results				
	Before Rubric		With Rubric	
Item	Spring 2011	Summer 2011	Spring 2012	Summer 2012
1	3.7	4	4.3	4.3
2	3.7	4.2	4.3	4.4
3	3.5	3.8	4.5	4.5

Students' discussion scores throughout the class were averaged and entered into SPSS in two groups, those that received the rubric (n=36) and those that did not (n=40). Independent samples t-test is used to compare the scores of the two groups which share a variable in common, but in which there is no overlap between membership of the two (George, D., and Mallery P. 2006; Salkind, N, 2008). Levene's test for equality of variances was found to be violated for the present analysis, $F(1,74) = .15.164$, $p < .001$. Owing to this violated assumption, a t statistic not assuming homogeneity of variance was computed. The group who received the rubric did better on average (M = 9.59, SD = .488) than the group that did not (M = 8.81, SD = 2.269). This difference was significant, $t(43) = 2.217$, $p < .05$.

Conclusions

The increase in evaluation scores for the items reported for this study and the student comments indicate a decrease in student confusion on course objectives and an increase in the level of student satisfaction with the class. The specific gain of 10 points on the evaluations from the Spring of 2011 to the Spring and Summer of 2012 (3.5 vs 4.5) in the third category *(the grading system for the course is clear)* is a good indication that students felt more confident about the derivation of their grades. In addition, the instructor experienced a noted difference in the number of emails received asking for clarification on discussion grades.

The increase of student discussion scores is an indication that with the addition of the rubric, students better understand the requirements of the discussion, and the content required for a scholarly contribution to an online discussion. This is especially important for students who are new to the online environment and/or new to graduate study and may not have experienced the complexity of discussion previously. While the addition of a rubric to clarify expectations is not a new topic in education, this particular rubric offers potential to clarify expectations in an area with which many online instructors and students seem to struggle. Providing guidelines for the expectations for scholarly online discussions at the graduate level can substantially improve the quality of the student contributions. While variations in student understanding were not measured in this study, the instructor observed more complete responses that demonstrated thought beyond personal experience on a more regular basis in the discussions. It is feasible that consistently using the rubric which guided students to write from the literature and develop their own thought improved the level of understanding beyond what

can be done without frequent and consistent input as is supported by Lapadat, 2006. Additionally, as the literature for online learning environments affirms the need for frequent, consistent, and timely feedback (Comeaux, 2005), this course, through the implementation of the rubric, offered feedback on discussions on a weekly basis.

This study is based on four sections of one graduate level course taught by one instructor. The results are not generalizable to every course format or online environment. The findings of this study could be impacted by factors that were not controlled for, including the experienced gained by the instructor over time. Further research on the efficacy of rubric implementation on discussion quality is needed to demonstrate the generalizability of the results. However, the results of this study showed positive potential associated with implementing the rubric designed based on student feedback in the course.

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