Guiding Principles for Online Course Development

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Introduction

Technology has forever changed the face of higher education (Appana, 2008; Renes & Strange, 2011). Online learning has been edging from the sidelines into the mainstream of education with more than 6.1 million students enrolling in at least one online course during the fall 2010 and online enrollments increased by ten percent, yet the overall growth of the higher education student population increased less than one percent (Allen & Seaman, 2011). The flexibility of online courses is very attractive for students attempting to balance work and family demands (Allen & Seaman, 2011; Appana, 2008; Hart, 2012; Oblinger & Oblinger, 2005). While the for-profit and community colleges led the way in providing online courses to their students, traditional colleges and universities are now following suit.

The Provost at the University of Kansas notes in the Annual Report for 2012 "because online learning is rapidly becoming an integral part of higher education, academic departments are developing strategies to improve and increase online and blended programs" (Vitter, 2012). For this plan to be successful, effective course redesign must be implemented in a manner proven to promote student engagement and result in retention (Boles, Cass, Levin, Schroeder, & Smith, 2010). This should be part of a linear comprehensive plan beginning with faculty orientation, training, and technical support as needed. It should include continuous evaluation and assessment as well as

implementation of recognized best practice for structure and delivery of online classes. At the University of Illinois, in Springfield, "the online programs are integrated as much as possible into the mainstream of the campus. Faculty members attend to online classes as a workload priority, not as add-ons, and administrators see the online students as core members of the university" (Boles et al., 2010). They have developed a model program with the goals of student retention, engagement, and success as their driving forces for providing online education. It will take using a holistic approach like this to build a viable online program at the University of Kansas.

The Process

There are two primary facets to developing online courses. Delivery of the content is one component and the second is the creation of the content. Delivery is easy in that colleges and universities typically offer online classes through course management system (CMS) software, thus providing virtual classroom space for faculty and students to interact over the course of a semester (W. R. Watson & Watson, 2007)

The instructor is considered the "content expert" and decides what tools to use, what content to include, essentially, she decides what components she wants to utilize to create an engaging learning environment. In other words, instructors decide the "what" of the course and are aided by the various resources provided by the CMS as well as the assistance offered by the instructional designers as to the "how" the course is organized.

The greatest challenge in delivering an asynchronous online class is that all of the interactions are computer mediated. How a course is taught is constrained by the mode of delivery. In a traditional classroom, the primary mode of delivery is face-to-face verbal and nonverbal communication. The students know what to expect since this

has been the primary classroom model for most if not all of their educational experiences. They expect the instructor to deliver most of the content if not all by lecture method. There may be some discussion in the classroom, but that is not the primary delivery method. Classroom interactions follow the traditional definition of interactions in which the instructor lectures, perhaps students ask questions, which the instructor answers – it is immediate and bidirectional. Both the student and the instructor are in the same place at the same time.

However, in an asynchronous class, communication occurs via computer and students and the instructor are separated by time and space, with this separation being identified as a transactional distance with the highest level of learning occurring when that transactional distance is minimized (Moore, 1989). This can be done, by utilizing the three variables and two dimensions of Moore's transactional theory when delivering a course online (Kanuka, 2011). Dialogue and structure are variables on the teaching dimension. Dialogue is the interaction between the instructor and the learners, while the elements of course design compose the structure. When there is a high degree of structure in an online course and a high degree of interactive dialogue, then the transactional distance is minimized promoting student engagement and success. The second dimension is the learning dimension with learner autonomy as the third variable.. Kanuka (2011) noted,

> So even where a course is highly structured, the learners may decide for themselves whether the guidance and directions will be used and, if so, when, where, in what ways, and to what extent. The praxis of this theory, then, involves determining the right mix of structure, dialogue, and autonomy for achieving

successful distance learning transactions. (p. 154)

"Getting the mix right" is the holy grail of online course development. Anderson (2003) noted that as early as 1979 distance educators were challenged to get the mix right between independent study and interactive learning system by Daniel and Marquis and in fact the challenge has become more difficult with the advent of computer mediated interaction. There is no one right answer, but as the instructor works through the course development, it is imperative that there is an attempt to "get the mix right" so that student engagement, retention, and success are possible.

Creation of a Class

Creating an online course requires a thoughtful, methodical process and has been shown to not be successful to just dump existing course content into the CMS. One approach utilizes the affordances of the CMS. Several factors must be considered when one contemplates creating an online course. The first question should be much the same as that which is considered when developing a course to be taught in the traditional classroom, "What do I want my students to know, remember, and to be able to do when they leave this class, that they didn't have mastery of before the class started?" A great deal of thought needs to go into the design or redesign of a class. After the learning objectives and course goals are set then they can be used as a road map for course design. The multiple technologies provided by the CMS can be then used for the flesh out the course.

This paper will employ the Seven Principles of Good Practice (Chickering, Gamson, & Poulsen, 1987) as a framework upon which identified effective online teaching strategies and technologies can be layered to structure a course. It is important

to remember that in a totally asynchronous online course, the students and the instructor do not meet, nor are they necessarily online at the same time. The applications described below will be targeted towards a fully online class. This is not to say that synchronous activities are not valuable, but they are beyond the scope of this paper

The Seven Principles of Good Practice

Chickering and Gamson's *Seven Principles of Good Practice in Undergraduate Education* have been around more than 25 years, and are built upon 50 years of research designed to help improve undergraduate student learning (Chickering et al., 1987). The inception of these principles came about in the mid-1980s when the reform movement to improve undergraduate education in the United States was sweeping the nation. Chickering and Gamson took advantage of that climate to develop and disseminate a statement of principles modeled after the "principles of good practice in experiential learning" released by the Council on Adult and Experiential Learning and in which Chickering had been involved.

They assembled a task force of highly respected scholars from the fields of college experience, organization, economic and policy issues in higher education who met for two days in the summer of 1986 (Chickering & Gamson, 1999). The final version of the Seven Principles for Good Practice in Undergraduate Education was presented in the lead article in the March 1987 issue of the AAHE Bulletin (Chickering et al., 1987). This seminal work has been used in faculty development, directed research interests (S. Watson & Sutton, 2012), faculty evaluation (Bangert, 2004; Chickering et al., 1987; Hutchins, 2003), course evaluation (Puzziferro & Shelton, 2009), online course evaluation (Graham, 2001; Ritter & Lemke, 2000; Testa, 2000) student self-

assessment (McCabe & Meuter, 2011; Nicol & Macfarlane‐Dick, 2006) and been applied to a myriad of situations.

This paper will identify each principle, quote the original definition for each and then identify activities that can be used in the online class environment to reinforce the principle. The team assembled by Chickering and Gamson in 1987 concluded that student success is related to effective teaching practices that encourage (1) student–faculty contact, (2) cooperation among students, (3) active learning, (4) prompt feedback, (5) time on task, (6) high expectations, and (7) respect for diverse talents and ways of learning.

Application of the Seven Principles

1. **Good practice encourages contact between students and faculty.**

Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans.

In an asynchronous online course, most if not all contact between the students and instructor will be in the CMS. Therefore, the establishment of the construct of "instructor presence" defined as the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes is crucial (Anderson, Liam, Garrison, & Archer, 2001; Picciano, 2002). In other words, building an instructor presence in the classroom that transcends time and space so that the student is aware and reminded that they are not alone in cyberspace, that there is a person on the other side of the screen. This can be

done in a number of ways. A "meet the instructor" area in the class is an excellent way to start building the instructor presence that is critical for student success. There are a couple of very effective ways for the instructor to introduce himself. One powerful method is to put a very short introductory video into the class. If the instructor is uncomfortable making a video, then a short podcast introducing herself (hearing a voice will make the instructor seem more real to the students) and putting picture of herself in the introduction page gives the students an idea of who the instructor is.

The most direct and immediate method of communication in the online environment between the instructor and the student is e-mail. It is helpful if the student has an idea of how immediate that contact is. So, an e-communications policy is very helpful in establishing guidelines for contact. This enables students to know what to expect from the instructor for turn-around time in email communications.

The announcement tool is also very helpful in bringing students' attention to important deadlines and that in addition to email notifications let the students know that a new announcement is put into the class. This furthers develop the instructor's presence in the class. It also serves to remind the student that although the class doesn't meet at set times, there is work in the class waiting for them and it helps them keep their online class in the forefront of their attention.

The discussion forum can be another place where the instructor's presence can be made known. "Instructor facilitation of discussion and an ongoing active presence in the discussion forum and other online communication media is essential for maintaining high levels of student engagement" (Dawson & McWilliam, 2008) p. 31. Morris and Finnegan (2009) concur, "When faculty are present ('visible' and active) in the online

environment, students benefit and student participation increases (p. 61). The constructs of teacher immediacy and teacher presence have been shown to be valuable in student learning (Baker, 2010; Morris & Finnegan, 2009; Ni, 2008; Russo & Ford, 2006).

2. Good practice develops a reciprocity and cooperation among students.

Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions sharpens thinking and deepens understanding.

The discussion area allows for sharing of ideas and can promote the feeling of being in a traditional classroom. Research on online student success and/or retention identifies the importance of developing a community in the online course and its role in contributing to student persistence (Anderson & Dron, 2010;Annand, 2011 (Daspit & D'Souza, 2012; Dawson, 2006); Garrison, 2000; Kanuka, 2011). The discussion area serves as a meeting place where community can be built. Discussion must be structured in a manner that facilitates student-to-student interactions. The first discussion forum should be a place for building community by allowing the students to introduce themselves to one another and to the instructor. Discussions should be guided, so for example in the first introductions forum specific information should be requested. Directions for the introduction area could read, "Please introduce yourself to the class here. Tell us what your major is and what your career goals are. Please also share one thing interesting about yourself that you are comfortable sharing." Providing very specific instructions guides the students so that most students will post about the same amount of information and the last statement invites them to share a personal statement with the other students, thus helping to start building the community of the class.

Students need to be instructed to reply to another post (or two) to further the community-building, however again the directions must be very precise. Replies must contribute to a conversation and comments like, "nice to meet you" are not considered replies. The discussions should be graded. A grading rubric for postings is quite beneficial in relaying expectations to students.

Having discussion areas for each module builds structure into the class, students know that there will be a discussion on the topics for that module and if the discussion postings instructions promote early first postings it works best. For example, in an undergraduate biology course the instructions can be "post one new thing that you learned from reading the chapter". This type of posting has two goals, one is to enhance the assigned reading and the second is that by writing about something covered in the chapter, it encourages them to reflect on the readings as well as reinforcing the information covered by the reading. An important rule for these types of postings is that they cannot post their initial post on the same topic that someone else has posted. This motivates them to post early so that they can post on their first choice. Then the other students can reply to the post and add to the information shared. The instructor has an important role of facilitator, so if someone posts on a topic that has already been chosen, then the instructor must step in and require that the second individual choose another topic (by private email – not in the discussion area). The instructor also facilitates by requiring that the secondary posts actually do add to the conversation and also by occasionally commenting on a post to reiterate an important concept or to clarify a misconception. Anderson, Liam, Garrison, and Archer (2001) note that an important role for the instructor is to facilitate discussion by "moving the discussion along" and insuring

effective and efficient use of time. This level of faculty input does take time, but it also contributes to the construct of instructor presence and as noted above promotes student success in the online classroom. The value of the discussions is for the students to interact with one another on a regular basis and to share their take on the material from the readings. Therefore, class size must be limited to 25 or fewer students (Boles, et al., 2010). It is difficult to build community in large classes and the discussion areas get so busy that it is difficult for the students to keep up with the readings.

In a graduate level course where a deeper delving into the content is desired, the discussion threads can get very complicated if the entire class is discussing one topic. It is better to break the class into small groups and have them work collaboratively in their group areas on one aspect of the topic in a wiki or other shared space where collaboration is easier to achieve.

There are a number of ways to utilize the discussion area, but the goals need to be the driving force. Is it to reinforce reading materials, or to build a consensus on what a journal article is saying, or an exploration of various theories? Since the entire class is limited to the online classroom, it is important to build reciprocity and collaboration into the discussions in order to mimic as nearly as possible the discussion that would occur in a face-to-face classroom

3. Good practice encourages active learning.

Learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing prepackaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences and apply it to their daily lives. They must make what they learn part of themselves

Active learning creates learning experiences in which students construct knowledge and solve problems (Barr & Tagg, 1995). The CMS has incorporated many interactive

tools that encourage and facilitate interactivity and cooperation in the online environment. By using the resources provided within the CMS the access to these created sharing spaces is limited to those in the class, which many find to be important in order to preserve student privacy. Blackboard provides a wiki tool that is easy to use and works very well for online collaborations. The major affordance that it offers is that it tracks user activity and revisions so the instructor can see who actually contributed to a group project which makes grading fairer and easier for the instructor. Students can work together to explore a topic and then create a page for others to learn from. This could be an all class project where everyone contributes or this could be a group project where the class is broken down into small groups to explore some aspect of a project and then possibly the projects could be combine to create a bigger project. This could work in either an undergraduate or graduate class very well. For instance in a history of technology class, the project could be to build a wiki identifying the various technologies that were tried in schools and show the factors that contributed to their failures. Each group could have a specific time span to cover, or each group would be assigned (or select) one or more of the technologies and would put together the information in the wiki. The wiki has a build in comment area where the students can work out the particulars of the assignments and goals collaboratively without having to go to the discussion area.

4. Good practice gives prompt feedback.

Knowing what you know and don't know focuses learning. Students need appropriate feedback on performance to benefit from courses. When getting started, students need help in assessing existing knowledge and competence. In classes, students need frequent opportunities to perform and receive suggestions for improvement. At various points during college, and at the end, students need chances to reflect on what they have learned, what they still need to know and how to assess themselves.

Prompt feedback has been found to accelerate and improve learning (Dunkin & Barnes, 1986; Sadler, 1998). Nearly all CMS systems provide a "grade" area where the instructor can put the grades and students can access their scores. This is an easy way to provide immediate feedback after assignments are graded. In many disciplines, assessment is based on examinations. If the exams are given in the CMS using the test area, they can be graded and made available for viewing very quickly and the student can get prompt feedback in that manner. For formative assessments, they also can be delivered in this manner, but can be designed for auto-grading (e.g. multiple choice, true, false) which permits immediate feedback to the student. Drop boxes are areas where students can submit attachments and they work well for managing writing assignments. The instructor does not have to worry about losing an assignment in his email inbox the assignment is in a particular place in the CMS. If the instructor requires that the assignment be in Word and then opens the document and activates the "track changes function" then the comments can be inserted directly into the document and the instructor can save the graded document and return it as an attachment. Including a comment in the e-communication policy describing the anticipated time of response to a message reassures the student that the instructor will respond in a timely manner. Lack of responsiveness, late response and limited communication on the part of the faculty member have been all been cited as contributory factors to lack of persistence of the student and even withdrawal from a course (Aragon & Johnson, 2008; Hart, 2012).

5. Good practice emphasizes time on task.

Time plus energy equals learning. There is no substitute for time on task. Learning to use one's time well is critical for students and professionals alike. Students need help in learning effective time management. Allocating realistic amounts of time means effective

learning for students and effective teaching for faculty. How an institution defines time expectations for students, faculty, administrators, and other professional staff can establish the basis for high performance for all.

Articulating the amount of time that students are expected to spend on a task has been shown to facilitate time management while developing course materials and experiences that provide a high level of engagement has been found to motivate students to spend more time on a task which can foster learning (Sorcinelli, 1991). The calendar function can be used by faculty to ensure students stay on task with deadlines and activities throughout the semester (McCabe & Meuter, 2011). "The assignment tool was advantageous for promoting time on task because students were automatically reminded about assignment due dates and new assignment postings each time they accessed the class. Students depended on these reminders and would contact the instructor immediately when assignments were created that failed to indicate a final date for submission." (Bangert, 2004), p. 225. Knowing how much time they had to complete an assignment gave the students guidelines so that they could manage their schedules in order to spend the amount of time needed to master the assignments

6. Good practice communicates high expectations.

Expect more and you will get more. High expectations are important for everyone-for the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated. Expecting students to perform well becomes a self-fulfilling prophecy when teachers and institutions hold high expectations of themselves and make extra efforts.

Appropriate student expectations can be fostered only when instructors clearly communicate their own expectations for the course and this is true for all types of courses, be it online, face-to-face, or blended (Renes & Strange, 2011). There is a strong link between achievement expectancies and performance (Sorcinelli, 1991). Instructors who develop challenging goals, that are also achievable, motivate students to reach for

those goals (McCabe & Meuter, 2011). Course goals and objectives should be highly visible to the student and the means by which students attain these goals and objectives needs to be transparent – grading rubrics, guidelines and calendars are essential to ensure that the information is conveyed to the learner and should be readily visible and links to these critical pieces of information present throughout the course (Renes & Strange, 2011). Sharing examples of exemplary work by students in previous classes gives the current students a better idea of expectations. Students seem to be more inclined to review these examples when they are provided electronically rather than in a paper form (McCabe & Meuter, 2011).

7. Good practice respects diverse talents and ways of learning.

There are many roads to learning. People bring different talents and styles of learning to college. Brilliant students in the seminar room may be all thumbs in the lab or art studio. Students rich in hands-on experience may not do so well with theory. Students need the opportunity to show their talents and learn in ways that work for them. Then they can be pushed to learning in new ways that do not come so easily.

"Faculty who show regard for their students' unique interests and talents are likely to facilitate student growth and development in every sphere –academic, social personal, and vocational" (Chickering & Gamson, 1991, p. 21). This principle is the "linchpin" that holds the Seven Principles together (Sorcinelli, 1991, p. 374). This is the arena in which the diversity of the CMS tools can fully come into play. The plethora of tools available for an online class allow for numerous alternate activities and assessments.

An underutilized tool is a journal or blog area that provides a platform for self-reflection. This tool can be set to private where only the student and the instructor can see the posts, or it can be made public to be shared with the other students. The selections of public or private will be dependent upon the goals for the activity.

Instructor scaffolding and feedback to student journaling has been shown to promote student learning and metacognition (Rimor, Reingold, & Heiman, 2008). This could be particularly useful in a graduate level course to encourage students to expand their metacognition.

Another option of providing an opportunity of alternate learning assignments could be facilitated by the "course gallery". This tool allows students to upload, share and view videos that they have created. The instructor does have to "approve" the videos before they can be shared. These videos could be as simple as a screencast with PowerPoint and the student record a teaching video, or as involved as they would like providing excellent constructivist approach to learning.

Some instructors like to allow students to lead and moderate discussion forums thus providing an experiential learning opportunity in leadership and teaching. Allowing the students a variety of choices in learning experiences can be challenging but definitely fulfills the last of the principles.

Summary

It matters not whether a class is undergraduate or graduate or if it is delivered online, face-to-face or as a hybrid class, the above described principles of good practice have withstood the tides of time and are still supported as "best practices in teaching." In each of these practices the instructor plays a crucial role and this is particularly true in online education. Students succeed in online courses, but it is not easy if the course has not been designed and delivered with the students' interests in the forefront.

It is also important to remember that each class is a work in progress. No perfect

online class is ever packed up and tied with a bow. Each time the class is delivered the instructor is encouraged to evaluate the course and the activities included to see if they are meeting the course goals. There are many tools and activities available not mentioned here, but that does not mean that they are not useful; however a word of caution is called for. Using a tool because it is available is not recommended but using a tool to promote learning in a manner that the instructor desires and then observing the students maturating as that learning process develops is well worth the time spent exploring, scaffolding, designing and delivering an online course.

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