

**NORTHCENTRAL UNIVERSITY  
ASSIGNMENT COVER SHEET**

Learner: **Steven Diaz**

**THIS FORM MUST BE COMPLETELY FILLED IN**

**Please Follow These Procedures:** If requested by your mentor, use an assignment cover sheet as the first page of the **word processor** file. Use "headers" to indicate your course code, assignment number, and your name on each page of the assignment/homework including this assignment cover sheet. .

**Keep a Photocopy or Electronic Copy Of Your Assignments:** You may need to re-submit assignments if your mentor has indicated that you may or must do so.

**Academic Integrity:** All work submitted in each course must be the Learner's own. This includes all assignments, exams, term papers, and other projects required by the faculty mentor. The knowing submission of another persons work represented as that of the Learner's without properly citing the source of the work will be considered plagiarism and will result in an unsatisfactory grade for the work submitted or for the entire course, and may result in academic dismissal.

**LTM5007**

**Dr. Susanne Flannelly**

**Multimedia Production Management**

**Assignment 4: The ASSURE Learning Model**

**Dr. Flannelly,**

I invite you seeing in practice, the lesson I planned for this assignment using the ASSURE model. Please access the lesson's activity by activating the following link: <http://voicethread.com/share/334632/>. I look forward for your feedback.

**Faculty Use Only**

<Faculty comments here>

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## The ASSURE Learning Model

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### Instructional Situation

In my attempts to go beyond traditional classroom practices through the use of technology and media, as suggested by Smaldino, Lowther and Russell (2008), the instructional model I use in my basic skills math courses is based on the Emporium model. This model is one of the six models for course redesign suggested by the National Center for Academic Transformation (NCAT) with the purpose of using technology to improve learning outcomes and reduce cost in higher education (as cited in NCAT web site, 2005). According to Twigg (2003), the Emporium model consists on transforming the classroom into a learning center where students use web-based instructional software to learn course content at their own pace with the availability of online resources and on-demand personalized assistance from tutors, classmates and instructors. Students learn mathematics by doing instead of by listening class lectures. In this instructional model, students experience an individualized instruction based on what they know and need. They control the how, when and what of the learning experience.

Due to an open attendance policy in my basic skills courses, the different paces each student learns the course content, and the focus of the instructional model on learning mathematics by doing; it is very difficult to schedule group discussions during class time for the purpose of connecting mathematics with real-world examples. As a developmental math instructor, I have the professional goal to promote math awareness among my students to make learning mathematics a meaningful experience. Unfortunately, many students in the basic skills courses believe learning mathematics is just doing textbook math problems to pass the next test and for graduation requirements. They often do not appreciate the useful applications of mathematics beyond the classroom walls and either they realized how often several of their daily-life actions and decisions are mathematical in nature. Therefore, to promote math awareness and make

connections with real-life applications, it is necessary to communicate about mathematics ideas in the classroom. Johnson and Green (2007) stated that students enjoy the opportunity to connect their learning with their everyday lives and demonstrate a greater appreciation for the usefulness of mathematics when they are required to write in real-life contexts. Therefore, I am concerned of not finding the appropriate time within the scheduled class period to engage students in class discussions about math awareness, as a consequence of the instructional model that I am using in the basic skills courses.

Determined to create learning opportunities to discuss about mathematics and promote math awareness, I decided using the discussion forum feature available in Blackboard (Bb) to complement what my current instructional model lacks. Johnson and Green (2007) recognized online discussion boards as a natural extension of the classroom community. Tubbs (2004) stated the use of discussion forums in the mathematics classroom create an interactive and social environment that increases dialogue, reflection, critical thinking, and participation. Writing is the dominant form of communication in discussion groups, which is a strategy to help students becoming active learners and personalize the course content by having the choice of applying what they know on areas they find interesting (Flores & Brittain, 2003). Having facilitated discussion forums in my online courses, I foresaw using discussion forums as a viable instructional option to discuss about mathematics in my onsite courses. Interestingly, the use of discussion forums follows the same principles of the Emporium model: it gives students control of when, what and how to participate actively in the discussion.

After several attempts using Bb's discussion forums during the Fall semester of 2008, I was not satisfied with the outcomes of the discussion activities. Students did not participate actively as I expected and their responses lacked substance. Overall, students were not giving their best

effort in making the discussions meaningful and thoughtful. From informal observations when students access the Internet in the computer lab, I inferred the dominant text format of the discussion forums in Bb made the interactions uninteresting and impersonal, which is contrary what students experience in the social networking sites, such as My Space or Facebook. In these social networking sites, the interactions occur not only in text format but also in audio and visual format. Therefore, my next approach was to find ways for enhancing the online discussions, so communication is based less on text and more on visuals and multimedia. Fortunately, I recently discover a web 2.0 application (i.e. VoiceThread.com) through a community of practice (CoP) that I participate for professional development, which has the potential to enhance the discussions using multimedia seamlessly.

VoiceThread is a collaborative multimedia presentation tool that allows users to make comments on different sections of the presentation using several formats (i.e. text, audio, or video), which creates a conversation about the presentation's topic. Users participating in the conversation can be visually identified with pictures or icons, not just by their name, making the interactions more personal. I decided for this assignment to create a lesson plan for an online discussion activity by integrating VoiceThread.com in my classroom practice. The topic of the online discussion is *Why we need to learn fractions?*

### Analyze Learners

#### General Characteristics

Students who take basic skills math courses are predominantly college freshmen students, whose ages range between 18-20 years old. There is a rich diverse student population in my courses, in particular from Latin-American and Caribbean countries; therefore, I often have to become familiarize with students' culture on how they learned mathematics in their countries.

My classroom rosters typically consist of more females than males. Many freshmen students are the first ones in their family to attend college, which is a reason they often demonstrate excitement, pride and high expectations for pursuing a college education. However, these students are also under significant stress, in many instances, to succeed in college for the same reason. In addition, a significant number of students in my basic skills courses commute to school and have part-time or full-time jobs, which could affect their academic performance if they lack the self-discipline and motivation to achieve their academic goals.

On any given day, it is not a rare occurrence observing my students being constantly engaged with their technological devices or gadgets (i.e. cell phones, iPods, and laptops), which is probably why they have a preference for interactive and rich-media learning environments. Unfortunately, a reason a significant number of freshmen students enrolled in the basic skills math courses is because they are unprepared to handle the rigor and load of college level math courses. Students typically demonstrate signs of math anxiety, which according to Platonic Realms (2008) web site defines it as “a feeling of intense frustration or helplessness about one's ability to do math” (para. 3). To worsen their math anxieties, these students also show poor study skills, short attention spans, easily bored and distracted, poor time management, and impatience. As suggested by Curtain-Phillips (2008), I often find necessary to re-examine my instructional strategies to design a productive and positive learning environment that focuses on more student directed learning and discussions, so my students experience more success.

### Entry Competencies

The course content of the basic skills math courses is a review or re-fresher of what students should have learned in mathematics classes during their schooling years (i.e. K-12). Therefore, students have prior knowledge and experiences with the course content. To find out students'

math proficiency and readiness, students are placed in one of the three different basic skills math courses (i.e. Arithmetic Review, Introductory Algebra, and Intermediate Algebra) based on their score from a placement test (i.e. College Board Accuplacer test). From formal and informal observations and conversations, students have demonstrated the ability to use a computer and navigate the Internet. For those students who lack this ability, they will receive on-demand assistance from the instructor, tutors, and/or their peers. In general, students should have the following competencies, so they can participate in the online discussion *Why we need to learn fractions?* using VoiceThread.com:

1. Students can define what a fraction is.
2. Students can identify different equivalent representations of fractions.
3. Students can perform computations with fractions.
4. Students can operate a computer and navigate the Internet.
5. Students can upload a self-portrait digital image to the Internet.
6. Students can communicate complete ideas via text, audio, or video.

### Learning Styles

One of the reasons for changing recently the instructional model of my basic skills math courses was the realization that traditional class lectures were augmenting my students' passivity and disinterest toward learning mathematics. If students did not master the basic skills during their schooling years, most likely, in a traditional instructional classroom setting then I find irresponsible to continue using the same instructional methods in my basic skills math courses. For such reason, I am constantly exploring and evaluating possible innovative instructional strategies using technology that take into consideration how today's students are experiencing the world they live in.

From classroom experiences, I have observed how students easily and actively engage with their portable technological devices (e.g. cell phone, iPods, and laptops). I am also amazed by their fondness for using interactive multimedia tools to connect with family and friends available in social networking sites. Technology motivates them to explore the world, try new experiences in a meaningful way and on their own terms, and receive the instant gratification they typically expect for doing something. Using VoiceThread.com, I expect to channel my students' enthusiasm, fondness, and savvy ness for technology and interactive multimedia tools to discuss about mathematics and promote math awareness.

### State Standards and Objectives

#### Standards

The basic skills courses are considered part of the program of developmental education; therefore, these courses are aligned with the Professional Standards in Developmental Education from the National Association for Developmental Education (NADE). In the area of mathematics, NADE endorsed the standards of the American Mathematical Association for Two Years Colleges (AMATYC), which is contained in the document *Crossroads in Mathematics: Standards for Introductory College Mathematics Before Calculus*. The following curriculum standards are expected to be achieved:

1. *Standard I-4: Connecting With Other Disciplines*. Students will develop the view that mathematics is a growing discipline, interrelated with human culture, and understand its connections to other disciplines.
2. *Standard I-5: Communicating*. Students will acquire the ability to read, write, listen to, and speak mathematics.

3. *Standard I-7: Developing Mathematical Power.* Students will engage in rich experiences that encourage independent, nontrivial exploration in mathematics, develop and reinforce tenacity and confidence in their abilities to use mathematics, and inspire them to pursue the study of mathematics and related disciplines.

Even when the National Technology Standards for Students (NETS-S) from the International Society for Technology in Education (ISTE) is for K-12 levels, it can be applicable to the basic skills courses since these students did not achieve these standards to enhance learning mathematics during their schooling years. Otherwise, they will not be taking basic skills math courses. The following NET-S standard is expected to be achieved: *Standard 4 - Technology Communications Tools.* Students use telecommunication tools to collaborate, publish, and interact with peers, experts, and other audiences.

#### Objectives

Students in the basic skills courses are expected to achieve the following learning objectives for the online discussion activity, *Why we need to learn fractions?*:

1. Based on their prior knowledge, and what they learned in class, students will define what a fraction is.
2. Based on their personal experiences and interests, students will explain in their own words the importance for learning fractions; therefore, verbalizing their math awareness.
3. Given a multimedia presentation at VoiceThread.com, students will analyze the images used in the presentation and read (or listen) their classmates' comments to deduce how fractions are involved in the real-life scenarios depicted in the images.
4. After analyzing the images and reading their classmates' comments, students will participate in the discussion by posting a substantive comment for three different images

of the presentation on how fractions are involved in the real-life scenario depicted in the images.

5. After observing the multimedia presentation and participating in the discussion at VoiceThread.com, students will post a new real-life example of fractions that was not mentioned in the presentation; therefore, they will be verbalizing their math awareness.

### Select Strategies, Technology, Media, and Materials

#### Select Strategies

The creation of the online discussion activity involves teacher-centered and student-centered strategies. The discussion is based on a multimedia presentation, which I must create and set up in VoiceThread.com. Once the presentation is created, my role is to facilitate the discussion by encouraging students to participate in the discussion, clarifying students' questions and providing additional learning opportunities that enrich the discussion. In this web site, students can interact and engage in a conversation about the presentation by posting comments in text, audio, or video format. The presentation will consist of digital images that depict real-life examples or scenarios typical of students' lives. Students personalized their responses by uploading a self-portrait digital picture or selecting an icon that represent them, which is displayed every time they post a comment in combination with their name. Using a web 2.0, such as VoiceThread, is a way of maximizing students' familiarity and experience with social networking environments for educational purposes.

All these strategies address each of the four essential aspects of motivations stated in Keller's ARCS model (as cited in Smaldino, Lowther & Russell, 2008). Using a web 2.0 tool in a math course will increase students' attention due to their fondness for technology and the Internet. Relevance will be achieved by using digital images that depict their everyday activities and

connect it with their learning. Students' familiarity with web 2.0 tools will facilitate their participation in the discussion and increase their confidence for learning mathematics. Students will achieve satisfaction when peers and the instructor recognize, publicly or privately, their contributions in the discussion since their responses are personalized with their own picture and name.

### Select Technology and Media

The online discussion will take place in VoiceThread.com; however, I have the flexibility to embed the interactive online discussion in my Bb course shell. Embedding the interactive discussion from VoiceThread into Bb has several advantages: (a) it facilitates access to the discussion by eliminating the need to visit VoiceThread web site, and (b) it provides a sense of security for those reluctant students who do not trust or feel comfortable signing up to Internet sites due to privacy issues, spam, and/or viruses. The discussion involves a multimedia presentation, so digital images will be necessary to create the presentation. However, VoiceThread also supports videos and documents in PDF, Word, Excel, and Power Point file formats, which should be considered for future presentations and discussions.

Based on the *Selection Rubric for Computers and Multimedia Software* created by Smaldino, Lowther and Russell (2008), I found appropriate using VoiceThread.com for the discussion activity since it met high quality marks on the following criteria:

1. *Alignment with Standards, Outcomes, and Objectives*: the interactive multimedia tools available in VoiceThread make it possible to discuss about mathematics and promote math awareness at any time and any place.
2. *Interest Level and Engagement*: VoiceThread is a web 2.0 tool, in which students can actively participate in a conversation around the multimedia presentation.

3. *Ease of Use:* VoiceThread platform is very intuitive and user-friendly.
4. *User Guide and Directions:* Animated and text tutorials are available for those students who are not proficient using technology. A blog is also available informing users about updates and tips using VoiceThread..
5. *Fosters Collaboration:* As a web 2.0 tool, VoiceThread is a collaboration tool.

### Select Materials

The presentation requires digital images of real-life examples, in which the concept of fractions are applied in the scenario depicted in the image. To personalize the posts in the discussions, a self-portrait digital image will be also necessary. A microphone is necessary for the presentation to include a narrated introduction and conclusion, making the presentation three-dimensional: text, visual and audio. Students also have the option to use microphone to post audio comments. With a web cam, I can post comments in video format, but unfortunately, I did not have access to this equipment when planning this lesson. However, I will encourage students using a web cam to post video comments to enhance the discussions.

### Utilize Technology, Media, and Materials

#### Preview the Technology, Media, and Materials

I had the opportunity to participate in a VoiceThread discussion about the historical event of President Obama's inauguration. The VoiceThread discussion was created by another educator, who is part of the CoP that I participate as a form of professional development. I was immediately captivated by the interactivity of the discussion and its potential use in my instructional practices, which led me try and become familiar using this web 2.0 tool as a participant (i.e. students' perspective) and moderator (i.e. instructor's perspective).

#### Prepare the Technology, Media, and Materials

To create the presentation for the VoiceThread discussion, I need to locate 12 copyright-free digital images in the Internet that depict different applications of fractions in real-life settings. The sequence in which I will arrange the images in the presentation must be based on the level of interest that could generate in students. I want students to observe the whole presentation before they lose interest; therefore, I must place the potentially less interesting images in between the potential attractive images. On the first slide of the presentation, I will include an image that depicts the theme of the whole presentation. I will also record and post a narrated introduction about the presentation and the expectations of the discussion. On the last slide of the presentation, I will include an image that implies an open-end question. This slide contains a narrated conclusion in which I will challenge my students to think and post another real-life application of fractions, different from the ones shown in the presentation. Finally, I will access the VoiceThread discussion in several computers on campus and ask other people to access the discussion with their computers to ensure the presentation is properly set up and functioning.

#### Prepare the Environment

The discussion takes place online; therefore, the only required preparation is embedding the VoiceThread discussion in Bb with detailed textual instructions about the expectations and outcomes of the activity.

#### Prepare the Learners

In my opinion, this stage of the lesson plan is the most challenging due to the open attendance policy I have in my courses. Therefore, there is the possibility that not all students will be in class when I introduce the activity. For such reason, preparing my students of the activity will consist of two parts: (a) introduce the activity on-site with a short presentation and demonstration using the classroom projector, and (2) create an online announcement in Bb with detailed

explanations and reference to the tutorials in VoiceThread web site on how to use this tool. In Bb, I will take advantage of the option for e-mailing class announcements to all my students, which will ensure everyone be notified about the discussion activity.

#### Require Learner Participation

From my teaching experience, I have realized that students will become more involved in the course activities if it is going to be graded. Therefore, for students to earn a grade, they need to participate in the VoiceThread discussion. I will inform them about the minimum participation requirements on how to earn a satisfactory grade. Once the online discussion is available, I will moderate students' responses by providing feedback, in person or by e-mail, for those responses that are not substantive and praising the high quality responses. I will also be encouraging students to take advantage of the multimedia tools to post responses other than text format and make the discussion more interactive, interesting and engaging. During the duration of the discussion activities, I will be posting reminders in Bb and sending e-mails to encourage students to participate in this unique learning experience.

#### Evaluate and Revise

Evaluating students' active participation in the discussion to achieve the lesson's objectives will be based on the substantiveness of their responses and on the number of posted responses. In the course syllabus, students will find a detailed explanation of how their posts are considered substantive. The rubric on the next page will be used to evaluate students' responses, which I will submit by e-mail to those students who participated in the discussion. To avoid discrepancies between the learning objectives and the students' learning outcomes, the objectives of this lesson were listed as the criteria of the rubrics with its corresponding weights.

Objectives	Score	Comments
Student defined what a fraction is. <b>(4 points)</b>		
Student explained in their own words the importance for learning fractions. <b>(5 points)</b>		
Student participated in the discussion by posting a substantive on comment on three (3) different images of the presentation. <b>(4 points per post)</b>		
Student posted a real-life example of fractions that was not mentioned in the presentation. <b>(4 points)</b>		
<b>Total (25 points)</b>		

As the discussion activities takes its course, I will be observing and reflecting the effectiveness of VoiceThread as an instructional tool and identify those areas that I could have improved the presentation. During informal conversations, I will ask students' input if using VoiceThread enhanced their learning experience and helped them gain a better appreciation for learning mathematics. Their comments, suggestions and ideas are valuable feedback to improve future VoiceThread discussions or to find alternative instructional strategies and/or technological tools that facilitate a discussion about mathematics. As Smaldino, Lowther, and Russell (2008) recognized when introducing the ASSURE model, my primary goal is to meet my students' needs, so they achieve the highest levels of learning.

## References

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