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Designing instruction is like a coach creating a game plan. Both follow the ADDIE model. The coach begins with the task of scouting the other team for defenses, presses, and offensive strategies which can be laborious (Analysis). After learning about the opponent the coach takes the data back to his own team to devise a plan for the JV team to pose as the opponent in practice and simulate the opponent’s press, defense, and the various offenses and inbound plays (Design). By simulating the opponent the coach can now develop strategies that will work best in a given situation and he formulates the game plan (Development). The players too have the opportunity to learn what to expect before they are thrown into the game. When it comes time to actually play the game the coach and the players are well prepared and they venture into the game with a plan (Implementation). However, many times things don’t go according to plan, and as the game unfolds the coach must continue to tweak and make adjustments as necessary as issues present themselves (Formative Evaluation) and at the end of the game the coaches and players evaluate what worked and what didn’t so the next game they can make the correct adjustments (Summative Evaluation).

As I have been designing my ID project this semester I have thought about my experiences as a teacher and as coach and how well they relate to the ADDIE model. My project was designing an online tutorial to teach 9th grade girls basic basketball skills prior to them trying out for the basketball team. I first took my idea to a former professor of mine at Utah State University named Dr. Hilda Fronske (nickname is Doc). Doc is the author of “Teaching Cues for Sport Skills for Secondary Students” which is in its 5th edition. She has compiled cues as a way to teach skills including basketball to high school physical education students. She includes pictures as demonstrations and provides explanations of drills to practice the skills. I met with her during her office hours and began to explain my idea. She listened for about 3 sentences until I used the word “online”. She said she needed to stop me right there, because teaching sport skills online would never work. The reason the cues are effective is because a living breathing teacher can be right there helping the students and correcting mistakes. I agreed that there needs to be an expert involved who can help correct and encourage, but I also suggested the use of video examples to enhance the learning. She again explained that there will never be a replacement for human interaction. Again I agreed and explained that this online tutorial will be used by girls over the summer as they prepare to tryout for the basketball team in the fall. Under state laws coaches are not allowed to hold practice, but using this tutorial students would be able to practice skills and get periodic feedback if they came to the coach in a one-to-one observation or instruction (not as a team). She was still very hesitant to give approval for my project, but reluctantly gave me permission to use her cues.

While I have compiled 5 sections of great basketball skill instruction using cues, pictures, and videos there are two things that will make it successful. First, the girls must be motivated to view the tutorial and put in the time it takes to practice the skills and become proficient. As Doc says in her book, “Practice-Practice-Practice! How many hours are you willing to practice?” Secondly, there must be valid instructor who can give expert advice through observation of the skill being performed in formative evaluations as skills develop. As a former 9th grade girls basketball coach I saw many girls who came into tryouts never having played organized basketball before and as a result many of their basketball skills were severely lacking. I am really excited to see the results that this project may produce for future 9th grade girls basketball players and how becoming proficient in these skills at an earlier age will affect how their basketball development will increase throughout high school.

Additionally, having learned what I know about the design process I know it will help me in my teaching as I prepare lessons. I will be much more thorough in my planning and design process rather than haphazardly throwing lesson plans together and improvising the lesson as I go. If I
decide to move from teaching into the educational technology field I know that these principles will help me as I design presentations for other teachers on effective ways to implement technology into their classrooms. If I decide to move into the ID field the skills I have learned this semester will be absolutely essential for me to succeed. The ADDIE model can be internalized into so many different methods and fields I am anxious to use my knowledge of the process and apply it to other areas of my profession.

Part 1 – Topic

Part 1a - Learning Goal
Upon completion of the tutorial students will be able to perform basic basketball skills including: shooting, dribbling, passing, and defensive technique.

Part 1b - Description of the audience
The target audience is 9th grade girls or 8th grade girls soon to be 9th graders who have a basic knowledge of basketball, but wish to improve their basic basketball skills.

Part 1c – Rationale
The past 2 years I have coached 9th grade Girls Basketball at Bear Lake High School and many of the girls coming into the program lack the necessary skills to adequately compete at the high school level. Therefore this tutorial is designed to help those girls improve their basketball skills before entering the Girls Basketball Program at BLHS.

Part 2 - Analysis Report

Part 2a - Description of the Need:

Part 2a.1 - Needs Analysis Survey
The survey was given to 50 9th grade girls in a high school English class. The survey was given in English rather than PE as to not get skewed data. Questions are sampling interest in basketball, in improving skills, and trying out for the basketball team. The survey questions can be found in Appendix A. As a coach I had about 6 girls with strong basketball skills and then there was a stark drop off in skill level to the next athletes. The classes at BLHS have a little bit less than 100 total students, so there are about 50 girls in each class.

Part 2a.2 - Needs Analysis Data Report
Basic Basketball Understanding:
44% or 22 of the girls surveyed explained that they already have a basic understanding of basketball. Given that over half of the girls did not even have a basic understanding of basketball and they didn’t express interest in gaining an understand the rest of the data is a representation of the 22 girls who have a basic understanding and that showed interest in trying out for the team.

Current Skill Level:
I took an average of the skill levels between girls who indicated that they had played on a school basketball team before and girls who had not. There is a stark contrast as I observed as a coach that girls who had not played before were lacking in basketball skills compared to those girls who have played on a school team before. The biggest contrast appears in dribbling skills, followed by shooting skills. This data is not surprising given 9th grade girls have a difficult time advancing the ball up the court (dribbling) and scoring (shooting). Therefore, I will focus additional time in the tutorial on those two topics.
Part 2b - Description of the Learning Context:

Part 2b.1 - Learning context
In the survey the learners were split on the tutorial being online or on cd-rom, so I will create the tutorial in a format that can be produced both ways. The instructor will be available via email from home or in person at school. State laws prohibit the instructor from conducting a formal practice, but the instructor can give pointers to individual learners or athletes if the learner approaches the instructor with specific questions. Nearly all contexts are psychomotor and must be presented to be checked off or to be improved.

Part 2b.2 - Transfer context
The learners will be using this tutorial at home, so those learners that do not have internet access at home, but that have a pc at home will still be able to utilize the tutorial. Both ways the students will have access to content presented in visual text and video examples. The learners will be expected to self-assess by practicing the skills presented before attempting to pass off skills to the instructor via video taping themselves performing the skills or presenting skill mastery in person at school.

Part 2c - Description of the Learners
This tutorial requires voluntary participation and allows the learners to improve their basketball skills prior to trying out for the school basketball team. Learners who already have a basic understanding will utilize the tutorial to improve basic basketball skills. The learners are 13-14 year old girls living in a rural, lower-socio economic community who have an interest in the subject matter. Some of the learners participating will not have internet access at home to view the online tutorial, so there will be a second version of the tutorial created for cd-rom to make access to the tutorial equitable to all learners. There is a small “basic understanding” section at the beginning of the online tutorial for learners who need a refresher to bring them up to speed on the terminology in the sections of the tutorial.
Part 3a - Learning Objectives

0.0-Basic understanding of basketball and athletic movement
0.1-Basic comprehension of the rules of basketball
0.2-Basic comprehension of basketball terminology
0.3-Basic comprehension of how basketball is played
0.4-Basic comprehension of athletic position (triple threat)
0.5-Basic comprehension of ball grips
0.6- Basic comprehension of throwing/ catching

1.0-Students will demonstrate proper shooting employing the basketball shooting cues.
   1.1- Grip ball (shooting hand gripping with fingertips in horizontal black ridge, non-
        shooting hand lightly balancing ball on the side)
   1.2- Hold ball at shoulder height (off-centered to shooting hand side)
   1.3.1-Balance: Feet shoulder width apart (athletic position)
   1.3.2-Square shoulders & both feet to face the basket
   1.4-Eyes: Look at the target (back of the rim)
   1.5.1-Determine shooting distance (necessity to jump or not)
   1.5.2- Determine trajectory (bank shot or not)
   1.6-Elbow: Bend elbow to a 90 degree angle
   1.7-Shoot the ball: by pushing ball up and away from body toward the basket
   1.8-Follow Through: Snap wrist (wave goodbye to the ball)
   1.9-Confirm execution

2.0-Students will demonstrate proper dribbling employing the basketball dribbling cues.
   2.1-Balance: athletic position
   2.2-Dribble to the front/side of dribbling hand
   2.3-Non-dribbling hand should be used to protect ball
   2.4.1-Hand position: thumb out and fingers spread
   2.4.2-Ball should be touching finger pads (not palm)
   2.5.1-Dribble in a “yo-yo” motion at waist height
   2.5.2-Push the ball out ahead to dribble while running
   2.6-Confirm execution

3.0-Students will demonstrate proper passing employing the basketball passing cues.
   3.1-Balance: athletic position (triple threat)
   3.2-Grip ball (hands on the sides of the ball with thumbs at the back)
   3.3-Hold ball at level with chest
   3.4-Step toward target (Chest pass: chest of teammate, Bounce Pass: floor about ¾
        distance between passer and receiver)
   3.5-Pass ball: using both hands push ball away from chest
   3.6-Follow Through: thumbs rotate pointing down to the floor, palms facing out
   3.7-Confirm execution

4.0-Students will demonstrate proper defensive footwork employing the basketball footwork cues.
   4.1.1-Balance: athletic position (knees bent slightly more than usual)
   4.1.2-Up on balls of feet, back straight, and head up
4.2-Both hands up to block passes or shots, and limit vision of the offensive player
4.3.1-Imagine triangle between offensive player, ball, and basket
4.3.2-Stay between man and the basket and deny passing lane
4.4-To move slide feet side-to-side (don’t cross feet/legs)
4.5-Confirm execution

Part 3b - Matrix of Objectives, Bloom's Taxonomy, and Assessment Plan

<table>
<thead>
<tr>
<th>Learning Objectives (a)</th>
<th>Taxonomy Classification (b)</th>
<th>Format of Assessment (c)</th>
<th>Description of Test Form (d)</th>
<th>Sample Items (e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>Knowledge/Comprehension</td>
<td>Short Answer</td>
<td>Paper-Pencil</td>
<td>Identify the 3 options from the “triple threat”</td>
</tr>
<tr>
<td>1.0</td>
<td>Application</td>
<td>Performance</td>
<td>*Observation</td>
<td>*Asynchronous video, or live synchronous</td>
</tr>
<tr>
<td>2.0</td>
<td>Application</td>
<td>Performance</td>
<td>*Observation</td>
<td>*Asynchronous video, or live synchronous</td>
</tr>
<tr>
<td>3.0</td>
<td>Application</td>
<td>Performance</td>
<td>*Observation</td>
<td>*Asynchronous video, or live synchronous</td>
</tr>
<tr>
<td>4.0</td>
<td>Application</td>
<td>Performance</td>
<td>*Observation</td>
<td>*Asynchronous video, or live synchronous</td>
</tr>
</tbody>
</table>

*Test will be based on student performance and coach & peer observation.

Part 3c – ARCS Table

**Project Goal Statement:** Upon completion of the tutorial students will be able to perform basic basketball skills including: shooting, dribbling, passing, and defensive technique.

<table>
<thead>
<tr>
<th>ATTENTION</th>
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</thead>
<tbody>
<tr>
<td><strong>A1 Perceptual Arousal</strong></td>
</tr>
<tr>
<td>Introduce the tutorial as a way to study and practice proper basketball technique and skills over the summer when coaching is not permitted.</td>
</tr>
<tr>
<td><strong>A2. Inquiry Arousal</strong></td>
</tr>
<tr>
<td>*Explain to athletes that participating in this tutorial &amp; practicing and mastering the skills they will</td>
</tr>
</tbody>
</table>
be able to increase their chances of making the basketball team in the Fall.

A3. Variability
Remind athletes to utilize the written explanations, terminology, and textbook pages along with the instructional videos throughout the tutorial to get the most out of the learning experience.

RELEVANCE

R1. Goal orientation
*Explain that if athletes have a goal of making the 9th grade girls basketball team, and/or performing well and getting more playing time this tutorial is a great way to meet those goals.

R2. Motive matching
*The same rubrics that are used for rating skills during tryouts will be used for athletes to pass of skills at the end of the tutorial.

R3. Familiarity
Remember to use basketball terminology when explaining the skills that are included in the tutorial, and that the tutorial will be building on the athlete’s prior knowledge of basketball.

CONFIDENCE

C1. Learning requirements
Explain these are skills they should already be familiar with, but with the information in the tutorial, use of supplemental resources, and the practice their skills should and will improve.

C2. Success opportunities
Explain the 4 main skill sets that will be addressed in the tutorials are broken down into 4 categories: shooting, dribbling, passing and defensive technique.

C3. Personal control
At the end of the tutorial and anytime from in September and October the athletes can come present the skills to the instructor and receive feedback for what they are mastering and what can still be improved upon.

SATISFACTION

S1. Natural consequences
*Athletes will experience increased basketball skills by completing this tutorial for lifelong use in recreation along with increasing the change of making the 9th grade basketball team.

S2. Positive consequences
Athletes will have improved basketball skills and they will have an improved understand of the game of basketball.

S3. Equity
The same rubric will be used to grade each athlete on each of the skills to be passed off.

*Completing this tutorial does not guarantee that an athlete will make the 9th grade girls basketball team, nor does it guarantee playing time if the athlete does make the team.

Part 4 – Instructor Guide

Introduction:

1 - Active Attention or Gain Attention
Hold an informal meeting with all 8th grade girls interested in playing girls basketball for the coming school year.

2 - Establish Purpose or Inform Learners of Purpose
Explain to athletes that the purpose for this program is to improve basketball skills before tryouts for 9th grade girls basketball team.

3 - Arouse Interest and Motivation or Stimulate Learners’ Attention/Motivation
By increasing basketball skills athletes will have a better chance of making the team and/or increasing playing time.

4 - Preview the Learning Activity or Provide Overview
Instruction will focus on learners being able to perform basic basketball skills including: shooting, dribbling, passing, and defensive technique.

Body:

1 - Recall relevant prior knowledge or Stimulate recall of prior knowledge
First part of tutorial will ask athletes to recall all prior knowledge about basketball, including: rules, terminology, athletic movement, etc.

2 - Process information and examples or Present information and examples
All examples and information are presented in the tutorial, cues can be found independently in the basketball chapter in Dr. Hilda Fronske’s “Teaching Cues for Sport Skills for Secondary School Students”.

3 - Attention or Gain & Direct Attention
The subjects in the online tutorials are girls basketball player and provides examples of how girls can succeed in basketball.

4 - Employ Learning Strategies or Guide or Prompt Use of Learning Strategies
Students must employ independent learning strategies to practice basketball skills.

5 - Practice or Provide for and Guide Practice
Students will follow tutorial with video examples and cues.

6 - Evaluate Feedback or Provide Feedback
Athletes will get feedback from instructor via face-to-face or video demo and review.

Conclusion:

1 - Summarize and review or Provide summary and review
The athletes can utilize the tutorial to review as much as is needed.

2 - Transfer learning or Enhance transfer
Athletes can enhance transfer by asking for specific pointers from the Instructor via email, video submission, or face-to-face inquiry.

3 - Remotivate and Close or Provide Remediation and Closure
At the end of the tutorial and anytime from in September and October the athletes can come present the skills to the instructor and receive feedback for what they are mastering and what can still be improved upon.

4 - Assess Learning or Conduct Assessment Evaluate
Instructor will provide feedback using the same rubric that is used during tryouts.

5 - Feedback and Seek Remediation or Provide Feedback and Remediation
Remediation can continue until tryouts on a one-on-one basis.
Part 5 - Learner Content

Part 5a – Learning Materials
Learners will proceed through each of the 5 sections of the online tutorial: Intro, Shooting, Dribbling, Passing & Defense. The online tutorial is designed for learners to proceed in the order listed in the above sentence. However learners have the option to move freely through the sections, and even repeat any section for better comprehension as needed.

*Intro: http://edtech2.boisestate.edu/travisthurston/502/basketball/
  -Learner Description
  -Introduction of Basic Understanding
  *Terminology, Rules, Positions, Triple Threat

*Shooting: http://edtech2.boisestate.edu/travisthurston/502/basketball/shoot.html
  -Introduction to Shooting
  -Set Shot & Jump Shot Cues
  -Foul Shot Cues
  -Layup Cues
  -Shooting Cues & Drill Videos (and Layups Cues & Drill Videos)

*Dribbling: http://edtech2.boisestate.edu/travisthurston/502/basketball/dribble.html
  -Introduction to Dribbling
  -Dribbling Cues
  -Dribbling Cues & Drill Videos

*Passing: http://edtech2.boisestate.edu/travisthurston/502/basketball/pass.html
  -Introduction to Passing
Part 5b – Formative/Summative Assessment Materials
The Skill Observation Rubric that will be used for the formative assessments is performance based and will require the learner to perform the skills that are outlined in the online tutorial. The learner can request a formative observation at any time throughout the use of the online tutorial. The observation can be done for all sections or for as few as one section at a time. The observation can be done synchronously or asynchronously by recording a video of the learner performing a skill.

This same Skill Observation Rubric will be used as the summative assessment at the end of the online tutorial, and will also be utilized as formative skill assessment at tryouts for the 9th grade girls basketball team. This allows the learner to know what is expected. Each skill is graded on a 5 point scale and the comment section allows the observer to provide helpful feedback. The rubric corresponds directly with the learning objectives.


Part 5c – Technology Tool Justification
*Computers – Computers will be utilized in this project for delivery of the tutorial both in the online version and in the cd-rom version, because every learner will have access to a computer to engage in the learning process.
*Digital Images – Digital images will be utilized for visual learners to see examples of the cues being performed. They will be placed in the text as supporting evidence.
*YouTube Videos – Videos go even a step further past digital images to provide a moving simulation of the skills, drills, and other helpful cues for the learners to use in the learning process.
Part 6 - Formative Evaluation Plan

Part 6a – Expert Review
The Subject Matter Expert for this project is Von Saxton who has 20 years of coaching experience including coaching both girls and boys basketball at the middle school and high school levels. He retired from coaching at the end of last season.

Part 6b – One to One Evaluation
For the One-to-One evaluation I will have two 9th grade female students and 1 PE teacher review the project and view the website interface and layout. Among other items I will be asking them how the online tutorial interface can be improve, and how the instructions can be altered to be more understandable.

Part 6c – Small Group
For the Small Group evaluation I will use 10 former basketball athletes who are now in 10th grade. They should be able to move through the project fairly quickly, but these ladies will be able to give valuable feedback as they were just recently in the target age group. Among other questions I will be asking the Small Group which section they thought was the best and which section they disliked. Additionally, I want to know if they think the chapter on basketball from Dr. Fronske’s book was helpful.

Part 6d – Field Trial
For the Field Trial I will have the current coach at Bear Lake High School have her Freshman Girls complete the project. They should be able to complete the project within a day or two as part of their practice for the upcoming season. This is a perfect field trial as freshman girls interested in basketball are the target learners.
Part 7a – Expert Evaluation Survey
1 – How can the project description be improved?
2 – How could the website interface be improved?
3 – How could the instructions be changed to be more understandable?
4 – Which part is most needed for a 9th grade girl to improve her basketball skills?
5 – Which sections seem confusing?
6 – How effective are the video samples?
7 – Were the external links to additional material helpful?
8 – Was the chapter from Dr. Fronske’s book helpful?
9 – What was the best part of the project?
10 - What did you like about the project?
11 - What did you dislike about the project?
12 - What suggestions do you have to improve the project?
13 - Are they any other skills or concepts that should be included into the project?
14 – What terminology or skill cues need to be altered?
15 – What would make the project better?
16 – What potential problems do you see with athletes completing this project?

Part 7b – Results of Expert Review
The survey was designed to provide open ended questions to get more feedback than may have otherwise been received. There was a helpful amount of feedback given to review. First, the project description and website interface were clear and easy to follow. Secondly, an item that came up several times throughout the questions was that it needs to be laid out clearly that by engaging in the online tutorial girls will not automatically be selected to make the 9th grade team. The verbiage should read that by improving your basketball skills in any way learners will have a better chance of making the team, and this online tutorial will only be helpful if the learner engages in practicing the skills and drills. Learners must commit time and effort to improve their skills, not just read the pages and watch the videos. The two best parts of the project were the images that were matched to the cues for visualization, and the YouTube with videos to show examples of skills being performed by girls and useful drills. The project could be improved by including links to the video in the cues text, or even embedding the videos in with the text. The Expert Review Survey can be found in Appendix B on page 19.

Part 7c – Comments on Change
I tried altering the tutorial to have the embedded video in line with the text cues, but everything seemed to be too cluttered. I tried instead to simply place links to the video in the text. What I ended up changing was placing all of the videos in their own section at the bottom of each page. This allowed me to provide an intro and/or explanation of each video. I also included verbiage about the importance of practicing and working hard to build the skills needed.
### Part 8 - AECT Standards Grid

**Professional Standards Addressed (AECT)**

The following standards, developed by the Association for Educational Communications and Technology (AECT), and used in the accreditation process established by the National Council for Accreditation of Teacher Education (NCATE), are addressed to some degree in this course. The numbers of the standards correspond to the numbers next to the course tasks show on the list of assignments. Not all standards are addressed explicitly through student work.

Assignments meeting standard in whole or part

<table>
<thead>
<tr>
<th>Standard 1: DESIGN</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>1.1 Instructional Systems Design (ISD)</td>
<td>ID Project</td>
</tr>
<tr>
<td>1.1.1 Analyzing</td>
<td>ID Project</td>
</tr>
<tr>
<td>1.1.2 Designing</td>
<td>ID Project</td>
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<tr>
<td>1.1.3 Developing</td>
<td>ID Project</td>
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<tr>
<td>1.1.4 Implementing</td>
<td>ID Project</td>
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<tr>
<td>1.1.5 Evaluating</td>
<td>Selected Discussion Forums; ID Project</td>
</tr>
<tr>
<td>1.2 Message Design</td>
<td></td>
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<tr>
<td>1.3 Instructional Strategies</td>
<td>ID Project</td>
</tr>
<tr>
<td>1.4 Learner Characteristics</td>
<td>ID Project</td>
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</table>

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<thead>
<tr>
<th>Standard 2: DEVELOPMENT</th>
<th>Assignments</th>
</tr>
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<tbody>
<tr>
<td>2.0 (includes 2.0.1 to 2.0.8)</td>
<td>ID Project</td>
</tr>
<tr>
<td>2.1 Print Technologies</td>
<td>Reading Quiz; ID Projects</td>
</tr>
<tr>
<td>2.2 Audiovisual Technologies</td>
<td></td>
</tr>
<tr>
<td>2.3 Computer-Based Technologies</td>
<td>(all assignments)</td>
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<tr>
<td>2.4 Integrated Technologies</td>
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<thead>
<tr>
<th>Standard 3: UTILIZATION</th>
<th>Assignments</th>
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</thead>
<tbody>
<tr>
<td>3.0 (includes 3.0.1 &amp; 3.0.2)</td>
<td></td>
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<tr>
<td>3.1 Media Utilization</td>
<td>(all assignments)</td>
</tr>
<tr>
<td>3.2 Diffusion of Innovations</td>
<td></td>
</tr>
<tr>
<td>3.3 Implementation and Institutionalization</td>
<td></td>
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<tr>
<td>3.4 Policies and Regulations</td>
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<table>
<thead>
<tr>
<th>Standard 4: MANAGEMENT</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0 (includes 4.0.1 &amp; 4.0.3)</td>
<td></td>
</tr>
<tr>
<td>4.1 Project Management</td>
<td></td>
</tr>
<tr>
<td>4.2 Resource Management</td>
<td></td>
</tr>
<tr>
<td>4.3 Delivery System Management</td>
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<tr>
<td>4.4 Information Management</td>
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<table>
<thead>
<tr>
<th>Standard 5: EVALUATION</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Problem Analysis</td>
<td></td>
</tr>
<tr>
<td>5.2 Criterion-Referenced Measurement</td>
<td>ID Project</td>
</tr>
<tr>
<td>5.3 Formative and Summative Evaluation</td>
<td>ID Project</td>
</tr>
</tbody>
</table>
**5.4 Long-Range Planning**

**Course Goals and Objectives**
The overall goal for the course is for each student to consider and use the systematic process of instructional design to create an instructional product. To achieve this goal, students will engage in activities that promote reflective practice, emphasize realistic contexts, and employ a number of communications technologies. Following the course, students will be able to:

1. Discuss the historical development of the practice of instructional design with regard to factors that led to its development and the rationale for its use
2. Describe at least two reasons why instructional design models are useful
3. Identify at least six instructional design models and classify them according to their use
4. Compare and contrast the major elements of three theories of learning as they relate to instructional design
5. Define “instructional design.”
6. Define the word “systematic” as it relates to instructional design
7. Define “learning” and synthesize its definition with the practice of instructional design
8. Relate the design of instruction to the term “educational (or “instructional”) technology”
9. Describe the major components of the instructional design process and the functions of models in the design process
10. Provide a succinct summary of various learning contexts (declarative knowledge, conceptual, declarative, principle, problem-solving, cognitive, attitudinal, and psychomotor)
11. Build an instructional design product that integrates major aspects of the systematic process and make this available on the web.
   a. Describe the rationale for and processes associated with needs, learner, context, goal, and task analyses
      i. Create and conduct various aspects of a front-end analysis
      ii. Identify methods and materials for communicating subject matter that are contextually relevant
   b. Describe the rationale for and processes associated with creating design documents (objectives, motivation, etc.)
      i. Construct clear instructional goals and objectives
      ii. Develop a motivational design for a specific instructional task
      iii. Develop assessments that accurately measure performance objectives
   c. Select and implement instructional strategies for selected learning tasks
      i. Select appropriate media tools that support instructional design decisions
d. Describe the rationale and processes associated with the formative evaluation of instructional products

i. Create a plan for formative evaluation

12. Identify and use technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
13. Apply state and national content standards to the development of instructional products
14. Meet selected professional standards developed by the Association for Educational Communications and Technology
15. Use various technological tools for instructional and professional communication

AECT Standards (Applicable to EDTECH 503)

1.0 Design

1.1 Instructional Systems Design

1.1.a Utilize and implement design principles which specify optimal conditions for learning.
1.1.b Identify a variety of instructional systems design models and apply at least one model.

1.1.1 Analyzing

1.1.1.a Write appropriate objectives for specific content and outcome levels.
1.1.1.b Analyze instructional tasks, content, and context.

1.1.2 Designing

1.1.2.a Create a plan for a topic of a content area (e.g., a thematic unit, a text chapter, an interdisciplinary unit) to demonstrate application of the principles of macro-level design.
1.1.2.b Create instructional plans (micro-level design) that address the needs of all learners, including appropriate accommodations for learners with special needs.
1.1.2.d Incorporate contemporary instructional technology processes in the development of interactive lessons that promote student learning.

1.1.3 Developing

1.1.3.a Produce instructional materials which require the use of multiple media (e.g., computers, video, projection).
1.1.3.b Demonstrate personal skill development with at least one: computer authoring application, video tool, or electronic communication application.

1.1.4 Implementing

1.1.4.a Use instructional plans and materials which they have produced in contextualized instructional settings (e.g., practica, field experiences, training) that address the needs of all learners, including appropriate accommodations for learners with special needs.

1.1.5 Evaluating

1.1.5.a Utilize a variety of assessment measures to determine the adequacy of learning and instruction.
1.1.5.b Demonstrate the use of formative and summative evaluation within practice and contextualized field experiences.

1.1.5.c Demonstrate congruency among goals/objectives, instructional strategies, and assessment measures.

1.3 Instructional Strategies

1.3.a Select instructional strategies appropriate for a variety of learner characteristics and learning situations.

1.3.b Identify at least one instructional model and demonstrate appropriate contextualized application within practice and field experiences.

1.3.c Analyze their selection of instructional strategies and/or models as influenced by the learning situation, nature of the specific content, and type of learner objective.

1.3.d Select motivational strategies appropriate for the target learners, task, and learning situation.

1.4 Learner Characteristics

1.4.a Identify a broad range of observed and hypothetical learner characteristics for their particular area(s) of preparation.

1.4.b Describe and/or document specific learner characteristics which influence the selection of instructional strategies.

1.4.c Describe and/or document specific learner characteristics which influence the implementation of instructional strategies.

2.0 Development

2.0.1 Select appropriate media to produce effective learning environments using technology resources.

2.0.2 Use appropriate analog and digital productivity tools to develop instructional and professional products.

2.0.3 Apply instructional design principles to select appropriate technological tools for the development of instructional and professional products.

2.0.4 Apply appropriate learning and psychological theories to the selection of appropriate technological tools and to the development of instructional and professional products.

2.0.5 Apply appropriate evaluation strategies and techniques for assessing effectiveness of instructional and professional products.

2.0.6 Use the results of evaluation methods and techniques to revise and update instructional and professional products.

2.0.7 Contribute to a professional portfolio by developing and selecting a variety of productions for inclusion in the portfolio.

2.1 Print Technologies

2.1.3 Use presentation application software to produce presentations and supplementary materials for instructional and professional purposes.
2.1.4 Produce instructional and professional products using various aspects of integrated application programs.

2.3 Computer-Based Technologies

2.3.2 Design, produce, and use digital information with computer-based technologies.

3.0 Utilization

3.1 Media Utilization

3.1.1 Identify key factors in selecting and using technologies appropriate for learning situations specified in the instructional design process.

3.1.2 Use educational communications and instructional technology (SMETS) resources in a variety of learning contexts.

3.3 Implementation and Institutionalization

3.3.1 Use appropriate instructional materials and strategies in various learning contexts.

3.3.2 Identify and apply techniques for integrating SMETS innovations in various learning contexts.

3.3.3 Identify strategies to maintain use after initial adoption.

4.0 Management

(none specifically addressed in 503)

5.0 Evaluation

5.1 Problem Analysis

5.1.1 Identify and apply problem analysis skills in appropriate school media and educational technology (SMET) contexts (e.g., conduct needs assessments, identify and define problems, identify constraints, identify resources, define learner characteristics, define goals and objectives in instructional systems design, media development and utilization, program management, and evaluation).

5.2 Criterion-referenced Measurement

5.2.1 Develop and apply criterion-referenced measures in a variety of SMET contexts.

5.3 Formative and Summative Evaluation

5.3.1 Develop and apply formative and summative evaluation strategies in a variety of SMET contexts.

SMET = School Media & Educational Technologies
Appendix A: Needs Assessment Survey Questions

1. Rate your understanding of basketball including:
   a. rules, b. terminology, c. game play, d. triple threat, e. throwing, and f. catching
   on a scale of 1-10, 10 being outstanding, 1 being no understanding.

2. Have you played on a school basketball team before? Yes or No

3. If you are interested in improving your basketball skills why do you want to do so?
   a. for recreation b. to tryout for the team c. not interested

4. Rate your current basketball skills on a scale of 1-10, 10 being the best.
   a. Shooting
   b. Dribbling
   c. Passing
   d. Defensive Technique

5. If you had an online tutorial or tutorial on cd-rom with tips, videos, etc. how
   significantly would your basketball skills improve on a scale of 1-10, 10 being
   “outstanding” and 1 being “no change”??

6. If you were able to significantly improve your basketball skills would you be more likely
   to tryout for the school basketball team? Yes or No

Appendix B: Expert Review Survey

1 – How can the project description be improved? Looks thorough and clear, easy to
understand. Perhaps add that girls won’t make team automatically by doing the tutorial.

2 – How could the website interface be improved? I like the layout, easy to follow

3 – How could the instructions be changed to be more understandable? Cues flow smoothly

4 – Which part is most needed for a 9th grade girl to improve her basketball skills?
   SHOOTING!

5 – Which sections seem confusing? none

6 – How effective are the video samples? The video samples are great, maybe move them inline
with text or have links to the videos in the text with the cues.

7 – Were the external links to additional material helpful? Yes, especially in the intro section

8 – Was the chapter from Dr. Fronske’s book helpful? It’s interesting to look through the book
and see how you used her cues, but also switched it up a bit and added your own too.

9 – What was the best part of the project? Having the instructional videos and pictures.

10 - What did you like about the project? I like that you have cues, pics, and video along with
your own insight into what coaches are looking for.

11 - What did you dislike about the project? Shooting page is a bit too long, but needed since you
are trying to focus attention there.

12 - What suggestions do you have to improve the project? Won’t automatically make team and
make sure they know they need to practice.

13 - Are they any other skills or concepts that should be included into the project? Defense
Should include “blocking out”.

14 – What terminology or skill cues need to be altered? None, terminology is well used

15 – What would make the project better? Include more videos

16 – What potential problems do you see with athletes completing this project? Actually
practicing and improving their skills. It takes a lot of time and commitment.