IT 570 Interim design document #2

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Introduction

Introduction – The introduction includes information on the background of the project, a statement of the need for the instruction and the intent of the instruction (what will it accomplish for the target learner?), and the assumptions about learning upon which you are basing your design. Also includes the overall instructional goal for the project and any sub-goals for your teams' portion of the project. All statements are substantiated with quotes from the needs or learner analyses or from the literature.

In a blended learning environment, students will learn how to solve real-life and mathematical problems involving angle measure, area, surface area, and volume. In order to reach that goal, students will meet a series of competencies, or objectives. Students will be able to

- Name polygons
- Find perimeter, circumference, and area of polygons
- Identify solid figures in 3D
- Find surface area and volume of solids

Students will demonstrate mastery of these competencies, or objectives, by completing synchronous and asynchronous activities.

The Knox County Schools curriculum and instruction department have set forth the curriculum framework for Geometry teachers and students. The basis of the need for my proposed unit of instruction is that the goal and competencies/objectives outlined above will be tested on the county's end-of-course exam. Students' grade on the exam will be worth 25 percent of their final grade.

Students will be able to solve real-life and mathematical problems involving angle measure, area, surface area, and volume. Goal mastery will be demonstrated via a series of tasks as well as a culminating project. Ultimate mastery of the goal and its competencies/objectives will be demonstrated on the Knox County end-of-course exam taken at the end of the students' senior year of high school.

Learner Analysis

Learner Analysis – Identifies the target learner and how that learner was identified, whether all learners are assumed to be similar or if there is any diversity in the learner population, the prior knowledge and experience of the learner with respect to the topic of the instruction, and the applicable learner characteristics and needs. Summarizes and substantiates conclusions based on learner analysis data.

The target audience for my project are special education high school juniors with disabilities such as specific learning disabilities in reading comprehension, written expression, and math, autism, functional delays, and emotional disabilities. In addition, special education high school seniors who failed junior year Geometry A may also be included in the target audience. It's important to note that special education students meet the graduation requirement of four years of math by taking Algebra I over the course of their freshman and sophomore years and Geometry over the course of their junior and senior years. This means special education students are able to spend about four times the amount of time that regular education students spend on the each subject. Also, the targeted students have an Individual Education Program (IEP) written especially for them which includes accommodations in the classroom and on the end-of-course exam. Common accommodations include extra time for assignments and tests, small group setting, oral and written directions, use of calculator, and abbreviated assignments. Students will have access to their own MacBook Pros beginning the first week of October.

Performance, Learning, Theoretical & Cultural Contexts

Performance, Learning, Theoretical & Cultural Contexts – Describes the performance context where the learner will use the knowledge and skills s/he gains through this instruction, and the learning context where the learning will take place (whether face-to-face, blended or virtual). Describes the alignment between the performance and learning contexts and how it is anticipated that this will affect the instruction. Addresses whether the learning context is compatible with learner needs and characteristics. Identifies the theoretical basis and assumptions about learning that form the basis of your design, and addresses the societal and/or organizational cultures that will provide a context for your instruction.

Content Analysis

Content Analysis – Provides a paragraph or two that addresses how the content was determined, verified, prioritized and sequenced. Includes a flow diagram or concept map that clearly illustrates the terminal outcome or objective, the supporting objectives and knowledge, the prerequisites, and the relationships between those elements. Uses either numbering or some other means to illustrate the sequencing of the instruction.

Aligned Outcomes, Assessments & Strategies

Aligned Outcomes, Assessments & Strategies – Provides a detailed, three-column table listing all learning outcomes (left column) aligned with the assessments for each outcome (middle column) and the instructional strategies (right column) designed to enable the student to master the assessment. All outcomes are identified by type of learning outcome, and, preferably, numbered.

Theoretical Assumptions