SPED 400/500

Creative Thinking and Problem Solving – Western Carolina University

Summer, 2022

INSTRUCTOR

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Virtual office hours by appointment

The teacher must keep alive The spark of wonder

To prevent it from becoming Blasé from over-excitement, Wooden from routine, Fossilized through dogmatic Instruction, or dissipated Through random exercise Upon trivial things. (John Dewey, 1938)

REQUIRED TEXTBOOKS

Rigorous PBL by Design. By Michael McDowell

COURSE DESCRIPTION

This course explores the nature of creativity and creative thinking and problem solving in the teaching and learning process. The emphasis is on problem-based and project-based learning (PBL).

CONCEPTUAL FRAMEWORK

The professional education program at Western Carolina University is to prepare highly effective and ethical graduates that are **inspired** to be lifelong learners, **engaged** in the community, and **empowered** to become leaders who strive to **transform** the future.

This course incorporates *all* of the basic components of the conceptual framework. The goals of the course include the following: 1) to develop a learning community where caring relationships provide meaning and purpose to learning and lifelong learning is valued, 2) to engage community children in the application of creative strategies that will develop their diverse competencies and talents, 3) to become leaders in their schools and communities in initiating creative teaching and learning.

DIVERSITY STATEMENT

Diversity in our society and schools is an important part of our history and a significant variable in discussions regarding the aims and purposes of education and schooling. The content of this course reflects a commitment to social justice and an emphasis on the necessity of preparing educators who will effectively meet the individual needs of ALL students. As such, issues related to race, gender, religion, sexual orientation and social class will be considered in this class. Students in this class teach in Jamaican schools. Jamaica is a diverse nation (the motto: "Out of many, one people" exemplifies a commitment to and respect for our varied backgrounds, beliefs and values).

ADA AND SECTION 504 PROVISIONS

Western Carolina University makes every effort to provide reasonable accommodations for students with documented disabilities in compliance with the Americans with Disabilities Act. To receive academic accommodations, students must be registered with the Office of Disability Services at 828- 227-7234. The letter received from Disability Services should be presented as documentation to the instructors as early in the course as possible.

TUTORING FOR DISTANCE STUDENTS

For distance students, tutoring support is available through Brainfuse HelpNow: https://www.wcu.edu/apply/distance-online-programs/current-students/tutoring-support.aspx

ACADEMIC INTEGRITY POLICY

WCU has an academic honesty policy that is enforced in this course. That policy is copied below from the university catalog. The procedure for handling cases of allegations of academic dishonesty are in the university catalog immediately after the statement of the policy.

Students, faculty, staff, and administrators of Western Carolina University (WCU) strive to achieve the highest standards of scholarship and integrity. Any violation of the Academic Integrity Policy is a serious offense because it threatens the quality of scholarship and

undermines the integrity of the community. While academic in scope, any violation of this policy is by nature, a violation of the Code of Student Conduct and will follow the same conduct process (see ArticleVII.B.1.a.). If the charge occurs close to the end of an academic semester or term or in the event of the reasonable need of either party for additional time to gather information timelines may be extended at the discretion of the Department of Student Community Ethics (DSCE).

Violations of the Academic Integrity Policy include:

Cheating - Using or attempting to use unauthorized materials, information, or study aids in any academic exercise.

Fabrication - Creating and/or falsifying information or citation in any academic exercise.

Plagiarism - Representing the words or ideas of someone else as one's own in any academic exercise.

Facilitation - Helping or attempting to help someone to commit a violation of the Academic Integrity Policy in any academic exercise (e.g. allowing another to copy information during an examination.

Please note that Faculty members have the right to determine the appropriate sanction(s) for violations of the Academic Integrity Policy within their courses, up to and including a final grade of "F" in the course. Further details regarding the Academic Integrity and the reporting process can be found via the link below:

http://www.wcu.edu/experience/dean-of-students/academic-integrity.aspx

COURSE DESIGN

The activities in the course are based on the STAR.Legacy template, which is based on the "How People Learn" framework (Bransford, Brown, & Cocking, 1999). *How People Learn: Brain, Mind, Experience, and School* is the result of a 2-year study which evaluated the research on the science of learning. The study can be accessed at www.nap.edu/html/howpeople1/notice.html .The STAR.Legacy consists of six phases of the learning cycle as described by Brophy (2000)

in *Guidelines for Modular Design*http://vanth.org/white_papers.html.

1. **The Challenge**--A statement that poses a complex goal. It is designed to integrate the fundamental concepts of the course that students must come to understand in order to solve the

2. **Generate Ideas**--Students record initial thoughts about the challenge. This provides an opportunity for students to demonstrate what they know about the It can serve as a pre-assessment and can be used to document growth in learning.
3. **Multiple Perspectives**--Writings or statements by "experts" that provide important insights on the challenge without providing a solution. Students can compare their initial thoughts with those of the
4. **Research and Revise**--Learning activities that focus on the important dimensions of the challenge. They can include readings, lab, homework problems, and they help students make links to the original challenge.
5. **Test your Mettle**--Activities that provide students with an opportunity to apply what they know and evaluate what they need to learn yet in order to solve the problem. Activities can include homework questions, quizzes, or essays in which they can synthesize what they learned in Research and Revise.
6. **Go Public**--This is the final product showing what students know at the end of the module. It can be a test, presentation, essay,

CONTENT MODULES

The course is composed of 5 modules plus introductory and culminating modules. The length of time to complete each module will vary depending on the topic and assignments.

Module	Essential Questions	Objectives	Related Activities
Introductory Module	How do we build community in an online environment?	• Understand the expectations of the course. • Introduce yourself to your classmates. • Communicate with your instructor and colleagues.	• Read introductory documents • Post a question on Muddiest Point. • Email instructors. • Complete the survey • Post a personal profile • Meet your classmates.
Module 1		• Define creativity. • Recognize and describe the characteristics of creativity.	• Post your initial thoughts on creativity.

	What are critical thinking and creativity?		• Read about creativity and creative persons.
			• Complete Module activities as described within the module.
			• Reflect on ways to enhance creativity in the classroom.
Module 2	How do we encourage critical thinking and creativity in our students?	• Describe and implement ways to foster creative attitudes.	• Complete SCAMPER activity
		• Apply strategies for promoting creativity.	• Complete Module activities as described within the module.
Module 3	How do we promote creative and critical thinking	• Develop an environment conducive to creative and critical thinking	• Complete Module activities as described within the module.
		• Know the characteristics of problem-based and project-based learning.	
		• Describe the difference between problem-based and project-based learning.	• Post your initial thoughts on PBL.
		• Be familiar and discuss the research on PBL.	• Read documents on problem-based and project-based learning.
Module 4	What is PBL and why should we use it?	• Create the structure, climate, and physical environment that support PBL.	• Construct a KWH (What you know, What you want to know, and How you will learn it) on PBL.
		• Reflect on using PBL with diverse learners.	• Complete Module activities as described within the module.
		• Develop ways to nurture learning communities and team building.	• Post your initial thoughts on community, collaboration, student strengths & interests, and critical thinking skills.
Module 5	How do we implement PBL?	• Collaborate with colleagues in the teaching and learning process.	• Read and reflect on a series of articles on implementing PBL.

		• Develop the interests and strengths of students.	• Develop an implementation plan for PBL with your own students.
		• Facilitate the development of research skills.	• Complete Module activities as described within the module.
		• Develop strategies to promote critical thinking skills.	
		• Develop a plan to implement PBL	
Module 6	How do we evaluate PBL?	• Develop methods for formative and summative evaluation.	• Read and reflect on a series of articles on assessing PBL.
			• Develop a rubric
		• Serve as a link in your community for resources for creative activities.	• Complete Module activities as described within the module.
			• Complete all required activities.
Culminating Module	Have I completed the end of course evaluation?	• Wrap up and say good-bye.	• Complete end of course evaluation
			• Complete Module activities as described within the module.

COURSE COMPETENCIES

The standards and indicators of the add-on license in Academically or Intellectually Gifted (AIG) are aligned with competencies outlined by the Council for Exceptional Children (CEC), The Interstate New Teacher Assessment and Support Consortium (INTASC) and the National Board for Professional Teaching Standards (NBPTS). Upon successful completion of SPED 500, students will be able to:

- recognize the characteristics of creativity in children;
- apply strategies for promoting creativity in the classroom;
- involve students in creative activity;

- foster creative attitudes;
- use strategies to promote critical thinking skills;
- recognize and develop the interests and strengths of students;
- facilitate the development of research skills;
- know the characteristics of problem-based and project-based learning;
- be reflective about using PBL with diverse students;
- understand and use research-supported strategies for PBL;
- develop the metacognitive skills of students by using complex questions, reflection and self- evaluation;
- develop methods for formative and summative evaluation;
- collaborate with colleagues in the teaching and learning process;
- nurture learning-support communities for students;
- serve as a link for resources to encourage creativity beyond the school (out-of-school activities, summer programs, creative competitions).

JAMAICA RELEVANCY

Primary Exit Profile (PEP) mandated by the Ministry of Education was designed to increase Jamaican students' academic and critical thinking, and creativity. Readings specific to Jamaican classroom and creative and critical thinking are included as course readings. Students will also design lessons and activities for promoting creative and critical thinking.

Course readings including those specifically related to Jamaica education will be posted on Canvas.

Critical thinking is a STUDENT RESPONSIBILITY

- You will be teamed with a fellow student to facilitate creative thinking and problem-solving strategies with other teachers during the week of field experience (June 29- July 2).
- You are expected to fully participate the week of field experience. Daily schedule will be posted soon.
- Timely participation on Canvas assignments is critical.
- You must adhere to academic honesty in your work. If plagiarism is evident, you will receive no credit for the assignment and may receive a failing grade for the
- Any person with a documented disability requiring accommodations to complete course requirements should make an appointment with one of the instructors as soon as
- Students taking the course for graduate credit will have additional research-based assignments. Higher standards will be applied to their work, especially in the quality of their participation.

MAJOR COURSE REQUIREMENTS/ACTIVITIES

Class Participation
You are expected to log on to Canvas a minimum of 4 times a week and actively participate in all activities

Activities and Discussion Postings on Canvas
There are reading assignments, activities, and postings in each module that you will be required to do on Canvas.

Problem-Based or Project-Based Learning Unit Plan
You will design a unit plan for PBL learning based on a real or hypothetical classroom or group of students. Your plan should include the following information:

- **Student Population (real or hypothetical)**. Include the grade level, learner characteristics,
- **Rationale for PBL Choice.** Describe your rationale for choosing that particular topic for PBL with your student population.
- **Scope and Sequence.** Make a statement of how your PBL plan fits into the larger scope and sequence. Look at the new Common Core State Standards (CCSS) for the grade level you have chosen. PBL is interdisciplinary so check out the CCSS for all disciplines at that grade level.
- **Pre-Assessment of Student** Describes how you will pre-assess students' interest, including examples of interest inventories, surveys, etc.
- **Design and Management** Design a plan and outline steps you and your students will take in formulating a management plan.
- Describe the resources you and your students will use in the implementation of the plan. Include a list of websites that your students can use to do research online.
- Describe procedures you will use to evaluate students' learning, including ongoing or formative assessment and summative assessment. Include examples of rubrics, checklists, etc.
- Describe the audience or outlet for project or problem.
- List all of your references in APA style, including books, videos, websites, and journal articles.

An analytic rubric is posted in the Rubrics folder on Course Content that will be used for scoring the PBL implementation project.

Instead of assigning point values, I give you the weight of each assignment on a scale of 1-4 with 4 being the highest weighted assignment. My hope is that we chase learning rather than points.

EVALUATION AND GRADING

Activities	weight
Readings, Activities, and Discussion Postings	3
Initial activities	2
Initial thoughts for each module	2
Personal Profile	2
PBL UNIT PLAN	3
Sharing of PBL UNIT PLAN	2
Scamper	3
Other miscellaneous module activities/module participation	3

Institutional Policies

Academic and Campus Resources

COURSE EVALUATIONS
At the end of the course a link will be provided in Canvas for you to access and evaluate the instruction of this course.