**ELED 573:**
*Math and Technology Assessment and Intervention*

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Office</th>
<th>Phone</th>
<th>Email</th>
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</thead>
<tbody>
<tr>
<td>Dr. Janet Tassell</td>
<td>Tate Page Hall – 314 Off.</td>
<td>270-745-5306</td>
<td><a href="mailto:Janet.tassell@wku.edu">Janet.tassell@wku.edu</a></td>
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<tr>
<td></td>
<td>Office Hours:</td>
<td>Fax: 270-745-6322</td>
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<td></td>
<td>MW 9:00-10:00 a.m.; 12:45-2:45 p.m. F 8:00 a.m.-12:00 p.m. – online</td>
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<tr>
<td>Dr. Marge Maxwell</td>
<td>Tate Page Hall – 365 Off.</td>
<td>270-745-2435</td>
<td><a href="mailto:marge.maxwell@wku.edu">marge.maxwell@wku.edu</a></td>
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<tr>
<td></td>
<td>Office Hours:</td>
<td>Fax: 270-745-6435</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9:00am-3:00pm T, Th (CST)</td>
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**Address:**
Western Kentucky University
1906 College Heights Blvd. #61030
Bowling Green, KY 42101-1030

**Prerequisite:**
Participant in Toyota MTLA

**Primary Course Website:** [http://ecourses.wku.edu](http://ecourses.wku.edu)

**Required Texts:**

**Required Special Instructional Materials Needed:**
**Required Hardware, Software, and File Formats:**
- **Hardware:**
  - PC/Windows-based computer with Internet Access
  - Web camera and microphone
- **Software:**
  - Microsoft Office Pro 2007 for Windows (Word, Excel, Access, PowerPoint), web browser
- **File Format:**
  - You must save MS Word files in the 1997-2003 format. In other words, save Word files as .doc (not .docx or .rtf).

**Media:**
USB Drive (flash drive) highly recommended. Since many students work on more than one computer, a flash drive makes it more convenient to transport files you are working on.

**Course Description:**
Focuses on increasing elementary teachers’ knowledge, planning, and implementation of mathematics and technology assessment and intervention techniques for specific learners.

**Course Objectives:**
1. Graduate students will maintain an online journal and participate in discussion forums reflecting thought-provoking, insightful comments on various topics during the course scoring 3 or higher on the rubric.
2. Graduate students will critique and offer insightful interpretations in a group book study scoring 3 or higher on the rubric.
3. Graduate students will create a multimedia project for assessment and intervention of students in mathematics and present the project at a course seminar scoring 3 or higher on the rubric.
4. Graduate students will create two original technology products designed to work with assessment and intervention of students given appropriate software and tools scoring 3 or higher on the rubric.
5. Graduate students will design an intervention plan for a classroom of students, including a variety of formative assessments.
6. Graduate students will create a Leadership Growth Plan for Assessment and Intervention.

**Instructional Methods:**
Demonstrations, discussions, reading assignments, written assignments, technology demonstrations, use of computer software and productivity tools, tutorials, informational videos, field experience

Course Topics:
Elementary Math topics: Today's Mathematics, The Development of Children's Mathematical Thinking, What Are We Asking Teachers to Do? and Implications for Our Own Work in Mathematics Education. Educational Technology: Overview of current technology systems and applications in education; Issues in educational technology; Productivity tools: definitions, characteristics, issues, assessment, integration strategies, lesson activities; Integrating the Internet into Education; Locating Internet resources for educational and instructional applications; personal leadership styles; leadership impact in schools.

Course Disposition Statements: (Disposition means natural tendency, emotional constitution of the mind, inclination, or propensity.)

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Description of Target Level 5</th>
<th>Level 2</th>
<th>Description of Target Level 5</th>
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</thead>
<tbody>
<tr>
<td>a. Values learning: Attendance</td>
<td>Consistently attends class and is on time. Usually notifies instructor in advance and arranges to meet instructor following a missed class. Usually gives reason for planned absence.</td>
<td>g. Values diversity</td>
<td>Willingly works with others from different ability, race, gender, or ethnic groups. Welcomes feedback and interaction with others. Listens carefully to others and respects the views of those perceived as different from self.</td>
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<tr>
<td>b. Values learning: Class participation</td>
<td>Actively engaged and interested in the class activities. Volunteers to respond to questions. Participates in discussions.</td>
<td>h. Values collaboration</td>
<td>Actively seeks out and incorporates ideas of others. Willingly works with others to improve the overall environment. Regularly shares information and ideas.</td>
</tr>
<tr>
<td>c. Values learning: Class preparation</td>
<td>Work is completed with attention to detail, is sequential, and is logical. Shows evidence of thoughtful analysis of the assignment. Work shows that adequate time and planning were allocated. Consistently comes to class well prepared.</td>
<td>i. Values professionalism: Respect for school rules, policies, and norms</td>
<td>Knows school rules and policies. Follows them consistently. Understands the purpose of regulations and respects their intent. Accepts responsibility for personally following them in patterns of dress, behavior, etc.</td>
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<tr>
<td>d. Values learning: Communication</td>
<td>Uses correct grammar in oral and/or written communication. Communication is free of offensive or inappropriate language. Uses language to express ideas very effectively regardless of the age of the listener.</td>
<td>j. Values professionalism: Commitment to self-reflection and growth</td>
<td>Recognizes personal limitations and strengths and uses them to best professional advantage. Actively seeks suggestions and constructive criticism. Regularly practices critical thinking. Regularly engages in learning through self-reflection.</td>
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<tr>
<td>e. Values personal integrity: Emotional control</td>
<td>Displays steady emotional temperament. Is receptive to viewpoints of others and their suggestions. Holds self accountable for emotions and behaviors. Displays a sense of humor and/or willingness to get along with others.</td>
<td>k. Values professionalism: Professional development and involvement</td>
<td>Regularly and actively participates in professional activities or events that promote professional development. Makes use of information from professional organizations, professional publications, and educational resources.</td>
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<tr>
<td>f. Values personal integrity: Ethical behavior</td>
<td>Is honest in dealing with others. Puts truth above personal need or advantage. Always dependable in terms of keeping personal and professional confidences. Can be counted on to follow through and keep word. Shows self to be a person of strong character.</td>
<td>l. Values professionalism: Professional responsibility</td>
<td>Accepts responsibility for own actions and for helping all students learn and actively seeks self-improvement. Consistently holds high expectations for the success of all students. Consistently looks to explain and remedy student lack of success by factors within the control of self.</td>
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Standards addressed in this course and Critical Performance Indicator:

Kentucky Teacher Standards (KTS):
- KTS Standard I: The Teacher Demonstrates Applied Content Knowledge
- KTS Standard V: Assessment
- KTS Standard VII: Reflection

National Council of Supervisors of Mathematics (NCSM) PRIME Leadership Framework:
- Ensure high expectations and access to meaningful mathematics learning for every student.
- Ensure high expectations and access to meaningful mathematics instruction every day.
- Ensure relevant and meaningful mathematics in every lesson.
- Ensure timely, accurate monitoring of student learning and adjustment of teaching instruction for improved student learning.

National Council of Teachers of Mathematics (NCTM) combined with NCSM:
- Leading the pursuit of a better mathematics future for every child
- Assuming and exercising professional responsibility and accountability for their own practice
- Assuming and exercising professional responsibility and accountability of the teachers they lead

This course is connected to the AMTE Elementary Mathematics Specialist Standards:

From AMTE Standard I -- Content knowledge for teaching mathematics:
Further specialized mathematics knowledge for teaching (Standard I b):
- Diagnose mathematical misconceptions and errors and design appropriate interventions.
- Decide whether, how and how far, to utilize specific oral or written responses from learners.
- Recognize, evaluate, and respond to multiple, often non-standard solutions to problems.
- Choose and/or design tasks to support the learning of new mathematical ideas or methods, or to test learners’ understanding of them.

Teaching (Standard II b):
- Construct and evaluate multiple representations of mathematical ideas or processes.
- Use questions to effectively probe mathematical understanding and make productive use of responses.
- Use various instructional applications of technology, judiciously, in ways that are mathematically and pedagogically grounded. Analyze and evaluate student ideas and work, and design appropriate responses.

From AMTE Standard II -- Pedagogical knowledge for teaching mathematics:
Curriculum and assessment (Standard II c):
- Uses multiple strategies to assess students’ mathematical knowledge. Engage in discussions and decision-making to establish appropriate benchmarks for learning goals from grades K to 8. Know the different formats, purposes, uses, and limitations of various types of assessment of student learning; be able to choose, design, and/or adapt assessment tasks for monitoring student learning.
- Use the formative assessment cycle and be able to find or create appropriate resources for this purpose.
- Analyze formative and summative assessment results, make appropriate interpretations and communicate results to appropriate and varied audiences.

National Educational Technology Standards (NETS) for Teachers:
- ISTE Standard 3: Model Digital-Age Work and Learning
- ISTE Standard 5: Engage in Professional Growth and Leadership

International Society for Technology Education (ISTE) Leadership Standards:
- TL-III: Teaching, Learning and the Curriculum
- TL-VI: Productivity and Professional Practice
- TL-VIII: Leadership and Vision

Educational Professional Standards Board’s (EPSB) code of ethics (url: http://www.kyepsb.net/legal/ethics.asp)
**EPSB Themes: Closing Achievement Gap**

Course Schedule for Fall 2010 Semester:
Link to WKU fall Academic Calendar:
[http://www.wku.edu/Dept/Support/AcadAffairs/Registrar/fall/calendar.html](http://www.wku.edu/Dept/Support/AcadAffairs/Registrar/fall/calendar.html)

All assignments are due by midnight of the due date.  
All seminars are held on Mondays from 5:00pm – 8:00pm.

DB: Discussion Board (may be in different formats)  

### ELED 573: Math and Technology Assessment and Intervention

<table>
<thead>
<tr>
<th>Week #1:</th>
<th>Mar. 28</th>
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<tbody>
<tr>
<td><strong>Mathematics Content–Lenses on Learning:</strong></td>
<td><strong>Technology</strong></td>
</tr>
<tr>
<td><strong>Session 3:</strong> Activity 1, Activity 2, Activity 3, Closing</td>
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<tr>
<td>Reading 4: &quot;Teacher's Professional Development: Critical Colleagueship and the Role of Professional Communities&quot;</td>
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<tr>
<th>Week #2:</th>
<th>April 4</th>
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<tbody>
<tr>
<td><strong>Message 11:</strong> &quot;Weighing Hens: Looking at Benchmark Testing&quot;</td>
<td><strong>Message 18:</strong> &quot;Faster Isn't Smarter: The Trap of Timed Tests&quot;</td>
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<tr>
<th>Seminar #1:</th>
<th>April 11</th>
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<tbody>
<tr>
<td><strong>Response to Intervention</strong></td>
<td><strong>How to use Technology for Assessment? For Intervention?</strong></td>
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<tr>
<th>Week #3:</th>
<th>April 11</th>
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<tbody>
<tr>
<td><strong>Session 4:</strong> Activity 1, Activity 2, Activity 3, Closing Readings 10-13</td>
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<tr>
<th>Week #4:</th>
<th>April 18</th>
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<tr>
<td><strong>Message 19:</strong> &quot;Embracing Accountability: Surviving the Test While Teaching Good Mathematics&quot;</td>
<td><strong>Message 22:</strong> &quot;We Don't Care About the Answer: Yes We Do -- Looking For Balance&quot;</td>
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<tr>
<th>Week #5:</th>
<th>April 25</th>
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<tr>
<td><strong>Session 5:</strong> Activity 1, Activity 2, Activity 3, Closing</td>
<td><strong>Intervention Plan including Technology</strong></td>
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<tr>
<th>Seminar #2:</th>
<th>May 2</th>
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<tr>
<td><strong>NAEP Assessment Activity</strong></td>
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<tr>
<td>Week #6:</td>
<td>May 2</td>
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<td>Week #7:</td>
<td>May 9</td>
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<td>Week #8:</td>
<td>May 16</td>
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<td>Week #9:</td>
<td>May 23</td>
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<td>Week #10:</td>
<td>May 30</td>
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Course Evaluation: (based on accumulated points)

<table>
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<tr>
<th>Participation in Seminars</th>
<th>75</th>
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<tr>
<td><strong>Lenses on Learning:</strong></td>
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<tr>
<td>Participation in DBs; book discussions</td>
<td>60</td>
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<tr>
<td>Multimedia Project and presentation</td>
<td>100</td>
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<tr>
<td><strong>Technology:</strong></td>
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<tr>
<td><strong>Leadership:</strong></td>
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<tr>
<td>Activities</td>
<td>65</td>
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<tr>
<td>MTL Assessment and Intervention Plan</td>
<td>200</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>1000</td>
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</tbody>
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**Grading Scale**

A = 90% = 900-1000
B = 80% = 800-899
C = 70% = 700-799

Class Time Management:
Management of your personal “class time” is one of the most difficult issues for students in an online class. Most face-to-face classes meet three hours a week and students are expected to spend up to six hours per week in class preparation and assignments. Therefore, you can expect to spend up to nine hours per week on any university course whether face-to-face or online. (Travel time has been a major consideration for many of you in face-to-face classes.) It is not advisable to procrastinate not only because of the time involved but the technical issues you may face and the time required to teach your lesson.

Submission of Assignments:
1. WKU subscribes to TurnItIn, a plagiarism service that gives professors an originality report for each student paper turned in. Your assignments may be checked through this service.
2. You will maintain your own blog journal through WordPress. It should be private but allow your instructors access to read your reflections.
3. There will be various methods used for class discussions. Some will be Discussion Boards through BlackBoard; however, other Web 2.0 discussion tools will also be used.
4. **The preferred method for submission of your assignments is to upload your assignment file through BlackBoard.**
   a. View the assignment description under Assignments in our BlackBoard course.
   b. Click on the link “View/Complete Assignment: Assignment Name” under the assignment description.
   c. Type a comment to your instructor about your assignment. It will not submit if you do not type something.
   d. Click “Browse” and locate your assignment file on your hard drive or diskette.
   e. If you have another file to upload, click “Add Another File” and Browse to locate your file. Be sure to add all files that you need to submit before you click Submit. You cannot come back to this screen.
   f. Click “Submit” to send your file to your instructor.

Emails to Instructor:
1. ALL emails should be to both of your instructors and MUST be in the following format:
   ELED 571, First Initial, Last Name, Topic
   Emails without this format will (gently) be returned to you to revise the subject. We are not trying to be rude! Our email programs sort mail according to the class number. If you do not use this standard email format, your message may get lost and many have been lost in past courses. Please help us with this!
2. Please set your email options such that when you reply to any message, it will include the original message. When you email me, my email software will retain your original message when I reply. If you reply back, your message should retain both your original message and my response. This helps to remind me of our ongoing conversations. Thanks!!
3. Please avoid emails with "humorous" attachments or emoticons, texting abbreviations, viruses by using virus-checking software, and using floppies that have been used on public machines. Use correct English grammar and spelling in all emails to your instructor. Remember that your emails are professional communication with your instructor.

Naming Files: In general, all files submitted should begin with your last name, then a period, then the module code, and a description of the assignment. For example, “Maxwell.Leadership.Plan.doc”.

Late Assignments: Assignments turned in after due dates during the semester will result in a **10% reduction per day** unless prior arrangements were made with the instructor. Any assignments turned in **after the last due date (see course calendar)** will result in a
20% reduction per day unless prior arrangements were made with the instructor. Technical problems are NOT an excuse unless reported to the instructor prior to 24 hours before due date.

**Plagiarism:** To represent work for course assignments or projects taken from another source (INCLUDING WEB SOURCES) as one's own is Plagiarism. Plagiarism is a serious offense at WKU. The academic work of a student must give an author credit for borrowed source material from his/her material. To lift content directly from a source [INCLUDING THE INTERNET] without giving credit is a flagrant act. To present a borrowed passage without reference to the source after having changed a few words is also plagiarism. **Plagiarism also includes submission of the same assignment for more than one class.** Plagiarism could result in a grade of an “F” for the assignment and/or the course.

WKU subscribes to TurnItIn, a plagiarism service which gives professors an originality report for each student paper turned in. Your assignments may be checked through this service.

**Participation and Communication:** Students in this online course are not expected to attend any class at WKU; however, student class participation is required. You ARE a part of a distributed class, i.e., you and your classmates are spread around the US and even the world! Each time you come to class via Blackboard on the web, please check Announcements for any current or relevant new information. You must discipline yourself to complete assignments on time. It is strongly suggested that the student notify the instructor in advance of a possible absence for three or more days.

Students’ participation grade includes completion of class assignments, reading all assigned materials, turning in assignments on time, maintaining contact with the instructor, use of the Q & A Discussion board, and maintaining a positive professional attitude. Your instructor is happy to make an appointment (either in person or by phone) with any student to help with any assignment or answer any questions. However, it is easier for your instructor to respond more quickly to email than regular postal mail or phone messages.

Due to the fact that: (a) it is often difficult to correctly interpret the intended tone of an email message/discussion board posting; (b) it is often too easy to quickly zip off a rude communication to someone without first finding out “the whole story” or thinking through the possible consequences of doing so; and (c) people sometimes will communicate things electronically that they would never say in a face-to-face conversation, students should take care to be polite, to-the-point, professional, and respectful in all communication in this course. In the case that inappropriate/disrespectful student communication is received by the professor or posted on a discussion board, the professor reserves the right to deduct points, delete it without answering questions or responding in any way, retain copies to be used as evidence in student disciplinary proceedings, or take any other appropriate action she sees fit. Please review the following netiquette website for more information about ethical and considerate online behavior: [http://www.albion.com/netiquette/index.html](http://www.albion.com/netiquette/index.html).

**Disability Accommodations Statement:** "Students with disabilities who require accommodations (academic adjustment and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services, DUC, room A-200. The Office for Student Disability Services (OFSDS) telephone number is 270-745-5004. Please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the OFSDS."

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**Course Assignments, Projects, and Evaluation**

**Participation:**

- Participation in Seminars (45 points, 15 points per seminar)
  1. Participation in seminar discussions and activities.
  2. Maintaining positive professional attitude. (No derogatory comments concerning other students or the instructor will be tolerated on the public discussion board. This type of comment should be addressed privately to the individual in concern only.)

**Lenses on Learning (300 Points)**

Lenses on Learning is a set of seminars designed to help instructional leaders think through the ideas that underlie standards-based reform in elementary mathematics and relate those ideas to their own work. Instructional leaders consider the following topics: the nature of mathematical understanding, the development of children’s mathematical understanding, discourse-based mathematics instruction, and professional development for teachers. In this course we will complete Module 2: Instructional Leadership in Mathematics. Participation in each of the four sessions will be worth 75 points each.

**Technology**
Book Discussions (75 points)
MTLA participants will read and discuss two books throughout the three courses (ELED 571, ELED 572, ELED 573) for this program. The two books are *Five minds for the future* by Howard Gardner and *Teaching digital natives: Partnering for real learning* by Marc Prensky. There will be discussion forums about topics in these books and how they apply to elementary mathematics.

Technology Skills (TS) Modules (75 points each)

**Blog Journals and Discussion Boards:**
Refer to course calendar for Blog Journals or Discussion Board due dates. Rubric below will be used to grade all discussion posts and responses.

**Scoring Rubric for Blog Journals and Discussion Board (partial points may be given)**
All Discussion Boards (DB) are worth 15 points; however, Blog Journals (BJ) are awarded variable points. See point values below.

<table>
<thead>
<tr>
<th>Rubric scores</th>
<th>Quality of Participation</th>
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| **4**
 DB: 14-15
 BJ: 93-100% | • Discussion/blog postings are submitted on time.
 • Contributions are meaningful and demonstrate understanding and synthesis of ALL assigned activities, readings and videos.
 • Discussion forums: In-depth thought and contributions that encourage intellectual growth of other participants. APA references are added for further information located by student.
 • Reflections: demonstrates in-depth thought and reflection. APA references added often.
 • Adds significant resources such as links to articles, websites, videos, blogs, podcasts, etc. that contribute to the week’s topics and ties them into your discussion.
 • Discussion postings are respectful and courteous.
 • Two or more comments are added to other students’ posts. |
| **3**
 DB: 10-13
 BJ: 70-92% | • Discussion/blog postings are submitted on time.
 • Contributions are meaningful and demonstrate understanding and of most assigned activities, readings and videos.
 • Discussion forums: Some thought and contributions encourage intellectual growth of other participants. One APA reference added for further information located by student.
 • Reflections: demonstrates some thought and reflection. APA reference added sometimes.
 • Adds a few resources such as links to articles, websites, videos, blogs, podcasts, etc. that contribute to the week’s topics and ties them into your discussion.
 • Discussion postings are respectful and courteous.
 • One comment added to other students’ posts. |
| **2**
 DB: 6-9
 BJ: 40-69% | • Discussion/blog postings are late.
 • Overall contribution/response is lacking in that readings are only sometimes incorporated into the discussions and postings are not always on topic.
 • Discussion forums: Adds one resource that does not significantly contribute to the week’s topics or does not really tie them into the discussion. No APA reference added.
 • Reflections:
 • Discussion postings are respectful and courteous. |
| **1**
 DB: 1-5
 BJ: 1-39% | • Overall contributions are not meaningful. For example, the posts do not go beyond "I agree" or "Good post."
 • Very little evidence of having read course materials or giving any in-depth thought to the topic.
 • No additional resources added. |
| **0** | • No contribution to discussion or reflection. |

**ELED 573 Culminating Project**

Math and Technology Plan for Assessment (200 points)