

ASSESSMENT PROJECT: “21ST CENTURY SCHOOLS: TEACHING AND LEARNING FOR THE FUTURE”

MIT 531

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I. Assessment Project Proposal

This year, the State Board of Education has adopted a new set of standards for North Carolina's public schools. These goals will replace the current "ABC's of Public Education" school accountability model. The name of this initiative is "Future Ready Students for the 21st Century." The guiding mission of this initiative is that every student will graduate from high school, globally competitive for work and postsecondary education and prepared for life in the 21st century.

In order to facilitate this initiative in Pender County Schools, a plan has been developed to design a group of “model classrooms” that include “21st Century hardware” and offering professional development on “21st Century teaching and learning.” It is the vision of the developers of this plan that a multi-tiered model for systemic change be developed that includes professional development and classroom transformation (both physical and pedagogical).

The online course “21st Century Schools: Teaching and Learning for the Future” is the introductory course in a series of professional development activities. The model used for this systemic change is Hall and Hord's Concerns-Based Adoption Model (Hord and Hall 1987). The adoption model outlines a model for professional development where those affected progress through a series of six stages until they ultimately adopt and begin to challenge themselves to refocus on another initiative. The goal of this course is to assist participants in their progression from an initial level of *Awareness* (“I've heard of the initiative, but I am not concerned about it”) by providing resources, discussion opportunities and activities to enhance their learning at the *Informational* level (“I would like to know more about it”). The main goal is that learners will complete the course at a *Personal* level as described by Hord and Hall (“How will using it affect me?”). They will have a clear understanding of the purpose, process and challenges necessary to

play a role in such a change that will assist in enhancing student learning. This critical and consequential reflection will play a key role in this transition at the classroom level.

The goal of this assessment project is to develop a set of criterion and norm-referenced assessment tools for this course in order to adequately identify any additional components it may need for effective learning and revision. Self-reflective tools will also be created for the learners, playing a key role in the attitudinal change that will also be necessary for this type of systemic change. This self-reflection will assist staff development planners in the creation of future courses, essentially a norm-referenced assessment of what learning has occurred in a number of sections of this course. While this is an assessment of learning (has the learner accomplished the objectives?), it is also an assessment for learning. These tools will be created to align with the learning outcomes of each module, giving the instructor and the learner a clear picture of which objectives have been met and which require more instruction as the course progresses. Another goal is for this course to be effective on a much larger scale in creating an aware and informed faculty who are ready to critically review their current strategies and practices. The “Future Ready Students” initiative is not one that will come at a low cost to school systems. It will require a paradigm shift be made in the schools and, ultimately, the classrooms. Not only will monetary resources be required, but teachers’ change in knowledge, ability and attitude toward the highly constructivist approach outlined in the initiative. These factors require that the delivered professional development be effective, informative and relevant to school faculty (teachers and administrators). The assessment of this course must reflect success in all three areas in order to proceed as planned.

Reference:

Taking Charge of Change by Shirley M. Hord, William L. Rutherford, Leslie Huling-Austin, and Gene E. Hall, 1987

II/III. Learning Outcomes and Assessment Techniques

For the online course, “Taking Pender County into the 21st Century - Assisting Our School in Becoming ‘Future Ready’ ,” teachers will progress through a series of eight modules featuring discussions, collaborative activities, individual activities and document studies. Documents will be self-selected from a “Multimedia Library” of relevant readings, videos, audio recordings, web pages and brochures.

Through the prescribed activities, the overall goal of this course is to increase teacher awareness of the Future Ready Students for the 21st Century initiative, provide practical information about the paradigm shift that accompanies 21st Century Teaching and Learning, and to create an understanding of the need for systemic change in districts, schools and classrooms. Teachers will complete the course with a greater understanding of the consequences and magnitude of an initiative such as this and choose to take steps to reflect upon and change their current practices.

Specific learning outcomes and instructional strategies are listed in the table below. By the end of this course, the learners will be able to:

Section II			Section III		
Learning Outcome	Learning Classification	Instructional Strategies	Assessment	Technique	Rationale
Differentiate between the “ABC’s of Public Education” and the “Future Ready Students for the 21 st Century” initiatives.	Verbal (Organized Knowledge)	Learners will compare and contrast two documents and collaboratively generate a list of differences between the two. Throughout this discussion, learners will then apply this comparison by, (1) reflecting personally on their own observations and experiences as a result of the “ABC’s of Public Education;” and, (2) identifying ways they feel schools and school systems may change as a result of the “Future Ready Students” initiative.	Direct Performance	Text-based reflective online discussion will be used to analyze learners’ understanding of both initiatives - how they differ and how they affect both school systems and teachers. An analytic rubric will be developed to measure learner performance on this outcome.	In order to compare and contrast these two documents, learners will need exposure to them and be able to discuss their effects on public education and, ultimately, their classrooms.

<p>Transform a teacher-centered classroom activity into a learner-centered one, given a scenario.</p>	<p>Intellectual (Problem Solving)</p>	<p>Learners will participate in a collaborative activity where they analyze a case study and “redesign” a lesson or unit plan utilizing a 21st Century approach.</p>	<p>Direct Performance</p>	<p>Individual Activity Interpreted Assessment (Learners provided with a case study depicting a teacher-centered classroom activity and asked to revise the lesson to show a more learner-centered approach). This will be a written assignment.</p>	<p>This outcome requires that teachers perform an individual task. This task will be graded using an analytic rubric where learners will be assessed based on their transformation of objectives, activities and assessment techniques.</p>
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<p>Identify the characteristics of a 21st Century teacher's skills and teaching philosophy.</p>	<p>Intellectual (Defined Concepts)</p>	<p>By identifying specific characteristics in "rapid fire" format, learners will collaboratively explain what characterizes a 21st Century teacher. They will be asked to identify both skills and pedagogical philosophy.</p>	<p>Indirect</p>	<p>In a discussion board, learners will post words and phrases that, from their reading, describe 21st Century teachers.</p>	<p>Since this will be a collaborative classification, teachers will offer their perspectives, from the readings, the characteristics of a 21st Century Teacher.</p>
<p>Describe the benefits of tools and systems that might be included in the 21st Century Classroom.</p>	<p>Intellectual (Defined Concepts)</p>	<p>Through a collaborative inquiry activity, learners will explore uses for the following tools:</p> <ul style="list-style-type: none"> • Wiki • Blog • RSS • Image Editing Software • Online Learning Systems • Social Bookmarks • Collaborative Web-based Office Tools 	<p>Direct Performance</p>	<p>Research activity Analytic rubric (Learners will conduct research in which they analyze, utilize and reflect upon possible uses for one of the tools from a list.)</p>	<p>In order to describe these tools, learners will need to use the list to research and test them.</p>

<p>Design a lesson utilizing a new tool in a 21st Century environment.</p>	<p>Cognitive</p>	<p>Participants will create a lesson or unit in which they will facilitate learning through the use of a “21st Century tool.” This lesson or unit will focus on the content objectives rather than the teaching of the tool.</p>	<p>Direct Performance</p>	<p>Individual Lesson Plan Design and Development Holistic Rubric</p>	<p>This is a practical application of the above outcome.</p>
<p>Generate an action plan for integrating 21st Century teaching and learning into his/her classroom.</p>	<p>Cognitive</p>	<p>As a culminating activity, learners will create an short-term (6 months-1 year) action plan for initializing a transformation of their lesson and unit planning to align with the standards of a 21st Century Teacher. They will use the North Carolina Standards for 21st Century Teachers (Revised June 2007) as their guide.</p> <p>This plan will be an assessment for this course and used as a tool for learning in the next class in the series.</p>	<p>Direct Performance</p>	<p>Action Plan Development Holistic Rubric</p>	<p>This is the practical application of learning outcome and a culmination of all learning outcomes for this course.</p>

IV. Assessment Tools

Assessment tools have been created for the following learning outcomes:

- Outcome 1: Differentiate between the “ABC’s of Public Education” and the “Future Ready Students for the 21st Century” initiatives.

Outcome 1 will be assessed using a threaded discussion where learners will reflect on two documents and contrast the ways in which the described initiatives have affected and will affect their own classrooms and school systems as a whole. They will be required to post an initial reflection; then respond to three other peer reflections. They will comment on both documents using evidence from the documents, personal reflections and real-world examples of how the two initiatives differ.

For this assessment, an analytic rubric will be used to qualify learner reflections based on dimensions necessary to validate the outcome has been attained. A tool has also been developed to ensure that data is collected reliably in every instance of assessment; since the goal is that tools are created for multiple instructors of the same course.

Validity

Content

In an online course, contrasting two documents is a task that requires the learner to 1) read the documents and 2) reflect upon the main points of the documents and how they relate contextually. Because the overall goal of this course is to create awareness and initiate change, teachers must not only relate to the documents, but also reflect personally on the changes they feel may occur in their schools and classrooms as a result of a new course of action. Based on this outcome, a document-based discussion is the most appropriate way of measuring teachers’ understanding of the differences between the two documents.

Construct

The online discussion assessment tool assumes that the teachers who participate are able to not only differentiate between the two documents, but also be able to personally relate to both. The assessment tool has been developed to measure all of these areas and determine that a discussion between peers has

actually occurred and that they are able to differentiate between these two initiatives.

Assessment-Criterion

This first assessment serves as a baseline for all other activities within this course. If learners struggle to attain or surpass expectations for this outcome, it will be necessary for course restructuring and remediation until all learners have reached this level. More discussion, presentation and learning activities will need to occur so that learners will be successful in other parts of the course.

Consequences

Since this is the initial discussion for the course, it will set the tone of how future discussions will occur. This can be either positive or negative. If all learners are actively involved, reflect appropriately and master the concepts, this assessment will create a common language among the learners for future modules. If they find it difficult and do not reflect on their own practice, more instruction will be needed since the desired learning outcome will not be reached.

Possible threat to validity:

- Teachers who are not able to relate to the verbiage of the documents and lack understanding of how strategic goals affect them at the classroom level will find it difficult to relate to these documents. This will require that the instructor take great care in explaining this concept if encountered.

Reliability

The creation of an assessment instrument that accompanies the rubric is an attempt to establish reliability of the assessment tool. Because this assessment tool is a discussion, the best possible way to determine the effectiveness of the tool is to consider the judgment of two or three equally qualified individuals. These individuals will be system stakeholders (curriculum directors, who will also be offering another section of the course). Instructors of the same course will be trained to score not only their own learners' discussions, but also discussions from another section to

determine interrater consistency. By having multiple judges of the same assessment items, the tool will be much more useful and reliable as the course is implemented to more and more participants.

Possible threats:

- A possible threat to the reliability of this assessment tool is the fact that this course is for Continuing Education Units (CEU's) and not graduate credit. In other words, the stakes are not necessarily high in order to ensure that learners are motivated to surpass learning outcomes as the rubric states. This concept could also infiltrate the judgment of all discussion evaluators leading to judge leniency and overall "watering down" of assessment tools.
- The amount of time that it will take for instructors to collaborate on assessments will cause some to either not collaborate or do so without serious thought to the learner outcome. This is a common problem with public school professional development - lack of time for implementation leading to ineffective assessment of learner outcomes.

ASSESSMENT TOOL: Online Discussion 1 - Rubric

Learning outcome: Differentiate between the “ABC’s of Public Education” and the “Future Ready Students for the 21st Century” initiatives.

Assessment Technique: Text-based reflective online discussion

	Surpassed	Achieved	Attempted	Failed
ABC’s of Public Education	Uses evidence from the “ABC’s of Public Education” initiative to create a complete description with real-world examples of its effect on schools/school systems.	Uses evidence from the “ABC’s of Public Education” initiative to create a generalized description with real-world examples of possible effects on schools/school systems.	Uses evidence from the “ABC’s of Public Education” initiative to create a complete description, but provides no real-world examples of possible effects on schools/school systems.	Learner does not use evidence from the “ABC’s of Public Education” initiative in his/her description.
Future Ready Students for the 21st Century	Uses evidence from the “Future Ready Students for the 21 st Century” initiative to create a complete description with real-world examples of possible effects on schools/school systems.	Uses evidence from the “Future Ready Students for the 21 st Century” initiative to create a generalized description with real-world examples of possible effects on schools/school systems.	Uses evidence from the “Future Ready Students for the 21 st Century” initiative to create a complete description, but provides no real-world examples of possible effects on schools/school systems.	Learner does not use evidence from the “Future Ready Students for the 21 st Century” initiative in his/her description.

Initiative Differentiation	Learner discusses both initiatives citing evidence from both documents to show differences between them using a clear argument.	Learner discusses both initiatives citing evidence from both documents to show differences between them, but argument is unclear.	Learner states differences, but does not support with examples either of the documents.	Learner does not contrast the two documents and provides no clear examples to support arguments.
Personal Reflection	Learner provides personal reflection in his/her initial posting that relates to the readings	Learner provides a personal reflection in his/her initial posting, but does not relate to the readings.	Learner provides a limited personal reflection in his/her initial posting that does not clearly relate to the initiative	Learner does not provide a personal reflection in his/her initial posting.

ASSESSMENT TOOL: Online Discussion 1 Data Collection Tool

Learner Name: _____

Week 1 Discussion - ABC's vs. 21st Century

Text-based reflective online discussion

Directions: Data is collected using the boxes below. Total scores should be posted in the shaded boxes.

ABC's Description	Score (Yes = 1, No = 0):	Document 1 Discussed <input type="checkbox"/> Yes <input type="checkbox"/> No	Document 2 Discussed <input type="checkbox"/> Yes <input type="checkbox"/> No
	Total Points: ____/4	Evidence Cited <input type="checkbox"/> Yes <input type="checkbox"/> No	Evidence Cited <input type="checkbox"/> Yes <input type="checkbox"/> No

21st Century Description	Score (Yes = 1, No = 0):	Document 1 Discussed <input type="checkbox"/> Yes <input type="checkbox"/> No	Document 2 Discussed <input type="checkbox"/> Yes <input type="checkbox"/> No
	Total Points: ____/4	Evidence Cited <input type="checkbox"/> Yes <input type="checkbox"/> No	Evidence Cited <input type="checkbox"/> Yes <input type="checkbox"/> No

Differentiation	Score (Yes = 2, No = 0)	Documents Contrasted?	Examples Provided?
	Total Points: ____/4	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Personal Reflection	Personal Reflection Scale	Total Points
	<input type="checkbox"/> Personal reflection included (1 point) <input type="checkbox"/> Relates to readings (1 point) <input type="checkbox"/> Provides details of personal experience (1 point) <input type="checkbox"/> No personal reflection included (0 points)	_____/3 Points

Total Score	Surpassed: 12-13 Points Attained: 8-11 Points Attempted: 4-7 Points Failed: <3 Points	_____/15 Points
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- Outcome 4: Describe the benefits of tools and systems that might be included in the 21st Century Classroom.

Outcome 4 will be assessed using a research activity where learners will be required to investigate, test and reflect on possible uses and benefits to one of the “21st Century” web-based tools from a list. From a rubric, learners will be judged based on three dimensions - description of the tool, identification of uses and a personal reflection about how they might use the tool in their own classrooms.

This assessment measures the outcome stating that the learner will be able to describe the benefits of a tool. Due to the overarching reflective goal of this course, learners will also be required to assess possible uses in their own classrooms. By requiring learners to actually research and use the tool, they will have attained knowledge about it and begun to identify benefits of using such a tool in their classroom.

Validity

Content

By having learners choose, research and utilize a tool from this list, the assessment tool is requiring them to gain appropriate knowledge about a particular tool in order to judge and describe the benefits of using the tool in his/her classroom.

Construct

Performing successfully on this assessment will determine that the learner has worked with the tool in a conceptual, practical and reflective manner having researched, used and determined usefulness of the tool.

Assessment Criterion

This assessment, like all other assessments in this course, leads naturally into other learning outcomes - as a prerequisite skill to be able to perform successfully on other assessments. This research will directly lead to the learning outcome stating that the learner will create a lesson plan in which he/she uses a 21st Century tool to facilitate student learning either by instructor use, student use or both.

Consequences

A positive consequence of this assessment is that learners will gain confidence in the process of learning about new web-based tools. One possible negative effect of this assessment is that the learner will not identify benefits of the tool because of the amount of time it takes to explore the tool on his/her own.

Possible threats to validity:

- Learners could choose a tool in which they do not see value. This would create a situation where the learner would either have to write an insincere reflection about the tool or write a reflection that describes why this tool would not be useful in his/her classroom.
- Because this tool will be self-selected, all learners in the course could choose the same tool and the desired range of learning and collaboration (not an outcome) might not be achieved.
- Much of this assessment relies on the learner to be truthful in their discussion of their use of the tool. If the learner seeks out a ready-made web-based review containing the components of this assessment, he/she could perform the task without achieving the desired learning outcome.

Reliability

The assessment technique used for this learning outcome is a research activity with an accompanying rubric. The rubric addresses three dimensions qualified by multiple criteria to assess learner success for each. The data collection method is a checklist that requires evaluators to analyze the learner response based on easily identifiable criteria. This method ensures that this performance assessment has specific dimensions to display learner success.

Possible threats to reliability:

- In the “Tool Description” section, assessing the criteria “complete description of tool” and “evidence of use” are somewhat subjective, causing there to be a possible discrepancy in scoring multiple assessments.
- In the “Personal Reflection” section, the terms specific and general may confuse some instructors.

ASSESSMENT TOOL: 21st Century Tool Discussion Rubric

Learning Outcome: Describe the benefits of tools and systems that might be included in the 21st Century Classroom.

List of “21st Century Tools” to be researched:

- Wiki
- Blog
- RSS
- Image Editing Software
- Online Learning Systems
- Social Bookmarks
- Collaborative Web-based Office Tools

	Surpassed	Achieved	Attempted	Failed
Tool Description	Learner describes tool. He/she shows evidence of actual use. Provides more than one URL for finding the tool.	Learner describes tool. He/she shows evidence of actual use. Only one URL cited.	Learner describes tool. Shows limited evidence of use. Only one URL cited.	Learner displays limited knowledge of tool. He/she provides no evidence of use. No specific URL cited.
Use Identification	Learner identifies multiple (>2) uses for the tool in the classroom.	Learner identifies two (2) uses for the tool in the classroom.	Learner identifies only one use for the tool in the classroom.	Learner does not identify any uses for the tool in the classroom.
Personal Reflection	Learner provides more than one specific example of how he/she might use the tool in his/her classroom.	Learner provides one specific example of how he/she might use the tool in his/her classroom.	Learner provides general information on how he/she might use the tool in his/her classroom.	Learner does not provide any examples of how he/she might use the tool in his/her classroom.

ASSESSMENT TOOL: 21st Century Tool Research Data Collection

Tool Description

- Complete Description of Tool (1 Point)
- Evidence of Use (1 Point)
- More than one (1) URL cited (1 Point)

Total Points: ____/3

Use Identification

- More than two (>2) uses identified (3 points)
- Two (2) uses identified (2 points)
- One (1) use identified (1 point)
- No uses identified (0 points)

Total Points: ____/3

Personal Reflection

- More than one (>1) specific example of practical classroom use provided (3 points)
- One (1) specific example of practical classroom use provided (2 points)
- General example of practical classroom use provided (1 point)
- No examples of practical classroom use provided (0 points)

Total Points: ____/3

Overall Score: ____/9

8-9 Points = Surpassed

6-7 Points = Achieved

3-5 Points = Attempted

0-2 Points = Failed

IV. Data Analysis

(Complete data analysis techniques in black - tools designed, initial explanations in gray text - tools not designed.)

Learning Outcome	Assessment	Data Analysis	Data Source	Data Analysis/Justification
		Collection Method/ Type of Data		
Differentiate between the “ABC’s of Public Education” and the “Future Ready Students for the 21 st Century” initiatives.	Online document-based discussion using analytic rubric to assess organized knowledge.	<p>In a text-based online discussion assessment, learners will display ability to differentiate between two initiatives in order to create awareness of changes that will occur at the district, school and classroom level.</p> <p>Quantitative - scores will be assigned using an analytic rubric and converted to ordinal measurement of performance levels (<i>surpassed</i> →</p>	Course participants in online discussion	<p>This will be one of two critical assessments of and for student learning in this course. A frequency table corresponding to the performance levels will be generated to display data for analysis facilitation.</p> <p>Progression of the course into the next module will be dependent upon at least 75% of learners “<i>surpassing or achieving</i>” this outcome as evidenced by the assessment instrument. A learner who scores below “<i>attempted</i>” level will be required to revise until they reach the desired level.</p> <p>Data from this assessment will be used to determine the level of guidance needed from</p>

		<p><i>failed</i>) using the designed assessment instrument.</p>		<p>the instructor for identified participants who attempted and failed to meet the desired level as the class discusses the initiative in future modules.</p> <p>Because these assessments will be used by multiple instructors over multiple sections of this course in a district-wide initiative, consistency of instruction is essential. To that end, an expectancy table will be developed and used to determine performance relationships among outcomes. This assessment will <u>be</u> used as a predictor of performance on future assessments by providing a context within the learners will perform. This will be especially useful for instructors who have little experience with online instruction. After “norming” the tool across multiple sections, the expectancy</p>
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				table will be used by instructors to determine appropriate levels of additional instruction (determined by an intervention plan).
Transform a teacher-centered classroom activity into a learner-centered one, given a scenario.	Individual Interpreted Performance Assessment Using Hypothetical Lesson Transformation	Qualitative - data collected based on changes learners make to the activity	Course participants using changes to assigned classroom activity	Activity Performance - learners will transform an existing lesson using information from readings in order to show understanding of differences between teacher-centered and learner-centered activities. As an assessment for learning, participants will reflect upon and refer to this list activity as they create future performance assessment products.
Classify a teacher in the 21 st Century.	“Rapid fire” Online Collaborative Discussion Assignment	Qualitative - a list of words and phrases will be generated by learners based on analysis of readings	Course participants in “rapid fire” brainstorm/discussion	Focus Group - learners will collaboratively generate a list of characteristics of a 21 st Century teacher in order to create a common language for future discussions. The product of this outcome will help learners not only assess their own understanding of the 21 st Century teacher, but

				also provide them a tool to use in constructing an action plan for change in a later performance assessment.
Describe the benefits of tools and systems that might be included in the 21 st Century Classroom.	Research Project	<p>In this performance project, learners will research one “21st Century Tool” in order to build capacity for its use in a lesson or unit.</p> <p>Quantitative - scores will be assigned using an analytic rubric and converted to ordinal measurement of performance levels (<i>surpassed</i> → <i>failed</i>) using the designed assessment instrument.</p>	Course participants through activity performance	<p>This is another critical assessment that will be analyzed by a rubric to help quantify learners’ level of understanding of 21st Century tools and how to research and evaluate them. The above instrument will be used to assign descriptive levels to numerical scores (<i>surpassed</i> → <i>failed</i>).</p> <p>A frequency table will be created to display the learners’ performance levels as measured by the assessment instrument. This will assist the instructor in determining if a learner will continue to the next module of the course or revise his/her project.</p> <p><i>Surpassing or achieving</i> desired outcomes on this assessment is essential for</p>

				<p>performance on the culminating activities that will lead to the second course in this series (this will be further researched with the expectancy table discussed above). Learners must perform at the minimum of “<i>achieving</i>” before progressing to the next module.</p>
<p>Design a lesson utilizing a new tool in a 21st Century environment.</p>	<p>Lesson Plan Design</p>	<p>Qualitative Performance - learners will generate a lesson.</p>	<p>Course participants using elements of lesson design</p>	<p>Performance - learners will design a lesson using researched tool or other tool of their choice to display ability to create future lessons for their own classrooms.</p> <p>While this assessment will serve as one of two culminating activities, the assessment will actually serve as a “document in draft” that will be revised in the continuation of this course. This document will be used as a different assessment piece in the second course.</p>

<p>Generate an action plan for integrating 21st Century teaching and learning into his/her classroom.</p>	<p>Action Plan Design</p>	<p>Qualitative Performance - learners will generate an action plan to facilitate future changes to their own classrooms.</p>	<p>Course participants using elements of action plan design</p>	<p>Performance on this assessment will be measured using a rubric and assessment instrument similar to others in this This action plan will be used as a tool in the next section of this online course.</p>
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