

EDU 320 Synthesis Paper

Kielly R. Richter

University of Mary

EDU 320 Synthesis Paper

Curriculum, instruction, and assessment includes all methods and aspects of the classroom, this paper is a review of all the themes that were learned in curriculum, instruction, and assessment and how one may implement them into the classroom.

The Effective Teacher

Description: The effective teacher is one who can reach the students whether it is in the aspect of a relationship or reach them in the aspect of teaching them. An effective teacher is not a clear cut, definitive thing but more so a combination of being a good person and being good at the job. An effective teacher to me is one who cares for the students, is able to teach effectively, and is able to create a relationship with them. My plan to be an effective teacher in my future classroom is by creating a relationship with my students that I had with my teacher, Mr. Haug. I hope to be one they look up to and feel comfortable coming to when they need help or advice. I will specifically do this by intentionally inviting them each and every day and making them feel welcome, as well as show them I care for them personally and in their successes.

Artifact (See Appendix A to view my reflection paper on the quote by Quintilian “... *the living voice, as it is called, feeds the mind more nutritiously, and especially the voice of the teacher, whom his pupils, if they are but rightly instructed, both love and reverence. How much more readily we imitate those whom we like.*”)

Understanding Your Students

Description: To understand your students is one of the biggest priorities as a teacher in order to develop the relationship between them, that is so important. Understanding the students is the

first step into everything, how they learn, how you can relate to them, how to communicate with them in the most efficient way. This understanding can be in all aspects as well, who they are as a person, their background and family, what kind of student they are among many other things. How I will get to know my future students in my classroom is by completing the activity in appendix “B,” which consists of the students completing the questionnaire and then after they fill out this sheet they will crumple it up into a ball and throw it around the room. Once everyone has thrown their paper ball everyone picks up one and returns to their desk; once they are in their seats each person will read theirs individually and as the teacher I will guess which student they are speaking of.

Artifact (See Appendix B to see how I will get to know my students.)

Goals, Standards, and Objectives

Description: It is important to have goals, standards, and objectives implemented into the classroom, this way students and the teacher have something to work towards and to look at in order to stay on track. Goals are something that is a desirable achievement, objectives are expectations of the students that are linked to standards, which are set by the state for the students to meet each unit. Another aspect of this theme is to have these stated somewhere in the classroom, posted on the wall, written on the board, wherever it may be so it is visible as a reminder to work towards these. It is important to set goals, standards, and objectives for the class so they constantly have an end goal to work towards. I will implement these specifically by having objectives for each lesson that are guided by standards and ultimately reaching our goals that we will set for each chapter or unit.

Artifact (See Appendix C-H to view my goals, standards, and objectives for the lesson plan.)

Unit and Lesson Planning

Description: Unit and lesson planning is a necessity in order to have an efficient year in school. Unit and lesson planning is simply planning out each lesson and overall, unit; this technique allows the teacher to prepare and get ahead so she has multiple days ready in advance. In these plans it has explicit detail on aspects such as standards and objectives, differentiation within the lesson, the method and process of teaching the lesson, etc. As the entire year consists of teaching lessons I will implement planning my lessons and units simply through creating lesson plans and grouping them into the units of the curriculum that I will teach. As years go on I will revise and edit my lesson plans in order to keep them updated and continually improve them in any way that I can.

Artifact (See Appendix C-H to view my lesson plan.)

Technology Integration in Instruction

Description: Implementing technology into instruction is an effective tool because it intrigues the students and helps them learn faster and more effectively. Implementing technology can be done in many ways, through games, reviews, the lesson itself, etc. Although this has many positive uses it also brings out issues such as; too much screen time, the cost of the technology, and many other problems. Technology is constantly changing and it needs to be in our schools as the world develops we need to be able to use all of these technological advances. Technology is an important tool to integrate into lessons and in my future class I will do this through teaching

the material itself, as I will probably teach on a smartboard or something like it. Other than this I hope to implement apps or games that they students can use in order to help them learn the material or just to get extra practice on the material.

Artifact (See Appendix C-H to see how I will integrate technology into my lesson.)

Questioning Strategies

Description: Strategies for questioning students is used in order to form effective questions that draw the students thoughts and create a clear and concise answer in order to state or restate an important aspect that the students should know. Another form of questioning strategies is to draw out discussion so the students may have a dialogue between them and their peers in order to come to conclusions, results, discuss topics, etc. It is important to prompt questions for students so that their inner thoughts and questions can be answered and to make sure directions or processes are clear. I may implement questioning strategies through having the students write down answers to problems, questions they have, or practice problems that they are struggling with and if they choose they can do it anonymously, this way we can do them as a whole class. Also another way is to check in with the students, to see if they understand and are with the rest of the group so we can move on as a whole.

Artifact (See Appendix C-H in order to see the questioning strategies I may use for this particular lesson.)

Teaching Strategies for Direct Instruction

Description: Direct instruction is the form of instruction when a teacher lectures to students.

This form of instruction is straight forward, the teacher simply presents the material and the students either listen or take notes at the same time. Direct instruction is very effective in some ways but it also has some downfalls as well; some of these strengths are that it is good to use for specific skills, and it allows the teacher to assess to high validity and reliability. Some of its downfalls are that it hinders creativity and the students may grow bored. Direct instruction will be used in my class as the most prominent form of instruction as much of the time I will be lecturing the students on the material for that lesson as it is the easiest for math.

Artifact (See Appendix C-H for how I made my lesson a direct lesson.)

Teaching Strategies for Indirect Instruction

Description: Indirect instruction is the method of instruction where the students teach themselves, through the help of the teacher. This form of instruction puts the obligation to learn the material in their hands, teaches the students responsibility. It is student centered, and results in higher expectations for the students and in turn a higher success rate in completing work whether if they need extra assistance or not. This also gives the students the opportunity to help one another succeed in the class. In the aspect that there needs to be a variety in instruction I will implement indirect instruction into my class by having students who thrive in the class group with those who are moderate or struggling. This way they can fill out notes together, with the help of myself and their textbook; and to then complete the practice problems as well as the assignments together so the students can teach themselves and each other.

Artifact (See Appendix C-H for how I made my lesson an indirect lesson.)

Assessing Learners

Description: One can assess learners in multiple methods whether it is for formative or summative assessment. Formative is a type of monitoring throughout the lesson, a progress type of assessment; a summative assessment is at the end of the lesson and these are both linked back to the objectives. One can assess students through a paper test, through group projects, presentations, essays, etc. This is an important tool in the classroom as the students and teachers, both need some form of check in to see where they are themselves and so the teacher may see as well. Assessing students in some type of way is a necessity, so we as teachers, can see where each student is at in comparison with other students and where they should be according to state standards. The main form of summative assessment I will implement into my classroom is a paper test or quizzes but I will also assess them through projects. For a formative assessment I will do a more variety of things such as group assignments, individual assignments, things like that.

Artifact (See Appendix I to see how I will assess my students for this lesson in particular.)

Conclusion

Through my time in this class I have grown as a pre-service teacher in multiple ways due to all that we learned through the assignments, artifacts, and discussions. I have grown as a pre-service teacher specifically because I have learned how to make a lesson plan and all that it consists of. Through learning how to create a lesson plan I also have learned how to set goals and objectives, integrate technology into my lessons and questioning strategies, as well as teach in a

direct instruction and an indirect instruction. Due to this in the future, I will be able to plan out my lessons for the material I will be teaching. I also have grown as a pre-service teacher through the discussions that we have had in class especially in the aspect of how to differentiate for specific students whether it is in assignments, group projects, or assessments. As a result of this course, curriculum, instruction, and assessment I feel that I have grown as a pre-service teacher and I feel more prepared for my future career of teaching.

References

L Borich, Gary D. (2017). *Effective teaching methods: Research based practice*. University of Texas at Austin: Pearson Education, Inc.

Appendix A

EDU 320 Reflection Paper

Reflection Paper

Kielly Richter

Mrs. Carmen Cain

In reflecting upon Quintilian's quote "... the living voice, as it is called, feeds the mind more nutritiously, and especially the voice of the teacher, whom his pupils, if they are but rightly instructed, both love and reverence. How much more readily we imitate those whom we like," I instantly think of one of my teachers from high school. The teacher that comes to mind is Mr. Roger Haug, who was my college algebra teacher during my senior year. As he is the reason I desire to become a teacher he had a lot of influence on me, and still does today even though he has passed.

If I were to choose someone to imitate in the aspect of my future life and profession it would definitely be Mr. Haug. The reason I want to be like him was not because of any specific thing that he said, or what he did, it was who he was as a person that inspired me. He had the biggest heart and really, truly cared for me, we had the personal relationship that each and every student desires to have with their teacher. We bonded outside of class over homework problems, looking over tests, and talking while he was grading and making his comments that weren't particularly the nicest. Not only did he have a big heart, but a sense of humor as well, he made class fun for us, he made it relatable to life and repeatedly said "I would love to be your guys' banker," as most of the class was not good at the banking and interest part of the course. His teaching style was really effective in the way that I prefer to learn. I am a very traditional learner when it comes to math which consists of taking notes, completing assignments and taking tests that challenged our level of knowledge that we had. Math seems to be my strongest subject so the class was easy and enjoyable for me as well, as he made it better with his light-heartedness, humor, and expertise on the material. Mr. Haug did have this personality that made you happy inside but he also was able to be strict when he needed to be. He wanted us to do well but he also

demanded us to complete our work, study for tests, and try our hardest in order to succeed. When we weren't paying attention in class he was stern with us and told us to refocus our attention, not because he wanted to be mean but he cared for us and wanted us to do well. I want to be able to be both of these things, caring and professional.

Mr. Haug was also one of the first people who urged me to become a teacher, he wanted me to continue to strive to be even better than I already was so that I could become the best teacher, that students love and respect. The teacher that students feel comfortable asking questions, seeking advice, or just to talk to. Without me knowing, he recommended me to the principal to tutor a peer who had gone through a horrific accident and needed extra help in college algebra, igniting my love for teaching. Once I started tutoring others I knew that I could do this for a living, I loved being able to help others understand the material and succeed in the class that they were struggling in. There was no better feeling than being able to make the material click, I wanted to continually have this feeling, for it to never go away and that is when I knew that I wanted to become a teacher, more specifically a math teacher in preferably a middle school.

I want to imitate Mr. Roger Haug in both the personal and professional way, for he is caring and loving but also an effective teacher. He is the one I look up to and listen to when it comes to me striving to become a teacher, I hold on to all the memories I have of him, so that one day when I need his advice and he is not there all I have to do is imagine what he would tell me. I only aspire to be like Mr. Haug and have this same effect on one of my students as he had on me, to be the inspiration in one's life and urge them to have the desire to become a teacher.

For I know and hope that this will be the most fulfilling profession there can be, nobody else gets the same satisfaction of teaching the future.

Appendix B

Kielly Richter

Mrs. Cain

EDU 320

24 January 2019

Getting to Know the Students

In order to get to know my students I will have them fill out a sheet during the first day of class.

The sheet will have questions such as:

1. Name?
2. What is one thing you would like me to know about yourself?
3. What is one thing you enjoy doing?
4. What do you want for yourself in the next year?
5. How do you learn best?
6. What is your favorite subject?
7. What is a fun fact about yourself?

After they fill out this sheet they will crumple it up into a ball and throw it around the room, once everyone has thrown their paper ball everyone picks up one and returns to their desk; once they are in their seats each person will read theirs individually and as the teacher I will guess which student they are speaking of.

Appendix C-H

Lesson Plan

Grade: 8th Grade	Subject: Algebra
Materials: Pencil, Notebook, Tape	Technology Needed: A smartboard, Laptops
Instructional Strategies: <ul style="list-style-type: none"> ● Direct instruction € Peer teaching/collaboration/ € Guided practice perative learning € Socratic Seminar ● Visuals/Graphic organizers € Learning Centers € PBL ● Lecture € Discussion/Debate ● Technology integration € Modeling € Other (list) 	Guided Practices and Concrete Application: <ul style="list-style-type: none"> ● Large group activity € Hands-on ● Independent activity € Technology integration ● Pairing/collaboration € Imitation/Repeat/Mimic € Simulations/Scenarios € Other (list) <p>Explain:</p>
Standard(s) 8.G.8: Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	Differentiation Low Proficiency: If students are below proficiency they will go to the triangle on the floor for additional assistance or get help from peers that understand the material so that those students can teach them or they can come see me as the teacher. Above Proficiency: If students are above proficiency they will help those who need extra help in a way of assessing themselves to see if they understand the material and can reteach it and help those who need extra assistance. Approaching/Emerging Proficiency: For students who meet the expectations they will continue doing their work and challenge themselves by practicing more challenging problems. Modalities/Learning Preferences: The type of multiple intelligences that this lesson would include are: Visual/Math- Using the Pythagorean Theorem Kinesthetic- The triangle on the floor, as well as sides and angles of the triangle. As well as using Sketchpad on the laptops. Interpersonal- Working with others.
Objective(s) The students will be able to identify the pythagorean theorem as well as side lengths. Eventually they will have the ability to implement this knowledge into filling out a triangle's values using the Pythagorean theorem. The students can structure the triangle in order for one to be able to solve it, and eventually validating that the triangle is correct. Bloom's Taxonomy Cognitive Level: Understanding, Applying, Analyzing, Evaluating	Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) Bell Work- Students are expected to be quiet and efficiently answer the question. Students are also expected to turn in their work and return to their desks. Direct Instruction- Students are to be quiet and pay attention. Students are to take notes. Visual/Graphic Organizers- Students are expected to participate in the activity and pay attention in order to understand. Independent/Partner/Small Group Work- Students are to respect others. Students are to participate in their group. Students are expected to participate on Sketchpad.
Classroom Management- (grouping(s), movement/transitions, etc.) Bell Work- Come in to the classroom, sit at their desks and answer the question on the board. Then hand in their sheets to the bin and return to their desks. Direct Instruction- Lecture using the smartboard, teaching the kids about the Pythagorean theorem so they have the knowledge to complete the lesson. Complete practice problems with whole group. Visual/Graphic Organizers- Come together as a class to use tape and create a triangle on the center of the floor with side lengths. Independent/Partner/Small Group Work- Students either work by themselves or with their peers to work on their assignment, referring to the triangle if need be. The students will also work on Sketchpad.	(Continuation of Behavior Expectations from the previous row)
Minutes	Procedures

30	<p>Set-up/Prep: As the teacher I will prepare myself in looking over the material as a refresher, create the notes and practice problems for lecture, and check it over to make sure it will all go smoothly. Gather masking tape in order to create the triangle.</p>		
5	<p>Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) The students will complete the question that is on the board and then go over the answer as a whole by a student completing it on the white board as an example for everyone ensuring that the students know the material learned previously. Ex: What is x?</p>		
30	<p>Explain: (concepts, procedures, vocabulary, etc.) Complete bell work and turn it in. Allow the students to break into groups to complete the notes together as well as the example questions using the method of those students who understand the material to teach those who struggle with it. Answer any questions that the students have. Come together as a whole group to create the triangle made of tape on the floor. Break into groups or individuals and work on their assignment. I will demonstrate how to use Sketchpad so that the students understand and may utilize it to their best ability. Questions:</p> <ol style="list-style-type: none"> 1. Does anyone need help on the bell work? (Getting Interest and attention) (Diagnosing and Checking) *Knowledge 2. Does anyone want to do another example question? Can anyone complete this question? *Question in Future Section* (Encouraging Higher-Level Thought Process) *Comprehension *Application 3. How does one use the triangle in order to understand the Pythagorean theorem? (Recalling Specific Facts or Information) *Knowledge *Application 4. Since we have completed the lecture does anyone want to take another look at a specific concept? Okay, let's take a look at sketchpad. (Structuring and Redirecting Learning) *Comprehension 5. How did I just demonstrate how to use sketchpad? (Managing) *Comprehension *Synthesis *Evaluation 6. How do we feel about this section, where is everyone at with the homework? (Allowing Expression of Affect) *Comprehension *Analysis *Evaluation 		
10	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions) The students will test each other with the triangle on the floor by giving two side lengths so that they complete it using the Pythagorean theorem. After this the students will work on their assignment whether it is individually or with others in the class; coming together to discuss problems and to see if they can come up with how this happens or why if it doesn't work. While working on their assignments they can refer to Sketchpad to draw the triangle with the side lengths in using this they will be able to visualize and map out the mathematical part to complete the triangle through the Pythagorean theorem.</p>		
5	<p>Review (wrap up and transition to next activity): Answer any questions they still have; the students will turn in their assignment if finished. Then they can pack up and go to their next class as I either write a different question on the board or if it stays the same.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <p>Formative Assessment: (linked to objectives)</p> <p>Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.</p> <p>Throughout the lesson checking in for questions as well as going to each student and seeing where they are at.</p> <p>Consideration for Back-up Plan:</p> <p>Back-up plan would be to take time outside of class to sit down with them and reteach a different way to help them understand the material.</p> </td> <td style="width: 50%; padding: 5px;"> <p>Summative Assessment (linked back to objectives)</p> <p>End of lesson:</p> <p>A quiz on the lesson learned evaluating their knowledge on the Pythagorean theorem.</p> <p>If applicable- overall unit, chapter, concept, etc.:</p> <p>A chapter test on the material that was most recently learned.</p> </td> </tr> </table>	<p>Formative Assessment: (linked to objectives)</p> <p>Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.</p> <p>Throughout the lesson checking in for questions as well as going to each student and seeing where they are at.</p> <p>Consideration for Back-up Plan:</p> <p>Back-up plan would be to take time outside of class to sit down with them and reteach a different way to help them understand the material.</p>	<p>Summative Assessment (linked back to objectives)</p> <p>End of lesson:</p> <p>A quiz on the lesson learned evaluating their knowledge on the Pythagorean theorem.</p> <p>If applicable- overall unit, chapter, concept, etc.:</p> <p>A chapter test on the material that was most recently learned.</p>
<p>Formative Assessment: (linked to objectives)</p> <p>Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.</p> <p>Throughout the lesson checking in for questions as well as going to each student and seeing where they are at.</p> <p>Consideration for Back-up Plan:</p> <p>Back-up plan would be to take time outside of class to sit down with them and reteach a different way to help them understand the material.</p>	<p>Summative Assessment (linked back to objectives)</p> <p>End of lesson:</p> <p>A quiz on the lesson learned evaluating their knowledge on the Pythagorean theorem.</p> <p>If applicable- overall unit, chapter, concept, etc.:</p> <p>A chapter test on the material that was most recently learned.</p>		

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

Overall, I know what you are planning on doing here, but I am not sure you are being detailed enough. I am not completely sure how Mrs. Cain is going to grade this, but I know from experience that other professors are going to ask you to dive in much greater explanation and detail. I also feel that your objective needs a little work. I mean it is completely up to you what you choose to and not to add in the end. I am just making some minor suggestions. My best advice would be to assume a substitute teacher is going to teach the lesson and modify it as necessary. Perhaps add some examples of problems or lecture notes?

Reflection (Technology)

1. I really like the use of the sketchpad but because it is not used very often, adding a brief lecture at the beginning of the lesson on how to utilize this feature will really help your students.

Reflection (Direct Instruction) (The original lesson plan is a direct lesson)

2. I really enjoy your guided notes. It can be difficult for some students to determine what is important during a lesson. This helps ensure that they can revisit the content. It also ensures that students are actively engaged in the lesson! I would just remind yourself to continue asking reflective questions. This ensures students are understanding and engaged in the learning process.
- Ashley N.
3. I liked the layout of your worksheet. There is something special about a simple math worksheet that is very satisfying for me. You made the content easy to learn by giving handouts. But you also make them learn the content rather than just giving a handout. I would just work on explaining a little more, I really liked this! – Mckenzie

Reflection (Indirect Instruction) (The added note makes the direct lesson into an indirect lesson)

1. I really liked the group idea. I would have really struggled to think of a way to not lecture a lot in a math class. Just like Ms. Cain said, that's what we grew up with so that's what we know. The only problem with working in groups is it always seems like there is one person in each group who doesn't put in the effort. So, I would just keep that in mind when you have them do the assignment together. That is the only thing I can think might be a struggle. I really would like to see this lesson plan in action! – Mckenzie

Appendix I

Practice Test

Name _____

Date _____

Write T for True and F for False. (Knowledge)

- 1. A right triangle has a 90 degree angle. _____
- 2. A 6, 7, 10 is another form of a 3,4,5 triangle. _____
- 3. The square of the hypotenuse equals the sum of the two other sides. _____
- 4. The pythagorean theorem can be used with all types of triangles. _____

Write the Coordinating Number with the Correct Letter. (Knowledge)

- A. The name of the side across from the right angle. _____
- B. How many side lengths does one need in order to find the rest using the pythagorean theorem? _____
- C. $x^2 + y^2 = z^2$ _____
- D. What are x and y are called? _____
- E. How many 3,4,5 triangles exist? _____
- F. What shape is the pythagorean theorem used for? _____

1. The Formula 2. Infinite 3. Hypotenuse 4. A Triangle 5. Two 6. Legs

Choose the Correct Answer. (Apply)

1. $3^2 + 4^2 =$

- a. 36 b. 9 c. 20 d. 25

2. $\sqrt{36} + \sqrt{64} =$

- a. 7 b. 14 c. 12 d. 8

3. $((8 - 2) * 4 - (7 + 3)) =$

- a. 14 b. -36 c. -10 d. 20

4. $\sqrt{49} * (3-1) + 35 =$

- a. 55 b. 259 c. 49 d. 0

Complete the Following Questions (Apply)

Use the pythagorean theorem to solve the following problems:

1. $Y =$

2. $Z =$

3. $X =$



