

NEEDS ASSESSMENT

The Missouri Assessment Program (MAP) scores have not made any significant improvements for the past two years. The superintendent of the school would like to see the MAP scores improve. Research indicates that teachers that use formative assessment as part of their instruction show greater improvement on student scores. The superintendent expects the faculty to demonstrate how they have integrated formative assessment into their classroom lessons.

The audience of the Formative Assessment workshop are middle school teachers. The teachers will be from all disciplines (Math, Science, Social Studies, Communication Arts, Music, Art, Physical Education, etc.). The age of the teachers are from 21 and up. There are no first year teachers in the faculty, but the least amount of experience is one year. The most experienced teacher in the faculty is starting her 40th year of teaching. Most of the teachers have between ten to twenty years of experience. All teachers retain proper Missouri required certification for their teaching assignment. This indicates that all teachers have the appropriate background knowledge to teach their classes. Further, there is one other teacher than the presenter that has attained National Board Certification.

The drawback to working with an experienced faculty is that it is difficult to get a teacher to change their classroom practices. This, in addition to teachers resistance to peer observation will need to be taken into account when designing the workshop.

My hypotheses is that with the emphasis on summative assessment, teachers have forgotten about the other end of assessment (formative). In addition, teachers are more apt to teach in a manner that is similar to how they were taught. Recent research has provided support for the importance of using formative assessment in the classroom. Teacher need to be reminded as to what formative assessment is, provided with resources of good questions to use for formative assessment, and practice techniques that allow the assessment to be embedded into the lesson in such a manner that not only do the students not realize they are being assessed, but data from the assessment is gathered quickly for the teacher to use on the spot. In order to determine if my hypotheses is correct, I need to determine what teachers know about formative assessment, how they are using formative assessment in their classroom, their feelings/motivation towards using formative assessment, and the resources they have for formative assessment questions. By knowing this information, I will know what to emphasize in the workshop. For example, if teachers claim to know about formative assessment, but observation indicates that they don't fully understand formative assessment then I will know to emphasize background information about formative assessment so everyone can have a common language.

Formative assessment, when properly used in the classroom, increases the student scores on standard tests. Formative assessment is also known as assessment for learning. This is an important distinction between summative assessment which is an assessment of learning, for example, standardized tests. More importantly, formative assessment provides a window for teachers into what students are thinking and when the information from the assessment is used to improve instruction, it improves student learning. Teachers will need to know how to appropriately incorporate formative assessment to maximize student learning.

An optimal situation will need to be defined. To find the optimal, research done by experts will be consulted. The optimal is that a teacher deliberately plans the instruction of their students that includes formative assessment

checks that provide data that the teacher uses to inform further student instruction. Teachers should be able to provide evidence (the assessment, the data from the assessment, and the lesson plans that indicate how the data impacted their decision of how to continue to teach the topic) of how they use formative assessment in their classrooms. I don't believe the Delphi Technique is appropriate here, but if we were to look at the work of several researchers and then rank the different pedagogies in level of importance, that might help define the optimal even further.

What is the actuals? In order to determine the actual situation, the first step is to find out what teachers know about formative assessment. The first method would be a survey of the staff would provide this information. I would choose a survey because the information sought is what teachers know about formative assessment. Surveys are fairly cost effective and if given during a meeting, a 100% return rate can be achieved. There is a level of anonymity with a survey that can make a teacher to feel comfortable to admit to lack of knowledge in formative assessment. Further, teachers feelings toward the proposed change to their classroom teaching methods can be explored. This is important information because it can be difficult to guide a teacher to change their classroom instruction.

A second method would be to do classroom observation. Ask teachers to allow for observation of their lessons that has formative assessment involved. This is a low cost method because several teachers can be observed at once, so a variety of data can be gathered quickly. The results of the observation can be compared to the survey results in order to see if there is agreement. Just like a formative assessment can help ferret out a misconception a student has, an observation can help determine if teachers actually know what they claim to know.

The last method would be to ask teachers to provide lesson plans that have formative assessment integrated into the lesson. This method, once again, can provide a lot of data quickly since we are looking at a faculty of several teachers (30). This is a low cost method since only paper copies or electronic copies (dependent on how the teacher has the lesson) can be sent and then reviewed. Once again, the data from the lesson plans can be used with the data from the surveys and classroom observation in order to triangulate on what the teachers know about formative assessment.

By knowing the actual situation in the classrooms, the workshop can zero in on what teachers need in terms of resources, techniques, or instruction how to use the data to inform their instruction. The data can also help differentiate the workshop in order to provide the individual teacher what they need for their classroom.

What is the cause? The MAP scores have remained fairly flat for several years without much improvement. The superintendent believes that teachers have leaned too much on summative assessment in their classroom and not used formative assessment to inform their instruction. The information that is needed about the cause is:

What do teachers know about formative assessment? How do teachers use formative assessment in their classrooms? Are teachers using the data from formative assessment to inform their instruction? If all teachers are using formative assessment correctly according to the described optimal, what else could explain the flat test scores?

All three methods described in determining actuals can also be used to help determine the cause. By carefully crafting questions that look into the above questions, the data can help determine the cause or the lack of

progress in student scores. When defining the cause, I am not certain that it is important to point to the cause. Teachers get caught up in placing blame. The focus of the needs assessment should be on providing a tailored workshop to meet the needs of the teachers and to keep the teachers focused on the solution to the relatively flat test scores. By not laying blame, teachers will be more open to changing their methods in the classroom because they will be less defensive about their current teaching methods.

What are the feelings? The feelings of the teachers need to be taken into account. Teachers are notorious for needing to feel as if they have all of the answers. Instead of approaching new experiences with the attitude of being a model for life long learning, teachers can be fearful of the change from what is comfortable. The survey questionnaire will provide information about teacher's feelings toward formative assessment and any change it may pose to their current teaching methods. The information from the survey can be used to determine the method for teaching workshop participants about formative assessment. For example, if teachers indicate that they do not want to use formative assessment in their classroom because of time factors, then emphasis should be placed on the techniques and how to embed the techniques into their lessons. This would alleviate the fear that this workshop will do nothing more than to create more work for the teacher.

What are the solutions? While the data from the MAP assessments and teacher observations performed by the administration prior to the needs assessment indicates that teachers are not using formative assessment appropriately in their classrooms, knowing the optimal and actuals will provide information about the gap that exists between the two. The gap is what needs to be addressed in the workshop. But, there is more than just lack of knowledge or improper performance. Motivation and incentive needs to be addressed. The expectation is provided by the superintendent of the school that all teachers will be able to demonstrate how they use formative assessment in their classroom. Also, the environment of their classrooms needs to be addressed because students need to feel comfortable in sharing what they know. The same can be said for teachers during the workshop. The data from the survey can answer most of the areas needing more information. The data from the classroom observation can get to all areas needed with the exception of motivation and incentive. Lastly, by reviewing teacher lesson plans, the data from the review will indicate information about knowledge, performance, and environment of their classroom. The data from the needs assessment should provide a clear picture of what teachers need in order to incorporate formative assessment in their classrooms. By tailoring the workshop using the data, teachers will leave with something they can use immediately and hopefully effectively.

The needs assessment will help me determine what to focus the workshop. Teachers are no different than other professions or their students in that they do not want to sit through something they already know. They want information that is meaningful and ready to be implemented. They do not appreciate learning something they already know which is the purpose of instructional design.

OBJECTIVES

Terminal Objective:

Given a unit of study, the teachers will map a lesson sequence complete with embedded formative assessment techniques and summative assessment choices by using the data from the formative assessment to determine the path of instruction in order to show that all students have a mastery of 90% or higher of the material.

Enabling Objectives:

Given a lesson plan, teachers will be able to distinguish between formative and summative assessments within the lesson plan with complete accuracy. (analysis)

After drawing a scenario from a pile of cards, teachers will design a quick formative assessment including the technique for delivery that they will demonstrate with complete class participation for peer evaluation at the end. (synthesis)

When asked, teachers will be able to explain the difference between formative and summative assessment with examples. (comprehension)

Given ambiguous data from a formative assessment, teachers will discuss and diagnose the next steps to take in the lesson planning in order to improve student performance. (evaluation)

ASSESSMENT

Terminal Objective:

Given a unit of study, the teachers will map a lesson sequence complete with embedded formative assessment techniques and summative assessment choices by using the data from the formative assessment to determine the path of instruction in order to show that all students have a mastery of 90% or higher of the material.

Trait	Superior	Average	Poor
Chooses learning objectives for unit	Consults district curriculum guides	Knows that “insert subject name” should be taught.	Chooses a topic based on personal favorite topic of study
Unpacks the objectives to determine prior knowledge students need	Consults state and national resources to determine prior knowledge needed to understand material	Remembers what was taught last year before teaching the current unit	Considers all students “knowledgeable” in what they need to know.

Writes summative assessment	Writes the summative assessment after unpacking the objective.	Has an idea of what will be tested once the material is taught	Plans the summative assessment the night before it is given.
Writes formative assessments to monitor student learning	Writes aligned formative assessments after writing the summative assessment	Plans to formatively assess students as the lesson progresses if it feels necessary..	Does not include formative assessments.
Writes lesson plan sequence	Lesson plan sequence is based on feedback from formative assessment data.	Lesson plan sequence is tied to the learning objectives.	Lesson plan sequence is haphazard and planned on the fly.
Embeds formative assessments in lesson using techniques learned	Students do not realize they are being assessed.	Students know that occasionally they take assessments that don't have an impact.	No assessments found in the lessons.

Given a lesson plan, teachers will be able to distinguish between formative and summative assessments within the lesson plan with complete accuracy. (analysis)

1. A lesson plan consisted of students answering multiple choice survey questions at key points during the note taking portion. The students used a “buzzer” system in which they would type in the choice A, B, C or D from the multiple choice survey questions. The software on the teachers computer would tabulate the responses and provide on demand charts for the teacher to glance at. The teacher would use the data from the questions to determine the next steps in the lesson. At the end of the lesson, the students took a pen and paper test that was scored by the teacher and grades were entered into the gradebook.

From the above scenario, choose the best response to the following questions:

- a. Which of the following choices is an example of a formative assessment?
 - A. students taking notes
 - B. students using buzzer system to answer questions
 - C. students taking pen and paper test
- b. Which of the following choices is an example of a summative assessment?
 - A. students taking survey questions
 - B. students taking pen and paper test
 - C. students taking notes.

After drawing a scenario from a pile of cards, teachers will design a quick formative assessment including the technique for delivery that they will demonstrate with complete class participation for peer evaluation at the end. (synthesis)

2. In a lesson related to having students write a sequence of events in a story, which of the following

choices would best check student understanding of deciding a sequence of events?

- a. Have students complete a worksheet in which they write the sequence of events from a given scenario.
- b. Place students in groups of 5 and give them a stack of cards in which the students are to each draw a card and organize themselves in order that makes sense
- c. Give students a quiz in which they write the sequence of events from a given scenario.
- d. Have students choose an article of their liking and write the sequence of events from the article.

When asked, teachers will be able to explain the difference between formative and summative assessment with examples. (comprehension)

- 3. A fellow teacher has noticed you have been gone to an assessment workshop. The teacher asks, what is the big deal about assessment? Isn't it all the same whether it is formative or summative, you just ask students questions? You respond:
 - a. Formative assessments help you know what the students know while you teach which gives you time to fix the problem before the big test at the end.
 - b. Summative assessments are more time consuming than formative assessments because of the grading involved.
 - c. Formative assessments are just shorter versions of the summative assessment.

ORGANIZER

Compare and Contrast

Formative Assessment

Summative Assessment

How Alike?

How Different?

_____	_____
_____	_____
_____	_____

ANALOGY

1. Formative assessment is like tasting a recipe before it is finished..

Formative assessment is the checking for student understanding while the student is learning new or reviewing concepts. The purpose is for the teacher to use the data from the assessment to decide how to proceed with the students in order to achieve the goal of all students learning. Many cooks, taste the batter or food while it is “in process” of being cooked. From the information the cook gains from the taste, the cook may adjust the recipe or proceed as suggested by the recipe to finish the food that is liked by all.

2. Formative assessment is like weighing a pig; just because you weigh a pig daily, doesn't mean that the pig is going to gain weight.

Formative assessment is only useful if the data from the formative assessment is used to improve student learning. You can assess students like mad, but if the data from the assessments are not used to provide feedback, the assessments won't improve student learning. Just like a farmer that weighs a pig every day, but makes no changes in the pig's feed to create a weight gain will probably not get what the weight gain they want for the pig.

REFLECTION ON LEARNING

How do I learn? Let me count the ways..... I can learn by doing, I can learn by hearing, and I can learn by seeing. But what does it mean to learn?

Learning is acquiring of facts, concepts, ideas, and/or procedures. Learners learn by organizing the material into structures or schema. The purpose of the structures or schema is so that the material can be retrieved at a later time. Is all learning intended? The answer to that question is no. Learning depends on the learners level of alertness and experiences they bring to the situation. I see this all of the time with students, even my own sons. They can sit there quiet and look attentive, but not learn a darn thing. This is because their minds are not in the classroom. They are thinking about other things. Experiences are just as important as well. I did not have experience in the business world which made some case studies harder to discuss than others. But, by reading and thinking about the comments of others and trying to apply my experience as a consumer, I still managed to learn. Learning is also better when an emotion is attached to the material that is learned.

Here is where I am going to cross over into instruction. Learning is also the management of the parts and wholes. Learning cannot occur without meaning or the whole being part of the instruction. Unfortunately, many teachers concentrate on the parts and do not make the connection to the whole. Students are very adept at “learning” the material long enough for the test and then promptly forget the information. This is not true learning. In addition, the human mind likes to know the answer or make sense of the situation. Instructional designers need to have experiences planned in order to

control how the learner makes sense of the material or situation.

My last comments on learning is that all people are capable of learning. This statement does not put a time limit on when the learning will occur. In order to achieve deep learning, the material needs to be broken down and put in context. Sort of like chunking the material in order to be placed in the learners schema. In order for learning to be efficient, the instructor needs to know what the learners bring to the table so they can tailor the information to the individual learners needs.

I could go on, but I think I would be discussing instruction more than learning.

Thanks for the class.

Susan German