

Qualitative Analysis Data

Each of the following pieces of data reflect some of the comments of a teacher participating in a focus group. Teachers are identified by a unique number to protect their anonymity. Their comments have been edited by the researcher in two ways: The first used common grammatical conventions to enhance the readability of the transcript, while the second removed data perceived to be extraneous to the purpose of the study.

- 2 The teacher must have a complete understanding of the mathematics content. She must have the capabilities of being multi-tasked like placing students, tutoring students, disciplining students...all at the same time! The teacher needs to be flexible and willing to individualize the program for each student.

- 4 You must have a firm grasp of content and be able to switch from topic to topic without difficulty. You must be able to spot and correct errors on the screen, and you must be able to explain concepts a variety of ways so students who cannot follow the speaker can follow you. You really need to be aware of what is going on so that you can keep students on task and monitor the class to be sure the equipment is being cared for properly.

- 6 Good organization skills to track each student and keep up with their pace so that you know when they are spending too much time on a lesson. Some students don't ask for help and will continue failing if you don't know when to step in. The task is more physically demanding than a regular classroom. After a day of tutoring individuals and going from station to station where everyone is on a different concept it can be draining but I feel much more effective than delivering a concept to a group.

- 7 You must be able to rapidly switch gears to aim instruction at the individual students in words they understand, rather than aim it toward the overall group as you would in a traditional classroom. Because you are dealing predominantly one on one, you must be able to tailor your vocabulary, your presentation, your entire methodology to a single student's knowledge core.

- 8 You must have a really good knowledge of math. It is also really important to be able to manage everything going on.

- 11 Nerves of steel. There are moments when 30 children have questions and you can't get to any of them quickly enough.
- 16 You must be well organized and able to run a structured classroom in order to handle all the situation and problems that must be taken care of in this classroom. The teacher needs to be able to plan thoroughly in order to coordinate the computer lessons, which correlate with the course outline. There is also a need to be able to manage student behavior in an experienced, effective teacher this program will live up to its potential and really give the students a good head start and a strong foundation in algebra. However, the administrators must not see it as a cure-all for weak teachers who cannot teach or manage a classroom. The teacher must not expect to just put the students on the computers and let the computers do all the teaching, as this is taking away from the effectiveness of this program. The teacher must be able to help the students pull together what they are learning on the computer lessons and transfer that knowledge to traditional lessons and test that they will run into later on in this class as well as in other math classes.
- 23 A teacher should have a good knowledge of algebra and algebraic methods and should be able to translate and simplify instructions from the program to the students. I almost forgot something really important—you also need basic computer skills.
- 24 Flexibility is the most important attribute that a teacher can have while using this program. I've learned a lot over this past year, and I have had to adjust the order of lessons, the structure of the class, and the grading procedures many times to best benefit the students' learning. Excitement is also a key to effectively using the program. If the teacher is excited about the program, they are more apt to learn more and pass the excitement on to the students. I really don't think that one has to have any special skills to effectively use the program because it is very user friendly. Being able to solve complex math problems is important so that you can help students work through them. Oh, I just remembered one more very important skill—a teacher has to be able to maintain order in the classroom. Otherwise, the students will not benefit from the program and the equipment will get stolen and/or destroyed.
- 25 I feel you need more planning time and the ability to multi-task.

- 26 There are only three things you really need: organization, patience, and flexibility.

Analysis of Data

Segments – List below, number by the teacher who is the source of the data. Extend the data table as needed.

Teacher Number	Segment	Topic
2	A complete understanding of the mathematics content	Content
4	A firm grasp of content	Content
4	switch from topic to topic without difficulty.	Teaching Function
4	explain concepts a variety of ways so students who cannot follow the speaker can follow you.	Teaching function
4	aware of what is going on so that you can keep students on task	Teaching function
4	monitor the class to be sure the equipment is being cared for properly.	Teaching function
6	students don't ask for help and will continue failing if you don't know when to step in.	Teaching function
7	dealing predominantly one on one, you must be able to tailor your vocabulary, your presentation, your entire methodology to a single student's knowledge core.	Teaching function
16	able to run a structured classroom in order to handle all the situation and problems that must be taken care of in this classroom.	Teaching function
16	The teacher must not expect to just put the students on the computers and let the computers do all the teaching, as this is taking away from the effectiveness of this program.	Teaching function
16	the teacher must be able to help the students pull together what they are learning on the computer	Teaching function

16	transfer that knowledge to traditional lessons and test that they will run into later on in this class as well as in other math classes.	Teaching function
23	A teacher should have a good knowledge of algebra and algebraic methods and should be able to translate and simplify instructions from the program to the	Teaching function
24	adjust the order of lessons, the structure of the class, and the grading procedures many times to best benefit the students' learning.	Teaching function
24	Being able to solve complex math problems is important so that you can help students work through them.	Teaching function
24	a teacher has to be able to maintain order in the classroom. Otherwise, the students will not benefit from the program and the equipment will get stolen and/or destroyed.	Teaching function
2	The capabilities of placing students	Teacher skill
2	The capabilities of tutoring students	Teacher skill
2	The capabilities of disciplining students	Teacher skill
4	spot and correct errors on the screen	Teacher skill
6	Good organization skills to track each student	Teacher skill
6	keep up with their pace so that you know when they are spending too much time on a lesson.	Teacher skill
7	You must be able to rapidly switch gears to aim instruction at the individual students in words they understand, rather than aim it toward the overall group as you would in a traditional classroom.	Teacher skill
16	there is also a need to be able to manage student behavior in an experienced effective teacher this program will live up to its potential and really give the students a good head start and a strong foundation in algebra	Teacher skill
8	It is also really important to be able to manage everything going on.	Teacher skill

16	The teacher needs to be able to plan thoroughly in order to coordinate the computer lessons, which correlate with the course outline.	Teacher skill
8	really good knowledge of math	Teacher skill
2	To be flexible	Teacher quality
11	Nerves of steel	Teacher quality
11	There are moments when 30 children have questions and you can't get to any of them quickly enough	Teaching reality
16	You must be well organized	Teacher quality
23	basic computer skills	Teacher quality
24	Flexibility is the most important attribute that a teacher can have while using this program.	Teacher quality
2	Being multi tasked	Teacher quality
24	If the teacher is excited about the program, they are more apt to learn more and pass the excitement on to the students.	Teacher quality
25	more planning time and the ability to multi-task.	Teacher quality
26	organization, patience, and flexibility.	Teacher quality
2	Willing to individualize	Teacher attitude
6	After a day of tutoring individuals and going from station to station where everyone is on a different concept it can be draining I feel much more effective than delivering a concept to a group.	Teacher reality

Categories

Paste the completed chart above below this heading.

Teacher Number	Segment	Topic
2	A complete understanding of the mathematics content	Content
2	Being multi tasked	Teaching function
2	To be flexible	Teacher quality
2	Willing to individualize	Teacher attitude
2	The capabilities of placing students	Teacher skill
2	The capabilities of tutoring students	Teacher skill
2	The capabilities of disciplining students	Teacher skill
4	A from grasp of content	Content
4	switch from topic to topic without difficulty.	Teaching Function
4	spot and correct errors on the screen	Teacher skill
4	explain concepts a variety of ways so students who cannot follow the speaker can follow you.	Teaching function
4	aware of what is going on so that you can keep students on task	Teaching function
4	monitor the class to be sure the equipment is being cared for properly.	Teaching function
6	Good organization skills to track each student	Teacher skill
6	keep up with their pace so that you know when they are spending too much time on a lesson.	Teacher skill
6	students don't ask for help and will continue failing if you don't know when to step in.	Teacher function
6	After a day of tutoring individuals and going from station to station where everyone is on a different concept it can be draining I feel much more effective than delivering a concept to a group.	Teacher honesty
7	You must be able to rapidly switch gears to aim instruction at the individual students in words they understand, rather than aim it toward the overall group as you would in a traditional classroom.	Teacher skill

7	dealing predominantly one on one, you must be able to tailor your vocabulary, your presentation, your entire methodology to a single student's knowledge	Teacher function
8	really good knowledge of math	Teacher function
8	It is also really important to be able to manage everything going on.	Teacher skill
11	Nerves of steel	Teacher quality
11	There are moments when 30 children have questions and you can't get to any of them quickly enough	Teaching reality
16	You must be well organized	Teacher quality
16	able to run a structured classroom in order to handle all the situation and problems that must be taken care of in this classroom.	Teacher function
16	The teacher needs to be able to plan thoroughly in order to coordinate the computer lessons, which correlate with the course outline.	Teacher skill
16	there is also a need to be able to manage student behavior in an experienced effective teacher this program will live up to its potential and really give the students a good head start and a strong foundation in algebra	Teacher skill
16	The teacher must not expect to just put the students on the computers and let the computers do all the teaching, as this is taking away from the effectiveness of this program.	Teacher function
16	the teacher must be able to help the students pull together what they are learning on the computer	Teacher function
16	transfer that knowledge to traditional lessons and test that they will run into later on in this class as well as in other math classes.	Teacher function
23	A teacher should have a good knowledge of algebra and algebraic methods and should be able to translate and simplify instructions from the program to the	Teacher function
23	basic computer skills	Teacher quality

24	Flexibility is the most important attribute that a teacher can have while using this program.	Teacher quality
24	adjust the order of lessons, the structure of the class, and the grading procedures many times to best benefit the students' learning.	Teacher function
24	If the teacher is excited about the program, they are more apt to learn more and pass the excitement on to the students.	Teacher quality
24	Being able to solve complex math problems is important so that you can help students work through them.	Teacher function
24	a teacher has to be able to maintain order in the classroom. Otherwise, the students will not benefit from the program and the equipment will get stolen and/or destroyed.	Teaching function
25	more planning time and the ability to multi-task.	Teacher quality
26	organization, patience, and flexibility.	Teacher quality

Analysis, Findings and Conclusions

After reading each of the descriptions for the various teachers there were 6 different categories I found that described each. The six categories were content, teaching function, teacher quality, teacher skill, teacher attitude and teacher reality. The category content spoke of the teacher having a firm grasp of the content she will be teaching and one of the contents mentioned was mathematics. The second category teaching function covered multiple responsibilities teachers have in the classroom. Some of the responsibilities were being able to switch topics without difficulty, being able to explain ideas to students in different ways, being able to run a structured classroom among other

important responsibilities. In addition, the teacher skill category list things like being able to discipline students, tutor students, and manage student behavior. Teacher quality covers crucial qualities teachers should have to be successful in the classroom. Some of the qualities teachers should have are be well organized, be flexible, and have basic computer skills. Teacher attitude is another important category because teachers must be willing to individualize. Lastly, teacher reality is the last category and how important it is. Many teachers struggle with feeling drained because they are having to constantly move throughout the classroom to serve the students or groups.

Effective teachers must be flexible, have good organization skills, have good classroom management skills, be able to adjust her lesson plans and grading style to benefit all students. She must also check on her students frequently since students will not ask for help. Being able to monitor the classroom is very important because it keeps the teacher safe, the equipment safe and the classroom stays a productive learning environment. When teachers are able to individualize in their classroom, students are set up for success. Individualization is a process of planning and implementing learning experiences that are responsive to each child's interests, strengths, and needs. Teachers reflect on their observations of each child and then plan the most effective ways to support each child's learning and development. When learning experiences are tailored to children's interests, they are more engaging and meaningful to children. Lastly, safety in the learning environment creates appropriate boundaries within which the students themselves will be capable of reaching and understanding their individual learning goals.

