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EDG500: Educational Research and Statistics

Lab 6: Qualitative Research Methods

Analysis, Findings, and Conclusions

The Algebra Computer Program

Focus Group

Data Analysis

Categories		
Teacher Number	Segment	Topic
	Organizational Skills/Planning/ Time Management	
2	The teacher needs to be flexible and willing	Flexibility
4	... able to switch from topic to topic without difficulty.	Flexibility
7	You must be able to rapidly switch gears	Flexibility
8	Also really important to be able to manage everything going on.	Flexibility
24	Flexibility is the most important attribute; adjust many times to best benefit the students' learning	Flexibility
26	There are only three things you really need: organization, patience, and flexibility.	Flexibility
2	placing students, tutoring students, disciplining students...all at the same time!	Time Management
24	adjust the order of lessons, the structure of the class, and the grading procedures many times to best benefit the students' learning	Time Management
11	30 children have questions, and you can't get to any	

Categories		
	of them quickly enough.	Time Management
25	need more planning time	Planning/Time Management
16	You must be well-organized and able to run a structured classroom; be able to plan thoroughly in order to coordinate the computer lessons; The teacher must be able to help the students pull together what they are learning	Organizational Skills/Planning/
6	Good organization skills to track each student and keep up with their pace	Organizational Skills
26	There are only three things you really need: organization, patience, and flexibility.	Organizational Skills
2	must have the capabilities of being multi-tasked	Multi-tasker
4	be aware of what is going on so that you can keep students on task and monitor the class	Multi-tasker
	Knowledge and Skill	
2	The teacher must have a complete understanding of the mathematics content.	Content Knowledge
4	...a firm grasp of content	Content Knowledge
8	...a really good knowledge of math	Content Knowledge
23	...should have a good knowledge of algebra and algebraic methods	Content Knowledge
24	Being able to solve complex math problems is important.	Content Knowledge
16	be able to help the students pull together what they are learning on the computer	Computer Skills
23	need basic computer skills.	Computer Skills
24	don't think that one has to have any special skills to effectively use the program	Computer Skills
	Classroom and Behavior Management	

Categories		
2	The teacher needs to be...willing to individualize the program for each student	Individualization
6	After a day of tutoring individuals...	Individualization
7	You must be able to...aim instruction at the individual...rather than aim it toward the overall group; you are dealing predominantly one on one, you must be able to tailor...to a single student's knowledge core.	Individualization
4	able to spot and correct errors on the screen	Problem Solver
6	Some students don't ask for help and will continue failing if you don't know when to step in.	Problem Solver
7	tailor your vocabulary, your presentation, your entire methodology	Problem Solver
16	transfer that knowledge to traditional lessons...in this class as well as in other math classes.	Problem Solver
24	able to solve complex math problems is important so that you can help students work through them.	Problem Solver
16	handle all the situation and problems that must be taken care of in this classroom; be able to manage student behavior	Behavior management
24	a teacher has to be able to maintain order in the classroom.	Behavior management
4	be sure the equipment is being cared for properly.	Equipment Care
24	the equipment will get stolen and/or destroyed.	Equipment Care
Personal, Communication, and Social Skills		
6	The task is more physically demanding than a regular classroom; it can be draining but I feel much more effective than delivering a concept to a group.	Physical and mental endurance
11	Nerves of steel.	Physical and mental endurance
16	The teacher must not expect to just put the students on the computers and let the computers do all the	Physical and mental endurance

Categories		
	teaching	
26	There are only three things you really need: organization, patience, and flexibility.	Physical and mental endurance
4	able to explain concepts a variety of ways so students who cannot follow the speaker can follow you	Effective Communicator
7	You must be able to aim instruction in words they understand	Effective Communicator
23	able to translate and simplify instructions from the program to the students.	Effective Communicator
24	pass the excitement on to the students.	Effective Communicator
6	but I feel much more effective than delivering a concept	Program Supporter
16	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.	Program Supporter
24	If the teacher is excited about the program, they are more apt to learn more and pass the excitement on to the students.	Program Supporter

Findings and conclusions

To address the inquiries of the administration, the following findings are presented as a result of the indicated discoveries. The Algebra Computer Program sought a researcher to implement a focus group to achieve results and explore feedback and data on how teachers used the program in their classrooms. Under the supervision of the focus group teachers, students worked in computer labs on a mastery model of learning for algebra. The program was

used either to supplement instruction or for instruction in its entirety. The teachers were asked, “Based on your experiences this year, what skills do you feel are needed to effectively use the *Algebra Computer Program* in your classroom?”

The data received from the teachers was compiled and compressed for analysis by categories and topics. Teachers were provided anonymity and assigned numbers. The results indicate the following themes. Due to the individualization of the independent program, a major theme was the need to be highly organized, have ample time for planning and planning well, and be structured but flexible. One teacher said, “There are really only three things you really need: organization, patience, and flexibility.” Another stated, “You must be well-organized and able to run a structured classroom, and plan thoroughly in order to coordinate the computer lessons.” Classroom and behavior management was another vital category. The teacher’s comments stressed the demands of individualizing for each student, problem-solving, and behavior management. Of these three topics, most feedback was related to the importance of being a problem solver, not only to assist the students in content but handling the diverse situations and complexities of many different instructional dynamics occurring at once. Several comments were, “Some students won’t ask for help and will continue failing if you don’t step in,” and “You must be able to aim the instruction at the individual; able to tailor to a single student’s knowledge core.” Behavior management was a concern for others, “handle all the situation and problems that must be taken care of and be able to manage student behavior.”

The Personal, Communication and Social Skills category emphasized the need for mental and physical endurance. The comment from one teacher was brief and to the point about what was needed-- “nerves of steel.” Another added, “The task is more physically demanding than a regular classroom.” The importance of being an effective communicator was shared to “aim instruction in words they can understand, explain concepts in a variety of ways, and translate and simplify the instructions.”

Knowledge of content and computer skills were mentioned, and their importance was addressed. However, there were fewer remarks in this category concerning what would be needed to use the program effectively.

Finally, the program received enthusiastic feedback from those excited about it. While considering the following accolades, and also committing to address ways to support the other concerns of the focus group, the data indicates it has the potential to be a program worth continuing. Consider these positive statements, “with an 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,” and “If the teacher is excited about that program, they are more apt to learn more and pass on the excitement to the students.”