Toward a common understanding of research-based instructional strategies

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ABSTRACT

A review of available books, articles and on-line resources which deal with "Research-Based Instructional Strategies" will produce a plethora of materials which promote the effectiveness of these strategies on student achievement. Also, a perusal of classroom instruction and teacher evaluation instruments will reveal that many of the evaluation instruments used for evaluating teachers address, to some degree, the use of "Research-Based" or "High Yield" instructional strategies. Since there is such a vast number of references to "Research-Based" and "High Yield Strategies", and since teachers are evaluated on their implementation of said strategies, there is an obvious need for a common understanding and definition of those strategies. This research project sought to determine what strategies classroom teachers believe are actually "Research-Based" strategies. When asked to self-report on the implementation of research-based strategies in the classroom, teachers overwhelmingly report that they are indeed using these strategies in the classroom. However, when asked to list the research-based strategies that they use in their classroom, the teachers' answers to the open-ended question show a lack of a common understanding of what is meant by "Research-Based Strategies." Many teachers listed resources and materials rather than strategies. The implication of this research is that any education community should establish a common understanding and definition of "Research-Based" Instructional Strategies.

Keywords: Research-Based Strategies, Teacher Evaluation, Classroom Instruction

INTRODUCTION

Much has been written and said about Research-Based Strategies in the past few years, especially since 2001 when the Association for Supervision and Curriculum Development published a book entitled, "Classroom Instruction That Works" by Robert Marzanno, Debra Pickering and Jane Pollack. The authors of this book conducted a meta-analysis of qualitative and quantitative research that measured in some way, the effects of instructional strategies on student achievement. The result of the study was a list of the 9 most effective teaching strategies. In the book, the strategies are listed, defined, and described; the authors also report the gains in student achievement that can be expected from using each strategy. A precise list of the 9 strategies can be found at: http://www.ntuaft.com/TISE/ResearchBased%20Instructional%20Strategies/marzanos%209%20strategies.pdf. Since the book's release, several epithets have become synonymous: Marzanno's Strategies, Research-Based Strategies, and High-Yield Strategies are just a few of them. The most commonly used one seems to be "Research-Based" Strategies.

A search of the Internet produced many articles; power points and writings that indicate State Education Agencies utilize the 9 research-based strategies for teacher training or professional development. One example is the West Virginia Achieves Professional Development Series, Volume 15, which is a presentation on Research Based High-Yield Instructional Strategies: the presentation is based on Marzanno, Pickering and Polack's book. Also, an internet search of teacher evaluation tools by state revealed that many State Education agencies, such as Tennessee, Virginia and more have an indicator of teacher effectiveness on their evaluation form that deals with the implementation of Research Based or High Yield Strategies.

Of course, one could assume that a Research-Based Strategy, technically, is any strategy that has been measured in some way qualitatively or quantitatively. But, evidence suggests that most of the time the wording "Research Based Strategies" has been used since 2001, it refers to the 9 most effective teaching strategies recorded in the book *Classroom Instruction That Works.* Since so much conversation, writing and, evaluation alludes to or espouses the use of Research Based Strategies, some questions arise. One question would be, "Do stakeholders in the education community: teachers, evaluators, trainers, and more, have a common definition or understanding of just what is a Research Based Strategy?"

METHODOLOGY

This research study was conducted to try to determine whether or not educators share a common understanding of research based strategies; and specially, what do teachers report when asked to name examples of research based strategies.

The Open-Ended Question

To collect the data for the study, a 20-question survey was distributed to one state's population of teachers via email. All questions on the survey were open-ended and respondents received no prompting other than the question. The survey was emailed to the superintendents of the state's school districts. The superintendents were asked to forward the questionnaire to the teachers in the respective school districts. At the end of the survey period, a total of 315 teachers

had responded to the questionnaire. This study focused on one of the open-ended questions on the survey, namely, "Name some research based strategies you use in your classroom."

Since the responses were open-ended, the data analysis was quantitative. The Content Analysis methodology was used to analyze the responses. After the researchers coded responses with the agreed upon categories, the results were then quantified to report the findings of the study.

Content Analysis is a qualitative research method, which has been used extensively since 1910 to qualitatively analyze textual content. Sociologist Max Weber used this textual analysis process to identify commonalities in mass communications and analyze the press coverage of political issues in Germany. During the 1930's and 1940's, Harold Lasswell, an American communications expert, used this research method to identify the content of wartime propaganda. The Content Analysis Research Method uses categorization procedures to formulate valid and replicable inferences from data in their context. There are five basic stages to the Content Analysis process: coding, categorizing, classifying, comparing and concluding. The first step, coding, is the basic tool for determining the unit of analysis and counting how many times the unit appears. In this study, the "main idea" was used as the coding unit. The second stage, categorizing, involves creating meaningful categories in which to organize the coded units. In this study, the Tenets of Constructivism were used as the categories. Classifying involves verifying that the units of analysis can be repeatedly assigned to the appropriate categories. In this study, the researchers worked together to establish the reliability that coding of the text units and categorizing could be replicated. This was accomplished in the Comparing stage. This stage involves comparing the categories in terms of numbers of units in each category and performing any relevant statistical analysis. In this study, the percent of the units that fell in each of the categories was compared. The Concluding stage was employed to draw theoretical conclusions about the content in the context.

The initial analysis of the data from this research question indicated a low incidence of teachers naming research-based strategies. This information prompted a second question: If teachers cannot, or do not, name research-based questions, would observations of teachers teaching in the classroom reveal that they use research-based strategies?

The Fetterman & Associates Empowerment Self Audits Data

Fetterman & Associates,(http://www.davidfetterman.com/), an international evaluation company (http://www.davidfetterman.com/) guided 8 schools in the same state where the open-ended survey was conducted through an Empowerment Self Audit process. David Fetterman, CEO of Fetterman & Associates explained the Self Empowerment Evaluation in 1996. The research population for the 20 open-ended question survey included the teachers in the 8 schools where Fetterman & Associates guided the Empowerment Self Audit process. Thus, the teachers included in the schools' Empowerment Self Audit process were a sub-population of the research study. The researchers secured the data from the 8 Fetterman & Associates Self-Audit Reports. Two questions in the Empowerment Self Audit process addressed research-based strategies. One question asked teachers in the 8 schools to respond to the following statement, "Effective, research-based teaching strategies are used in every classroom in our school." The teachers selected a response from the following options: Strongly Disagree, Disagree, Agree or Strongly Agree. Another section of the Fetterman & Associates Self-Audit Reports was a table reporting the results of classroom observations by Fetterman & Associates' consultants. One item

observed and reported in the table was "Research based instructional practices are in use." Fetterman Associates documented their observation to this item with a rating of Exceptional, Acceptable or Needs Improvement.

The final step in the research was to compare the data from the question, "Name some research based strategies you use in the classroom." with the 2 items from the Fetterman & Associates Empowerment Self Audit Reports which included the sub-population.

FINDINGS

Results from the Open-ended Question

Three hundred and fifteen teachers responded to the survey; 274 answered this particular question: "Name some research-based strategies you use in the classroom." The 274 teachers listed 825 separate "strategy" responses. Of the 274 teachers who responded to this question, 45 teachers listed some form of one of the 9 Research Based strategies identified by Marzanno, Pickering, and Pollak. Some responses did not address the prompt, and some teachers chose to make a statement concerning strategies. Many teachers listed researchers or writers, many listed instructional materials, and many listed instructional programs, models, curriculum planning techniques and initiatives.

When asked the question, "Name some research-based strategies you use in the classroom.", only 13% of the teachers named some form of the 9 Research Based Strategies. Only 29% of the items listed as research based strategies were actually instructional strategies.

Table 1: Overview of Response Data

Number of Participants	Number of Participants Answering the Question	Number of Participants Naming a Research Based Strategy	Number of Specific Responses	Number of Specific Responses About Research Based Strategies
315	274	42	825	245

Of the 245 responses that were actual strategies, 21% were some form of Cooperative Learning, 20% were some form of Identifying Similarities and Differences, 16% were some form of Summarizing and Note Taking, 12% were some form of Generating and Testing Hypotheses, 11% were some form of Reinforcing Effort and Providing Recognition, 9% were some form of Setting Objectives and Providing Feedback, 4% were some form of Nonlinguistic Representations, 5% were some form of Questions, Cues and Advanced Organizers. And 1% were some form of Homework and Practice.

Table 2: Number of Responses by Strategy

Marzanno, Pickering and Pollack's Research-Based Strategy	Number of the 825 responses that fit in each strategy category
Identifying Similarities and Differences	48
Summarizing and Note Taking	38
Reinforcing Effort and Providing Recognition	28
Homework and Practice	4

Nonlinguistic Representations	11
Cooperative Learning	51
Setting Objectives and Providing Feedback	22
Generating and Testing Hypothesis	30
Questions, Cues, and Advance Organizers	13

Many of the 825 individual responses were names of researchers and writers. The persons listed as research-based strategies are listed in the table below.

Table 3: Persons listed as research-based strategies

Author or Researcher	Area of Expertise
E. P. Torrance, J. S. Renzulli and F.E. Williams	Creativity and Gifted and Talented Education.
Ruby Payne	Characteristics of Children in Poverty
Marie Clay	Early Intervention for Reading
Robert Kegan	Meaning-making
Charlotte Danielson	Framework for Teaching
Mike Schmoker	Focusing on the Essentials
Lucy Caulkins	Primary Grades Literacy
Fred Jones	Classroom Management and Procedures
Madeline Hunter	PET lesson planning model.

Many of the responses were actually curriculum programs, professional development programs and lesson planning guides. Some of the programs listed were Love and Logic, Cognitively Guided Instruction, Effective Literacy, Reading First, Comprehensive Literacy Model, Gizmos, Labs, ABA, Modeling, Direct Instruction, PET, DRA, Words Their Way, Words Journey, 5 e model, ELLA, VAKT, MAX teaching, SRA, Reading Recovery, Orton-Gillingham, Lit Lab, and the Literacy Design Collaborative.

A few teachers seemed to use the opportunity to make a statement. Some examples of those responses are listed in the table below.

Table 4: Teacher comments about research-based strategies

After 25 years, I have seen the "research-based" strategies come and go and obtain new names for old strategies. Use some logic and common sense.
None
I am afraid I find most research produces the results the person is wanting to produce and is therefore not useful. Most of the folks researching don't know anything about real classrooms.
Not big on research-based, prefer my own observation and research. If it happens to fall into a certain researched so be it. I have enough to remember with the number students I see daily to remember the research based strategies.
I use a wide range of strategies and do not rely on any one since they are often repetitious and the designers only change the terminology. Research is also often flawed since it is carried out in institute of higher learning and small trials, seldom done in real-life situations.
I've not use very much research-based strategies.

Results from the Fetterman & Associates Empowerment Self Audit Reports

One hundred seventy-eight teachers from 8 public schools were involved in the Empowerment Self Audits guided by Fetterman & Associates. Eighty-eight percent of the teachers Agreed or Strongly Agreed with the statement, "Effective, research-based teaching strategies are used in every classroom in our school." The combined results of the Fetterman & Associates observations and responses to the statement, "Researched based instructional practices are in use." Is recorded in the Table below.

Table 5: Responses to "Researched based instructional practices are in use."

Exceptional	Acceptable	Needs Improvement
49 (27%)	92 (51%)	37 (22%)

Fetterman & Associates consultants recorded at least acceptable implementation of research-based strategies in the classroom visits in 78% of the observations, and 88% of the teachers reported that they Agree or Strongly Agree that research-based strategies are used in every classroom in their schools.

CONCLUSIONS

The data from this research project indicates a major breakdown in communication. One could conclude from the open-response question data that teachers do not know what research-based strategies are, especially since only 16% of the teachers named an actual teaching strategy. However, the observation data from the Fetterman & Associates Empowerment Self Audits indicate that teachers are using some form of a research-based strategy 78% of time. One could conclude from these two data sources that perhaps the breakdown is in the disconnect between teachers' understanding of research –based strategies and the expectations on teacher evaluation tools. One obvious misunderstanding is that teachers seem to have a misunderstanding of the difference between teaching materials, curriculum programs and instructional strategies. One other obvious conclusion is that some teachers are frustrated with some accountability and change initiatives. The most obvious implication of this research study is that some work needs to be to done to create a common understanding among all the stakeholders in the education community as to what constitutes a research-based instructional strategy: a move Toward a Common Understanding of Research-Based Instructional Strategies.

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