ABSTRACT
        The Department of Curriculum and Instruction at
Central Missouri State University, Warrensburg, Missouri, has
designed an experience for student teachers in elementary schools to
prepare them for reflective thinking in their own classrooms. Student
teachers conduct action research by reflecting on what they do in the
classroom, identifying effective practices, and implementing positive
change strategies. Action research papers (n=515) written over the
past 4 years were examined to determine the breadth and variety of
topics that student teachers are researching. A table lists the
variety of concept areas researched, and 10 subsequent tables list
topic areas in some of the major concept areas such as academic
achievement, behavior management, mathematics, and reading. It is
felt that the variety of research selections shows that the student
teachers are finding issues in their own classrooms that interest
them and they are willing to put forth the effort to find out
alternative ways of approaching the issues. Individual faculty
advisors may find a redundancy in the topics of their advisees, but
this may be more faculty influence than student selection. The
benefits of the process of action research are shown by comments
subsequently made by the student teachers in their first years of
teaching. Eleven tables, which make up most of the paper, detail the
action research projects. Contains nine references. (JDD)

Action Research: Reflective Thinking Model

Applied During Student Teaching

A Paper Presented to the

Association of Teacher Educators

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Action research is a practical and directly relevant pursuit reflecting the development of new approaches to solve problems with direct applications in actual situations within the student teacher's world. The subjects of the research are the classroom students, staff and others with whom the student teacher is primarily involved. Action research provides an orderly framework for problem-solving and new assimilation of developments that are superior to the impressionistic, fragmentary approaches that otherwise typify developments in education. It is also empirical in the sense that it relies on actual observations and behavioral data, and does not fall back on subjective opinions of people based only on their past experience. Action research is flexible and adaptive, allowing changes during the trial period and sacrificing control in favor of responsiveness in experimentation and innovation.

The move towards action research projects by student teachers is a "New Direction" in student teaching, and is a means to strive for excellence and accountability within the student teaching semester and the full development of reflective thinking in teachers. In student teaching, it is important that each student make rational choices between alternative practices, validate the effectiveness of those practices, and to build a stable foundation of effective practices as a safeguard against ineffective teaching. This prepares them for their own classroom and the independence of being a practicing professional.

Today's practitioners are expected to demonstrate reflective teaching strategies through a conscientious effort to reflect on what one does in the classroom, identifying effective practices and then implementing positive change strategies. This method means that teachers continually assess, reflect and make decisions on everyday classroom experiences.

With this philosophical premise, the Department of Curriculum and Instruction at Central Missouri State University, Warrensburg, Missouri, set out to design an experience for student teachers in the elementary school that would prepare them for reflective thinking in their own classrooms. This experience is part of a course that elementary student teachers take while they are out in the public schools. This seminar course fosters professional reflection through a structured analysis and synthesis by the students of the progress of the process of becoming a teacher. The focus of this presentation is a description of the categories of research done by students since the beginning of the action research component.

After four years of doing the action research projects there was growing concern that the topics being researched were being recycled and that, over time, there was little variety in the action research papers. In fact, some faculty advisors supposed that there might even be plagiarism going on and that the students were just copying previously written papers.

A careful examination of the 515 papers written over the past four years shows clearly that this supposition is false. The following data clearly represent the breadth and variety of topics that the student teachers are researching. Table 1 shows the listing of basic curriculum and concept headings within the 515 papers.

Table 1

Variety of Concept Areas Researched and Number of Papers Within Each Heading

Headings	Number of Topics	Number of Papers
Academic Achievement	25	29
At Risk	2	2
Attention Deficit Disorder	6	12
Behavior Change	8	9
Behavior Management Techniques	22	29
Classroom Arrangement	13	25
Contracts	2	2
Cooperative Learning	9	16
Creative Writing	7	18
Kindergarten	17	24
Language	5	14
Learning Centers	3	4
Learning Styles	2	2
Math	23	85
Miscellaneous	17	19
Nutrition	2	2
Parental Involvement	4	5
Positive Reinforcement	22	81
Reading	22	36
Science	8	12
Self-Esteem	6	7
Social Studies	6	6
Spelling	19	66
Teaching Strategies	6	10
Total	256	515

Tables 2- 10 show the variety of topics under the headings which have many papers. Table 11 shows the variety of headings under which Cooperative Learning is found.

Table 2

Variety of Topic Areas in Academic Achievement

Topics	Number of Papers
Behavior Problems	1
Competition	1
Computer-Aided Instruction	1
Concept Mapping	1
Cooperative Learning/Jr. High	1
Cooperative Learning	2
Daily Written Quiz	1
Departmentalization	1
Desk Organization	3
Extra Practice in Math	1
Extrinsic Motivation/Math-7th Grade	1
Gender	1
Home Study	1
Increasing Vocabulary	2
Late Assignments	1
LD/Individual Instruction	1
Learning Styles	1
Organizational Skills	1
Peer Tutoring	1
Positive Stimulation	1
Reduce Noise Level	1
Review Multiplication Facts-6th Grade	1
Self-Concept	1
Teacher Expectation	1
Worksheets vs. Hands On	1
Total	29

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Table 3

Variety of Topic Areas in Behavior Management Techniques

Topics	Number of Papers
Assertive Discipline	3
Assignment Sheets - Books	3
Attention Training System - 4th Grade boy	1
Class Meeting to Resolve Conflict	1
Classroom Management Systems	1
Competitive Groups	1
Conflict Resolution - 2nd Grade boy	1
Contracts	2
Discipline Strategies	2
Motivational Techniques -1st Grade boy	1
Organizational Skills	2
Peer Modeling/Time On Task	1
Peer Rewards	1
Preventing Discipline Problems.	2
Required Hand Raising	1
Shyness	1
Teacher Attire	1
Teacher Oriented Discipline	1
Verbal Instructions	1
2nd Grade Student	1
5th Grade Classroom	1
Total	29

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Table 4

Variety of Topic Areas in Class Arrangement

Topics	Number of Papers
Attention Span	3
Behavior of 2nd Graders	1
Behavior of 3rd Graders	1
Cooperative Learning	1
Floor Seating-Participation	1
Following Directions	3
Instruction Time	1
Overcrowded Classrooms	1
Participation	5
Social Behavior/Gender	1
Social Interaction	2
Student Behavior	1
Time on Task	4
Total	25

Table 5

Variety of Topic Areas in Kindergarten

Topics	Number of Papers
Behavior Modification/Time on Task	2
Cooperative Learning	3
Emergent Literacy	1
Handicap Awareness	1
Journal Writing Skills	2
Learning Styles	1
Letter Recognition	2
Manipulatives	3
Nutrition & Food Choices	1
Peer Tutoring	1
Precisely Timed Activities	1
Productive Transition Time	1
Reading Areas/Talking	1
Social Interaction	1
Student-Oriented Charts	1
Thematic Units	1
Token Economy System/Behavior	1
Total	24

Table 6

Variety of Topic Areas in Math

Topics	Number of Papers
Ability Grouping	1
Analog Clocks	1
Comprehensive Skills	2
Computer Usage	4
Cooperative Learning vs. Independent	2
Cooperative Learning	19
Formal Management & Completion of Work	1
Formative Evaluation, Grades 7&8	1
Grouping Skills	1
Individual Instruction	1
Journals	1
Learning Centers	1
Manipulatives	27
Mastery Math	2
Multi-sensory Instruction	7
Multiplicative Facts Drill	2
Peer Tutoring - 6th grade	1
Peer Tutoring - Grades 1-3	4
Problem Solving	2
Repeated Addition	1
Socialization-Games	1
Using Real Money-1st Grade	1
Visual Imagery	2
Total	85

Table 7

Variety of Topic Areas in Miscellaneous

Topics	Number of Papers
Early Childhood, Special Education	1
Effects of Literature on Motivation	1
Force and Verbal Abuse	1
Gender Bias	2
Kinesthetic Numeral Writing	1
Left-Handed Instruction	1
Listening Skills	1
Make-up Work	1
Mastery Learning	1
Multisensory Testing	1
Peer Teaching vs. 1st grade	1
Personal Hygiene/2nd grade	1
Random Student Participation	2
Socialization/Mainstreaming EMR	1
Teacher Attitudes/Time on task	1
Visiting the Library	1
Visual Aids/Letter Reversal	<u>1</u>
Total	19

Table 8

Variety of Topic Areas in Positive Reinforcement

Topics	Number of Papers
1st Grade Low Achievers	3
Attendance - 8th Grade	1
Behavior	8
Behavior Disorder-Control	6
Behavior in Hallways	3
Behavior-7th Grade	1
Effect of Candy on Completion of Assignments	20
EMR	2
Established Goals	1
Extra Recess as Reward	1
Extrinsic vs. Intrinsic	2
Homework - 3rd Grade	1
Hour-English Speaking Student/Time on task	1
Increasing Responsibility	1
Individual Communication	1
Motivation of Grades 1-3	6
Negative vs. Positive	4
Put Name on Papers	1
Student Demands Attention	2
Time-on-Task	14
Transition in 2nd Grade	1
Work Habits	1
Total	81

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Table 9

Variety of Topic Areas in Reading

Topics	Number of Papers
Active Book Reports	1
Advanced Organizers/5th grade	1
At Risk	1
Book Reports	1
Books of Interest/2nd grade	1
"Cloz" Procedure	1
Cooperative Learning	3
Dolch Basic Sight Words	1
Individual Instructor	1
Interests	2
Language Experiences	3
Look & Say - 1st Grade	1
Music in Silent Reading	1
Oral Presentation	2
"Possible Sentences" Activity	1
Positive Reward - 1st Grade	1
Sequencing	1
Sight Words - 1st Grade	4
Story Mapping	1
Strategic Instruction	3
Tactile/Letter-Sound Recognition	1
Whole Language	4
Total	36

Table 10

Variety of Topic Areas in Spelling

Topics	Number of Papers
A.D.D. Program	1
Achievement Level Grouping	1
Additional Review	2
Cooperative Learning	17
Cooperative vs. Individual	3
Daily VATK Practice	2
Games-Achievement	2
In General (Elementary Schools)	3
Individual Instruction	3
Integrated Language Arts	1
Multisensory Instruction	15
Paired Learning-Modality	3
Reward Systems	2
Short Term Interventions	1
Short, Daily List	1
Test-Study-Test Program	5
Whole Language-5th Grade	1
Writing Experience	1
Computers-1st Grade	2
Total	66

Table 11

Variety of Concept Areas Including Cooperative Learning

Headings	Number of Papers
Academic Achievement	3
Classroom Arrangement	1
Cooperative Learning	16
Creative Writing	2
Kindergarten	3
Language	1
Math	21
Reading	3
Science	1
Spelling	20
Total	71

The variety of research selections shows that the student teachers are clearly finding issues in their own classrooms that interest them and they are willing to put forth the effort to find out alternative ways of approaching the issues. The variety also shows that individual faculty advisors may find a redundancy in the topics of their own advisees, but this may be more faculty influence than student selection.

The benefits of the process of action research are shown by the comments made by the student teachers when we see them in the first couple of years of teaching. Over and over again we hear that they are glad to have gone through this process for several reasons. First, they had specific language and examples to share in the interview setting when asked how they would handle a hypothetical situation. These student teachers could speak clearly about the reflective-decision making process and how to come to a rational, rather than a gut reaction, response. Secondly, they tell about how having gone through the process of learning how to concisely document observations and other data made it much easier for them to document student behavior for special education staffings and parent conferences. Finally, they tell how they are using the reflective-decision making process in making real life decisions in their classrooms. Some have even had the opportunity to share their research with other teachers in the building and participate in staff in-service.

Action research during student teaching is a time consuming process for the student teacher and the faculty advisor if it is done correctly. However, the benefits to the student teacher, and ultimately to the children they teach are worth it.

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