The primary objective of a project undertaken by the University of Dayton (Ohio) and a local school district was to create an environment of academic inquiry built on a strong foundation of collaboration between the school district and the university. Using the Getzel Model of organizational interaction, teachers were paid, encouraged, and instructed in academic inquiry through a collaborative effort between the school district and the university. Twenty projects were written, begun, and partially evaluated during the 1994-95 school year. The 20 projects followed a four-phase model designed to unite university and school district through a collaborative model of inquiry. The four phases involve: instruction-based dialogue; implementation by teachers and funding for their requirements; continuation and replication; and commitment of teachers to leadership. It is concluded that the following are important for the success of a research project such as this one: (1) trust and academic dialogue; (2) commitment to fundamental research, especially at the teacher level; and (3) interrelation among change and practical (action) and theoretical (basic) research. (Contains 13 references and an appendix with 15 University of Dayton Project—Ripley Union Lewis Huntington Schools research abstracts.)

(MAH)
THE UNIVERSITY AND THE SCHOOL: A LEADERSHIP MODEL FOR COLLABORATIVE INQUIRY

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Abstract

The University and the School: A Leadership Model for Collaborative Inquiry.

The primary objective of this research project was to create an environment of academic inquiry that was built on a strong foundation of collaboration between a school district and a university. Using the staff of a rural school a workable model for school leaders was designed that encouraged, supported, and funded teachers in the process of academic inquiry.

Using the Getzel Model of organizational involvement and the literature of Giroux, Maslow and Joseph, the researchers developed an effective implementation model for educational leaders who desire to excite rigorous academic research among their staff.
INTRODUCTION

The need for teachers to be creative and to operationalize that creativity through the use of action or applied research, theoretical or basic research, or activity centered projects is not new. This pursuit of knowledge through creative channels is neither driven from the reality that schools are centers of inquiry, nor is this pursuit driven by the fundamental knowledge that teachers should be producers as well as transmitters of knowledge (Schaefer, 1967). Today, in the busy world of teaching, teacher creativity and research have taken a back seat to teacher class loads, extra-curricular activities and intensive testing. Therefore, moneys, incentive grants, and developmental dollars that would foster and train teachers to be creative are shortchanged, and typically foster only marginal research.

The primary objective of this project was to create an environment of academic inquiry that was built on a strong foundation of collaboration between a school district and a university. Using the Getzel Model of organizational interaction, and the ideographic and nomothetic dimensions inherent in that model, teachers were paid, encouraged and instructed in academic inquiry through a collaborative effort between the school and the university.

The operational objectives were: 1.) the development of a “burning desire” project that would direct teachers toward research and inquiry which would foster investigation into their discipline, and 2.) the collaboration between a research faculty, doctoral students, and a public school system.
Those two objectives were brought to operational status when 20 teachers in a local school district and a local research university decided to develop an environment of collaborative inquiry.

**Data Source**

The entire 157 member faculty of a local school district in Ohio comprised the applicant pool. Each staff member, including classified, was encouraged to submit an initial proposal for consideration. Over 50% of the staff responded with a proposal. A $4000 grant was awarded to the school by the university to pay stipends to the twenty teachers. Each teacher received a $200 stipend, at least two full days of personal time to write, and dollars for supplies. The school board paid for substitutes and supplies while the grant paid stipends.

The proposals reflected originality, and the collection of the final projects represented individuality in their data collection and methodology. Therefore, our final data set reflects not only an aggregate collection of operational results, but a composite of individual teacher projects that were developed through a process of collaboration. The data reflects a positive leadership model for the art of inquiry.

**Literature Review**

Practical inquiry is devoted to solving immediate problems faced by people in concrete settings. The concern is with responding to and overcoming those problems (Brewer, 1988).
Jerome A. Popp (1978) separates practical and theoretical inquiry: Practical inquiry is aimed at the direction or guidance of action; its linguistic outputs are thus prescriptions. Theoretical inquiry is descriptive and its conclusions are assertive. Popp (1978) states that “Prescriptions are, thus, the fundamental units of practical thinking just as propositions are the fundamental units of theoretical thinking” (p. 282).

Clearly, research should celebrate thought, calculation and contemplation. However, a marriage for the modern day teacher must occur. The Western secular thought, a soul/body dualism, is one possibility (Brewer, 1988). It can be argued that the pursuit of knowledge as a disinterested and intrinsic function is not all by itself accurate. Plato, and even Socrates himself, was intent on helping others see the principles and ideas of higher order reality which lie behind the immediate and concrete activities of daily life. Therefore, an integration between the practical and theoretical fields of research must occur. For critical pedagogy to be developed as a form of cultural politics, both the teacher and the student must be viewed as transformative intellectuals. In other words, thinking and acting are inextricably related (Giroux, 1988).

Rooted at the base of teacher research is a need to know. If we are to understand it well, this need to know must be integrated with the fear of knowing, with anxiety, and with the needs for safety and security (Maslow, 1968). Teachers, especially at the primary levels, have been relegated to “distributors” of knowledge and social conformity (Schaefer, 1967). Our schools should be staffed with scholarly
teachers, and organized as centers of inquiry that foster a new tough-minded progressivism that is at the same time appropriate to contemporary needs (Cremin, 1965).

J.W. Getzels (1978) talks about the skepticism of educators concerning basic research. Getzels argues that the assertion that research has little bearing on the operation of schools is wrong. Educational research must be a vital component of educational practice. Getzels presents a four part argument for the enhancement of teacher research in schools. First, basic or theory-oriented research can have powerful effects on the operation of schools. Second, basic or theory-oriented research contributes to broad conceptions and fundamental paradigms of human behavior that provide the crucial contexts and guides for the substance and method of education. Third, these conceptions and paradigms enter into the preparation of school personnel and alter the preparation of leaders. Fourth, the university performs a practical and ultimately applied function through its basic research in formulating and pursuing apparently impractical problems. These arguments heighten the importance of the theoretical research perspective and can further be strengthened by examples of successful integration to practice.

However, practical research, or interactive research, is a more common modality. In the interactive process the problem-solving model is the most preferred concept of research. This model is a linear one. Research provides empirical evidence and conclusions that help to solve a policy problem. The decision drives the
application of research. A problem exists and a decision has to be made, information is
missing and research provides the missing knowledge. When the research is
conducted, the gap is filled (Weiss, 1979). This model, while still highly optimistic in its
impact on policy action, seems to be the favored approach to research. Teachers can
utilize this type of research to impact their classroom and their buildings. Some of the
teacher research in this type of model can be commissioned by the district, and the use
of the research will impact future choices and procedures.

The Process of Research

Educational researchers do not go shopping for topics. Also, teachers do not
pick topics from a list. Teacher-researchers tend to study questions or topics that
impact their own classrooms. Curiosity is the seed for the research question, and the
integration between theory and practice is the developmental model for the research
design. Fundamentally, the teacher-researcher can generate a hypothesis, or test a
hypothesis. As educational researchers, we can place aspects of a theory (called hypothesis) under a microscope (Brause & Mayher, 1984).

To test theory, we would need to focus on only one aspect of the total theory.
These aspects are frequently called variables which potentially contribute to the
predicted outcomes. The teacher-researcher would manipulate the desired variables to
test the influence of the variables. After the research is completed, the variables
scrutinized to determine their individual or collective impact on the hypothesis, then the
theory is accepted, modified or abandoned (Brause & Mayher, 1991). Different
teaching models, different teaching techniques, and different teaching styles can be researched and adapted, changed or modified for each individual teacher-researcher. The hypothesis (theory) testing research is of great benefit to the classroom instructor.

Research which generates theory is called hypothesis generating. This type of teacher research studies naturally occurring phenomena, those not subject to experimenter manipulation. By reflecting on a particular experience in the classroom, the teacher-researcher can exemplify and identify the research question which will generate the theory. Furthermore, when a teacher reflects on routine approaches to organizing and enacting classroom instruction, the teacher adopts an "inquiring stance" and questions the effectiveness of the process. Identifying the available population, selecting data which are accessible, selecting data which are representative of a larger pool of information; and identifying the resources available are essential parts of forming the research question (Brause & Mayher, 1984).

Change Through Research

The learning organization is very diverse. Subsequently, the process of change is not simple. Research, research design, and new concepts of instruction are dependent on the understanding of that diversity. Research that effects change must not fall victim to cultural myopia, or the belief that one's particular culture is appropriate in all situations and relevant to all others (Loden & Rosener, 1991). Change must, at least in the new century, reflect diversity of cultures and cultural ideologies. When change occurs to a learning organization, many times those changes are instituted on a
peripheral level so as to appease the researcher. The end result of this action is that the researcher has little impact on the mainstream culture, and the organization sees little benefit from the research. Change, as indicated earlier, takes time and commitment.

This commitment known as change tends to travel through mental models to paradigms of success. Joel Barker (1992) says that, "A paradigm shift, then, is a change to a new game, a new set of rules" (p. 38). This shift becomes the high water mark for educational change. Many of the paradigm shifts have been initiated by people experimenting with the current rules. When the rules change, the whole world can change. The adherence to rigorous inquiry creates an environment in which many of the rules will be modified or changed. Then, change can become a direct result of research, and research becomes the vehicle for a systematic evaluation of what is, as well as what should be.

Since change has been linked to a paradigm shift and a collaborative effort of design and methodology, the ability to create the new also has to be built into the organization (Drucker, 1993). Isolated research by any teacher in any organization will not produce change. Therefore, the organization must build into its very fabric three systematic practices. First, each organization requires continuing improvement of everything it does. Secondly, every organization will have to learn to exploit, to develop new appellations from its own successes. Finally, every organization will have to learn how to innovate and organize a systematic process of teacher research.
Modern organizations, using this research driven process of change, create another tension, a tension that is created by change in a community that does not always accept change. Because of change, and an organization that is focused on change, the school community must transcend community in order to foster change (Drucker, 1993). Transcending the community to foster change is not an easy task. Change based on teacher driven research is change that will evolve and develop to become a sound part of the curricula. This process is based on a strong model, one that works from the position of teacher leadership and administrative support. Ultimately, teachers will begin to understand that research can change their classroom and their school based on a developmental model of inquiry and university support.

**A Leadership Model**

Twenty projects were written, begun and partially evaluated during the 1994-95 school year. Those 20 projects reflected the work of teachers dedicated to conducting inquiry. For the sake of this model inquiry was defined as either a creative project, practical research designed to address a specific need in the classroom, or theoretical research designed to simply answer a question or a burning desire of the teacher. In all 20 projects the teachers were creative and used the basic precepts of practical research to conduct the project. Getzels’ research (Getzels, 1978) presents an argument for the enhancement of teacher research in schools and was used in this project. The 20 projects presented in this project (see appendix) are the result of a four phase model designed to unite the university and a school district through a collaborative model of inquiry.
Phase One: Instruction based dialogue

This portion of the model involved the articulation between a university and a school district. This integration began in a staff development program that was carried throughout the school year. Teacher dialogue with professors on a small group or individual basis was required. Continued instruction in hypothesis formulation, data collection, and literature review occurred with a connection to the teacher's "burning desire." This "burning desire" of the teacher was developed by a constant dialogue between researcher and teacher that encouraged the teacher to openly discuss ideas on research that were academic. The teacher needed to fulfill this desire in order to complete. In other words, the dialogue and instruction portion of this model established trust between the university, the instructor, and the school.¹

The instruction phase of this project also included on site visits to the university. This phase took the teacher to the university campus and provided a different environment that will help foster inquiry. Working with a Ph.D. class which was studying the structure of knowledge or research, teachers developed their hypothesis on a one to one basis with graduate students and developed a true focus on their question or burning desire. This connection to the "campus" will continue for at least

¹ There was no attempt to correlate the professional school model to this model of teacher inquiry. The professional school model is more integrated and reaches beyond research to an integrated curricula and university/school shared vision (Joseph, 1995).
one semester with at least three visits to campus. This off-campus portion of the instruction phase will be vital since the college environment aids in the “thought” process of inquiry.

**Phase Two: Implementation and funding**

Good research will result in some form of change in the system. Teachers must know that a commitment has been made by the leadership team to develop programs and foster teacher inquiry that will have an impact on the teacher’s class and the teacher’s school system. A continued monitoring by the leadership team and the research faculty is vital. After the initial instruction and hypothesis development, the teachers should begin implementation. Barriers to the development of the teacher’s projects must be removed. Money must be committed to fulfill the needed equipment and supply requirements. Time away from the classroom, time to collaborate with other staff and or university faculty, and appropriate support for the “frustration” of research must occur. In other words, an emphasis on the teacher/researcher must be made by the board of education, faculty, and staff.

**Phase Three: Continuation and Replication**

While economic and administrative support are needed at the onset of the research projects, this support is also needed throughout the teacher research cycle. This cycle can last for several years and should evolve to be a strong marriage.

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2 If a research university is not close to a public school, a connection between a research faculty and the school can be made by scheduling consulting time with the faculty and personal meetings with teachers and the research faculty.
between university, school, and staff. Ultimately, every project should be replicable and serve as a model for other teachers in the field. While intra-staff motivation is enhanced by the teacher researcher other teachers begin to develop ideas for research.

As with intra-staff motivation, inter-staff improvement also is heightened as professionals from other school districts see the results. The ultimate practical research can be used over and over again by other professionals and lead the way for continued follow-up studies and academic challenges. Working with a university helps facilitate this inter-professional growth since publication options are always open. As the teacher progresses the university faculty and graduate students begin to develop ideas of the professional school model and fulfill the very important connection between a university and a school district.

As an administrator, the continuation and replication of teacher research projects can be encouraged by funding, public recognition, and a commitment to teacher growth by becoming a part of the teacher's projects. Student achievement will be monitored and the ultimate connection of student performance to project implementation will be evaluated. With continued success and an environment that fosters this four phase model, teachers can begin to grow as researchers.

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3 This project is only in it's second year. There has not been enough time to evaluate, on a quantitative basis, the impact these 20 research projects will have on student performance.
Phase Four: Teachers as Leaders

The ultimate connection between research and teacher is the resolve that through the process of inquiry teachers become trainers of trainers. After implementation and replication teachers begin to understand that "they" can control the direction of their classroom, design and direct systemic change based on collaboration between the university and the school, and begin to add good programs to a knowledge base. This transition allows teachers to become leaders and motivates them to help others with the academic journey towards working on a "burning desire." The commitment to leadership is a commitment that ultimately includes all staff in an exciting, ever changing, and dynamic force known as inquiry.

Conclusion

The collaborative model discussed here is one that develops an on-going and dynamic relationship between a school district, staff, and a university. This model takes time and effort and is not done in a short period of time. Trust and academic dialogue are key to the successes of this program.

Change is clearly a disposition to individual vision, collaborative mission, and a commitment to fundamental research that directs and has an impact upon policy. The fundamental ability for organizations to survive in the 21st century is an ability for them to assume a posture of change and to encourage research at the teacher level.
The interrelation between change, practical/action and theoretical/basic research is fundamental. A vision of change, coupled with the ability to formulate effective research, gives the educational leader, as well as the teacher, a chance to have an impact upon education in a very real and dramatic sense. Research can impact a learning organization and should be firmly rooted in a "burning desire" and a collaboration model between school and community. This model can be used by other districts of similar or varying size utilizing the model presented.
References


APPENDIX
The University of Dayton Project
Ripley Union Lewis Huntington Schools
Research Abstracts

Cyber Trek: Using the Internet
Susan Owens

This project develops a training unit to be used first in Computer
Applications II, and then as a workshop for teachers and administrators
at the junior/senior high school. With minor modifications this unit can be
used as a model for district wide workshops. This project hopes to
establish a mini-library of resource materials for students, teachers and
parents, a basis for competent technical skills for Internet, a stimulating
Internet project for computer application students, and a district wide
policy for the use of the Internet. Success indicators are designed to
follow the objectives, and a proposed budget of $290.00 is presented.

Increased Effectiveness in the Teaching of Reading
Rachel Carter

This project develops new reading strategies that increase the
authors personal effectiveness and spark the student's desire to read in
and out of the classroom. This project also hopes to develop a classroom
which will create a positive reading environment, and foster independent
readers that take a more active role in the reading process. It is hoped
that students will enjoy reading more at home and in the classroom, their
oral reading will improve, and the level of comprehension and reading
skills significantly increase. Research will be conducted on effective
strategies for teaching reading, and literature-based centers will be
developed. Indicators of success are consistent with the objectives, and
a budget of approximately $350.00 is sought.

Modifications for the Math Classroom
Cecilia (Tee) Parker

This project seeks to change the classroom “direction” of the
researcher. First, a survey of the current math literature will be
conducted to find if there are any studies that would enhance the age
appropriateness of math topics. Secondly, a commitment to changing the teaching methods of the author through the increasing use of manipulatives is discussed. It is hoped that a combination of a literature review and a reward system will bring about the in-line objectives of this proposal. An anticipated budget of $676.00 is outlined.

**Student Quest**  
Donna Sutton and Carole Little

This project hopes to serve the student body more efficiently by developing a student directory. The directory would include information on various opportunities available for students in the Ripley Union Lewis Huntington Schools. The directory would include student organizations, teams, and club activities. As an ongoing commitment to change this project would also survey the students, staff, and community to identify new areas of need. Support groups could be started, new programs offered, and resources linked with individual programs. The activities designed to achieve the goals are consistent with the project, and an approximate budget of $500.00 is requested.

**A Developmentally Appropriate Preschool Program: A Survey of Need**  
Jonelle Arnold and Rochelle Littleton

This project hopes to aid the researchers in gaining information and knowledge about kindergarten teacher's expectations of incoming students, and discerning how the preschool program can meet those expectations. Through that process it is hoped that a team building environment among the professional staff can be implemented. A survey of kindergarten teachers will be conducted to access their expectations for children entering kindergarten. Classroom visits and sharing will take place between the kindergarten teachers and the preschool staff. Research will be conducted on developmentally appropriate preschool programs. The success indicators will be fulfilled when the outlined results found on the needs survey are integrated into the kindergarten and preschool programs. A $384.00 budget is requested.
Behind the Scenes in Video News Production
Nancy Harmon and Vicki Asbury

This project seeks to aid the researcher in broadcast journalism. Improving skills in technology and media, improving language and vocabulary skills related to technology, and improving broadcast journalism skills are three key need dispositions. The researcher will then produce a weekly newscast on local Channel 14 with an eighth grade class, and incorporate learned technological skills in programming, such as the camera, computer and television. The teacher will also conduct field trips to community colleges to observe production techniques and to enhance the teaching and learning of video production. The success indicators are consistent with the project and integrate a $590.00 budget.

Hable y Escriba!
Linda Harrell

The researcher hopes to motivate students to transcend affective barriers (peer pressure, academic expectations, low self-esteem) in the classroom in order to increase their oral and written competence. The project hopes to create an atmosphere in the classroom that promotes self-esteem and creativity in using the second language by displaying student work, rewarding student achievement and improvement, and giving students opportunities for unstructured oral and written work. The researcher hopes to provide resources to meet the needs of students and develop activities specifically designed to promote productive skills. The instructor will also research resources in the second language, interview other language teachers, and survey research journals on language education for effective strategies. The success indicators are in direct relationship to the goals, and incorporate a $540.00 operating budget.

Effects of Chemicals on the Embryonic Development of Frogs
Michael R. Preston, DDS

The researcher hopes to develop the association of scientific inquiry, and to answer personal questions concerning embryonic toxicity. This project is designed to develop sound scientific methods of inquiry that can be used in the classroom as a participation exercise. This research project will not be done during regular classtime, and the nature
of this project should change the environment of the science rooms. With a budget of $300.00 the researcher hopes to fulfill his success indicators by research and student measured results.

**Creative Instrumental Music Laboratory**  
Joseph A. Dallas

The researcher hopes to unlock the creative potential of students through experiences and experiments in task conceptualization, implementation, and completion. A study of the literature, personal contacts with other musicians and performers, as well as a review of current text books will be conducted to enhance teaching options. Students will be asked at the beginning of the year to bring their favorite musical selection to class and to analyze and describe it musically. This task will be repeated at the end of the year, and a comparison of the results will be made. Enhancement and enrichment programs are outlined in the project, and students will be encouraged to develop their own potential as a musician. The success indicators are both objective and subjective. The budget is still not complete at this time.

**A Creative Writing Forum for Publication**  
Michael E. Scanlan

The researcher hopes to write, edit, and publish a short story in a given publication, and then to instill that need and desire in his students. By attending a writing conference, contacting a review editor of a publishing company, and creating writing time in his personal life the researcher hopes to publish in a quarterly literary magazine. Following that experience on a personal level the instructor hopes to offer a creative writing forum for the students, and then to publish and distribute throughout Brown County a literary magazine composed of student manuscripts. The success indicators are both personal and professional with a $500.00 budget anticipated.

**Technology in the Ripley Union Lewis Huntington Schools**  
Douglas E. Bahnsen

The researcher hopes to become more competent in the use of technology in classroom instruction. Research will be conducted to determine the need and ultimate availability of low power broadcasting in the Ripley Union Lewis Huntington School District. A survey will be conducted to determine the interest in programming currently received by
cable subscribers, and to investigate distance learning programs and the plausibility of employing a full-time technology technician as well as a full-time certified visual and performing arts instructor. It is hoped that this project will extend current TV programming to the other 50% of the school district not receiving cable service. A review of the literature, the administration of a validated survey instrument, the expansion of the curricula offerings in the Ripley Union Lewis Huntington School District, and an increase in the use of technology in the classroom form the success indicators. A budget of $1500.00 is sought.

Making Math Meaningful for Teachers and Students
Julie A. Castle

The researcher hopes to bring about a change in attitudes and behaviors of teachers toward the way math should be approached and taught. An emphasis on “how to think about how to problem solve,” and an approach of quality practice over high-quantity/low-quality problem solving is outlined. A review of the literature, courses of study, and inservice material will aid in the development of this new way of looking at math instruction. Students will work in cooperative groups to solve word problems. An emphasis on the “how and why” of problem solving, as well as a limitation on the quantity of problems will be part of the pedagogy of this project. The success indicators are highly quantifiable, and a budget of approximately $750.00 is included in the study.

Exercise Write
Marjorie S. Appelman

The researcher hopes to further her knowledge in the area of creative writing and self-publishing. Then the author hopes to use that knowledge to engage and encourage students in the art of creative writing and the ultimate publication of a literary magazine. By developing an atmosphere of creativity in the classroom the researcher hopes to increase the number of students who turn in creative writing projects, and ultimately publish a magazine using those manuscripts. On the personal side the researcher will review current literary magazines, contact authors and facilitate the publication of a magazine for the class. A $325.00 budget is included and is part of the requirements for the satisfactory completion of the success indicators.
Showing a Different Side of Reading: After School Reading Clubs
Jane Throckmorton

The researcher hopes to develop a successful after school reading program, instill pride in those students who participate in the program, and expose the participants to several different areas of reading. The instructor will research current literature on effective reading modalities, improve her skills in motivating students, and improve her leadership skills. The reading “club” will meet once a week in the afternoon and serve students in grades 1-6. The students will make books, perform small plays, create poetry, recall vocabulary words through the game of bingo, learn about other cultures through teacher activities, and visit a major bookstore. Success indicators include items that are consistent with the objectives of the project. A $1125.00 budget is outlined in the proposal.

(This project began in the spring of 1995-highly successful)

EDUventures
Brad Moffitt

The researcher hopes to develop new vehicles for the continued improvement of the Venture Capital Project, as well as maintain current reform efforts outlined in the Venture Capital Proposal. Through a futuristic and innovative master schedule, the review of current literature on innovative and instructional driven scheduling plans, and the integration of competency based education initiatives, it is hoped that continued collaboration and interdisciplinary planning can occur. An emphasis on electronic media and television broadcasting will be supported, with a strong connection to community involvement highlighted. The researcher will conduct qualitative research on the current science curricula in grades K-11. The blending of new programs and the interaction of curricula to the technical, college preparatory, and vocational career student will be studied. A teacher driven, community supported and administrative guided continuation of the Venture Capital project supports the success indicators in this proposal. An estimated budget of $500.00 is outlined.