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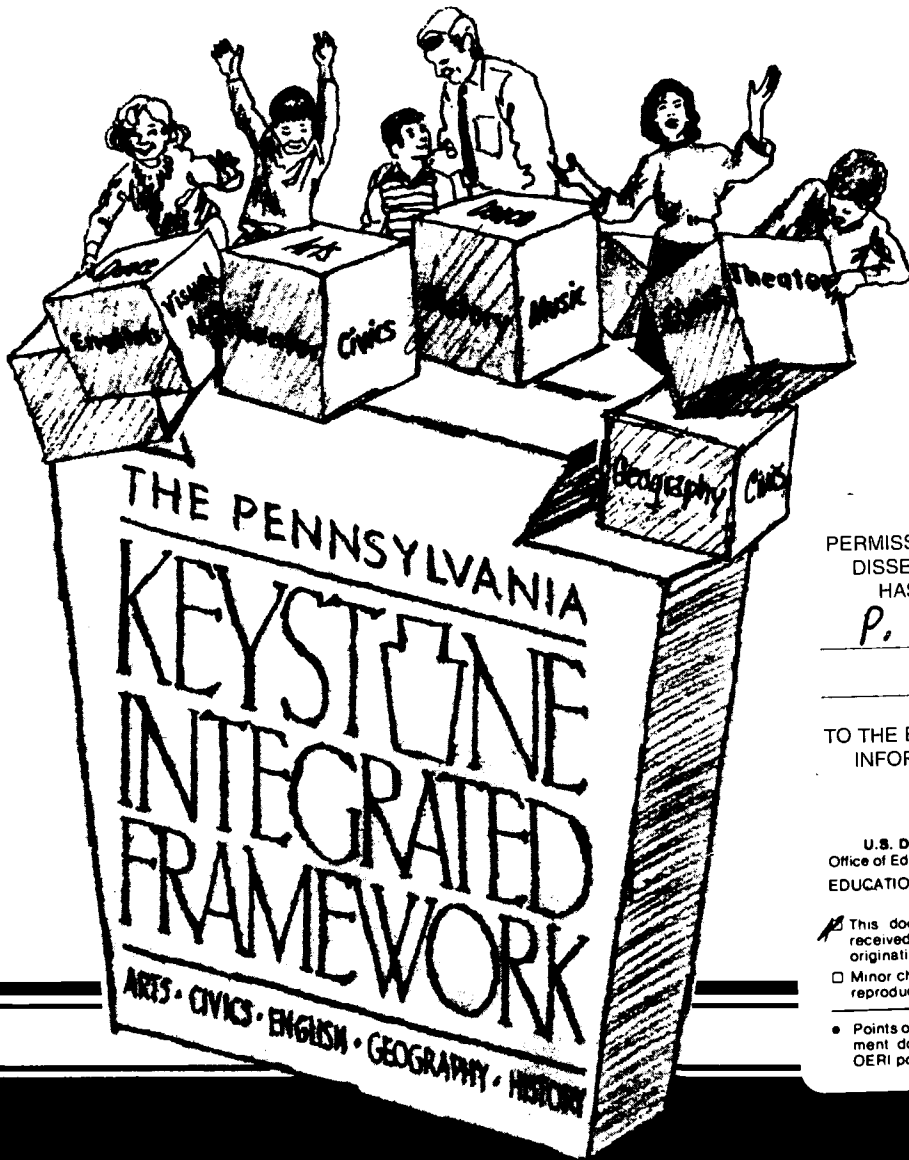
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ABSTRACT
        This compendium of information and resources can be used as
guide to those interested in curriculum integration as an effort toward
school reform. The compendium summarizes the work of the Keystone Integrated
Framework Project. It also provides information to those who wish to explore
the possibilities of curriculum integration in their own schools. the book is
divided into four sections. Section 1, "Framework," provides prefatory
information, an abstract, history and overview of the project. Section 2,
"Implementation," contains a summary of a self-evaluation from the sites
conducted at the halfway point of their first year. Section 3, "Partnerships
and Pilot Sites," tells the story of each site from the perspective of the
team members themselves. Section 4, "Strategies," includes two booklets,
"Instructional Strategies for Developing a Framework for an Integrated
Curriculum" and "Assessment Strategies for Curriculum Integration". (EH)

THE PENNSYLVANIA
KEYSTONE
INTEGRATED
FRAMEWORK

ARTS · CIVICS · ENGLISH · GEOGRAPHY · HISTORY

COMPENDIUM

ERIC
Full Text Provided by ERIC

A COMPENDIUM

for

The

Keystone Integrated Framework

- a project sponsored by

The Pennsylvania Department of Education
Bureau of Curriculum and Academic Services
and
The U.S. Department of Education
Innovations in Education
under the
Improving America's School Act, 1994

January 1997

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THE PENNSYLVANIA

KEYSTONE
INTEGRATED
FRAMEWORK

ARTS · CIVICS · ENGLISH · GEOGRAPHY · HISTORY
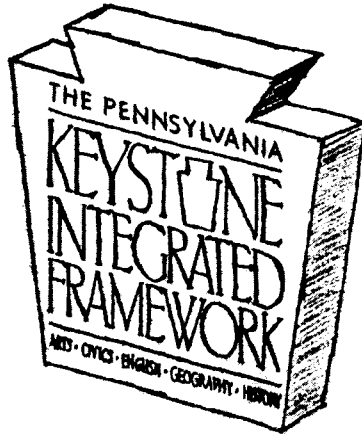
INTRODUCTION

INTRODUCTION

Perhaps it is because we as Americans hold schooling in such high esteem that we are willing to question the pedagogy in schools, both private and public. Perhaps, also, it is because we as a nation have an inherent desire to improve that we continue to ask, "Is there a better way to deliver instruction and a better way for students to learn?"

Every generation repeats the paradox: While waxing enthusiastically about their own "excellent preparation," at the same time community members raise questions on "how to improve the schools." Because of this generational attachment to education, approximately every twenty years a new movement arises, sometimes out of the ashes of a previous one, and sometimes from new findings based on years of research.

Americans find themselves at such a juncture now in the waning days of the twentieth century. Not only at the dawn of a new century but also on the cusp of a new age of technology unprecedented throughout history, the American people are looking to educational institutions for answers. Because of the compelling need of our society to prepare for a world which is facing a plethora of social, economic, and political changes, the schools must develop new instructional materials and strategies. In a world in which facts alone cannot provide solutions, the schools must find ways to educate children to draw upon multiple resources and to synthesize information. Children learn best when content is linked to process, and they solve problems best when knowledge comes from many sources.

What is needed, then, is school reform and standards for that reform. Pennsylvania has accepted that challenge through such initiatives as the Governor's Advisory Commission on Academic Standards and the Keystone Integrated Framework Project which finds as one of its missions the promotion of academic standards.

The Compendium

The Keystone Integrated Framework Project is pleased to be a part of a larger effort toward school reform and offers this compendium of materials, information, and resources as a guide to those who are interested in curriculum integration. This compendium summarizes the work of the Project, sharing the findings of the project with the reader. Further, it provides information to those who would like to explore the possibilities of curriculum integration in their own schools.

Section One–*Framework*, provides the prefatory information—the who, the what, and the why. In addition, an abstract, the history and overview of the Project are offered for those who would like to know the background.

Section Two–*Implementation*, contains a summary of a self-reflection from the sites conducted at the halfway point of their first year. Also included is a comprehensive instructional booklet, "The Keystone Integrated Framework: A Guide for Implementation."

Section Three–*Partnerships and Pilot Sites*, tells the story of each site from the perspective of the team members themselves. The stories are in their own words, and are unedited. In addition, this section provides the names of the sites and the names of persons to contact for further information about any specific site. The section closes with a reflection on the Project from its Director.

Section Four–*Strategies*, includes two booklets, one on "Instructional Strategies for Developing a Framework for an Integrated Curriculum" and one on "Assessment Strategies for Curriculum Integration."

The Compendium has been divided into these four main sections to facilitate use by the reader. Reading sequentially or starting at any point in the collection, the reader is sure to find much useful information. It is with pride in the accomplishments of the eleven sites, the staff, the committees, and the writers that this Compendium is offered to educators at all levels who are interested in curriculum integration.

Sixth graders vying to trade on the stock exchange in 1929, in period clothing, rushing from broker to broker, trading at high volume, watching the Dow Jones climb higher and higher. Then a voice: "We have a disaster on our hands. The stock market has closed. We do not know when it will re-open. The banks are also closing. We advise you withdraw your money as soon as possible."

"Nothing important ever happens in Susquehanna County. What a dumb place to live. Why do people stay here?" This was a challenge the teachers of these juniors could not ignore. . . .

"But our director of transportation has spent weeks on making the bus schedule work . . . and now your team of eighth grade students is saying that they can plan a more efficient bus routing system?"

The year is 2113. After centuries of humanity's abuse of the planet, the earth is rapidly becoming uninhabitable. Rampant crime, corrupt governments, failing nuclear fission plants, extensive species extinction, depleted mineral resources, disease, starvation, infestation, and disastrous climatic events have ruined earth. The only possible solution is to send the remaining population into space in interconnected habitats . . .

"My dad will build it."

"That's very kind of you to offer, Kevin, but building a full-size covered wagon is a mammoth undertaking."

"My dad can do that."

"Perhaps you should talk to him this evening and then we'll discuss it tomorrow."

"O.K., but my dad knows how to do this and he'll build it for us."
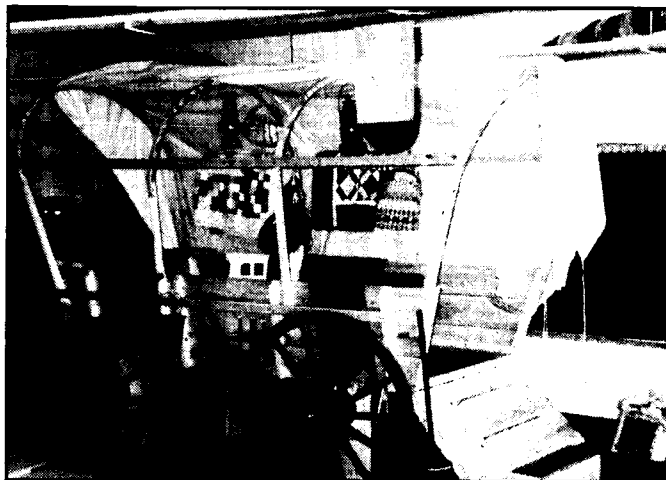
No place to meet; no common planning time; no two team members with the same students; no telephone line for the new laptop computer donated by the Project; intensive scheduling isn't working out; various changes in administration; and band camp is scheduled the same week as the mandatory Summer Institute for the Keystone Project . . . .
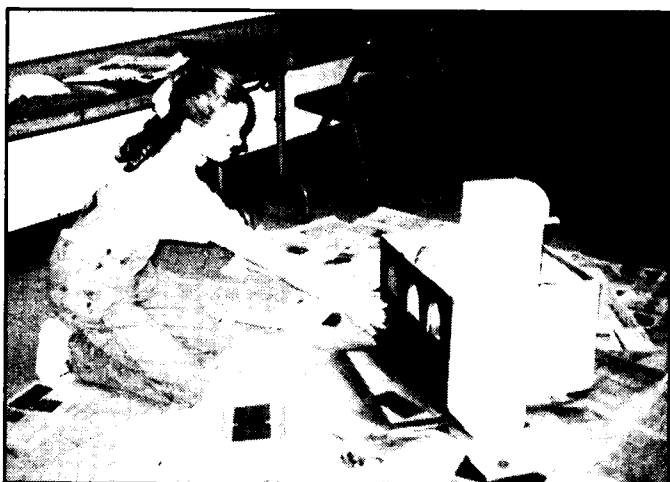
"What am I doing here at 7:30 in the morning, taking a drama class? I'm supposed to be in the practical nurses' program. What is 'Ecodrama' anyway?"

A school without walls . . . thirteen different languages spoken at home . . . twenty-two percent of the students in ESL . . . inner-city . . . nothing going for this school except exceptional teachers with the creativity and determination to design and implement a vertical curriculum strand with arts as the core.

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THE PENNSYLVANIA

KEYSTONE INTEGRATED FRAMEWORK

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Beth Cornell is the Fine Arts and Humanities Advisor for the Bureau of Curriculum and Academic Services, Division of Arts and Sciences. She comes from a background in visual arts and has held the position as a director of a non-profit agency in the state of California. Ms. Cornell serves on the boards of many art councils and is a strong advocate for the arts. Beth conceived the idea for this project and is co-author of the grant application which resulted in the grant's being awarded to Pennsylvania.

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Manuel Barrera, Education Specialist, is a former classroom teacher who specializes in bilingual and special education, staff development, and educational leadership issues. He holds a bachelor's degree in integrated science, biology, and bilingual education; a master's degree in special education and rural/cross-cultural studies; and has a dance/choregraphy background in African and modern dance. His experiences range from teaching inner city youth to rural Alaska native children, developmentally delayed pre-schoolers to advanced placement physics. Mr. Barrera is presently a Ph.D. candidate in Special Education at Penn State University.

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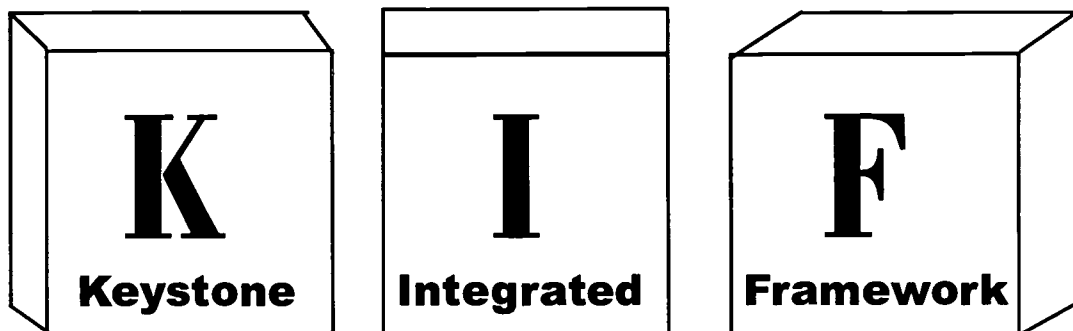
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THE PENNSYLVANIA KEYSTONE INTEGRATED FRAMEWORK

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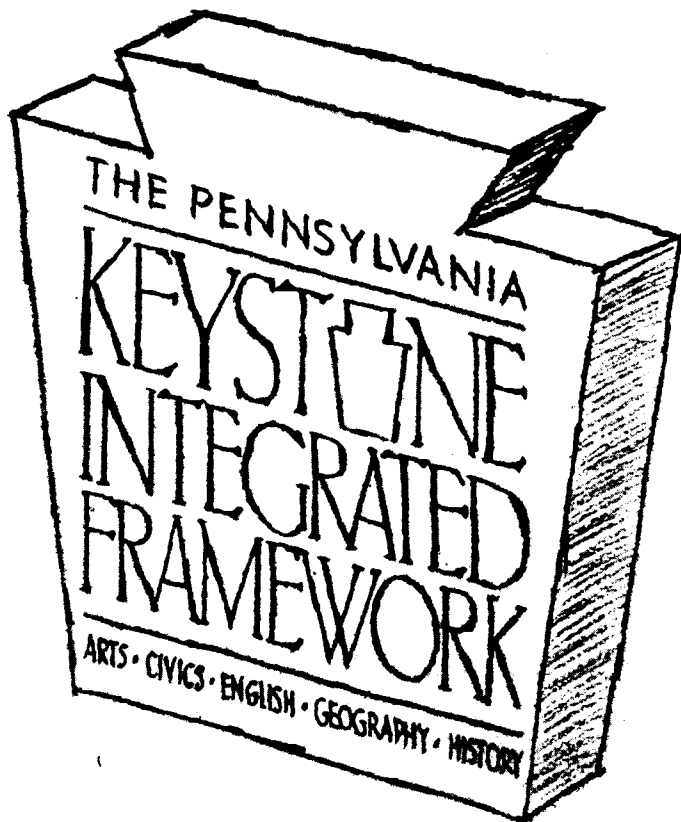
SECTION ONE

K Keystone **I** Integrated **F** Framework

The Keystone Integrated Framework Project, a federally funded program, is an initiative promoting the integration of curriculum, specifically the integration of the arts with civics, English, geography, and history. The Project has two main purposes: (1) to promote the arts as an equal partner with other academic subjects and (2) to encourage teacher preparation programs to include instruction in the process of curriculum integration.

Eleven Pennsylvania school sites, partnered with an institution of higher education, were selected through a competitive call for applications to serve as pilot sites for the Project. A main criterion for selection was the commitment from each site to develop a unit or program in which one of the arts (dance, music, theatre, visual arts) is central to the curriculum design. Each of the eleven teams is comprised of five teachers from the school and three faculty from the partnered college or university. These eighty-eight educators attended a Summer Institute in August of 1995 where they received intensive training as well as guidance in planning their programs to be piloted during the 1995-1996 and 1996-1997 school years. These eleven school sites are also serving as laboratory sites for the higher education partner in their teacher preparation programs.

In addition to the pilot sites' program, a writing and design team of content specialists, research scholars, university professors, school-based practitioners, state and local educational administrators, and community partners have been developing *The Keystone Integrated Framework: A Compendium* (print materials as well as a video) which will be used during the school year of 1996–1997 to disseminate information and provide training to teachers and teachers of teachers across Pennsylvania. Trainers and materials will be provided to Intermediate Units, institutions of higher education, and professional organizations who will be invited to serve as host sites for the training.

The Keystone Integrated Framework Project, and its resulting print and media documents, is expected to provide (1) the vision and direction for an innovative approach to the integration of curriculum and (2) a plan for teacher preparation and staff development in the integration of the arts into the curriculum.

The Project Director is Judith T. Witmer, Ed.D., P.O. Box 311, Hummelstown, PA 17036. Telephone: (717) 566-9599. Facsimile: (717) 566-9897. The Project Advisor is Beth Cornell, Fine Arts Advisor, Bureau of Curriculum and Academic Services, Pennsylvania Department of Education, Harrisburg, PA 17126. Telephone: (717) 787-5317. Facsimile: (717) 787-7066.

Keystone Integrated Framework Project

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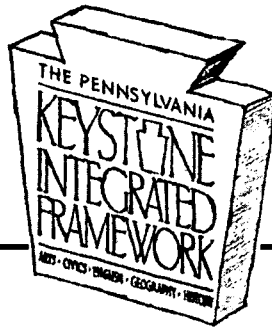
HISTORY

HISTORY OF THE
KEYSTONE INTEGRATED FRAMEWORK PROJECT

In the spring of 1994, the United States Secretary of Education extended a Call for Proposals under the Secretary's Fund for Innovation in Education. Through the efforts of the Bureau of Curriculum, Pennsylvania Department of Education, a proposal was submitted and was one of several projects selected nationwide as a recipient of a three-year grant. This grant allowed the Division of Arts and Sciences to further its on-going efforts toward school restructuring and to collaborate with the Division of Teacher Education in promoting changes in teacher preparation and certification.

While there were pockets of experimental programs in curriculum integration in the Commonwealth, none had been part of a statewide project with a common structure. At the time of the grant proposal Pennsylvania was affiliated with the Coalition of Essential Schools and the Education Commission of States; however, the Department of Education itself was not directly involved in any statewide programs that centered on curriculum integration. Receiving this grant made it possible to field-test the concepts of curriculum integration in eleven sites throughout Pennsylvania.

What is important in the KIF Project is its two-fold purpose: commitment to integrated curriculum design with the arts as the center and reform in teacher preparation programs.

More specifically, this project was designed to accomplish seven goals:

1. Create a multidisciplinary, integrated curriculum framework model to be used by Pennsylvania schools and districts in their development of K-12 curriculum standards for the arts, civics, English, geography, and history.

2. Design these standards to meet both state and national goals.

3. Generate and disseminate a unified course of study for this integrated approach to curriculum.

4. Implement the framework in eleven pilot schools.

5. Link these eleven sites with university partners.

6. Create a videotape that demonstrates the framework in action.

7. Utilize this integrated framework as a basis for the development of guidelines for (a) teacher education and (b) re-certification and continuous professional development of teachers.

The Sites

Eleven Pennsylvania school sites, partnered with an institution of higher education, were selected through a competitive call for applications to serve as pilot sites for the Project. Criteria for selection included the commitment to developing a unit or program in which at least one of the arts (dance, music, theatre, visual arts) is central to the curriculum design and to make changes in the teacher preparation programs in universities. Each of the eleven pilot site teams is comprised of at least five teachers from the school and three faculty from the partnered university. As part of the application process, each participating partnership (i.e., of a school site and university partner) submitted a proposal that detailed the vision for that partnership, the specific goals and objectives for all three years of the project, the desired and measurable outcomes in terms of student achievement, knowledge and skills, the roles and responsibilities for each partner and a plan of operation including activities for both students and faculty. In addition, districts were asked how they intended to document the project and to share the experiences and knowledge gained by the project. Such a project as the Keystone Integrated Framework (KIF) Project fits very well into the school reform movement occurring in Pennsylvania schools and is parallel to the mission of the Pennsylvania Department of Education which has been advocating and supporting numerous initiatives of school reform for more than twenty years. Pennsylvania has also taken a leadership position in redesigning its regulations for K-12 instruction and special education, revising policy guidelines for teacher certification, and committing to the design and adoption of new state academic standards. As one of the national leaders in school reform and restructuring, the state has been in the forefront of systemic change, assisting local schools in their efforts to improve instruction. The KIF Project was designed to serve as a guideline to local schools and districts who had an interest in piloting these reform efforts.

The KIF Project also assisted the Division of Arts and Sciences establish task forces in English, the fine arts and social studies to undertake the major task of drafting academic standards. These task forces were led by the curriculum specialists in the Bureau of Curriculum and Academic Services and have produced draft copies of their work; these standards, even in the development and subsequent draft form, have helped to shape the end product of the work of the Keystone Project. (At press time, the reading/writing standards are under review by the Governor's Advisory Commission on Academic Standards.)

The Project is a three-year design with the first year devoted to planning, the second to implementation, and the third to dissemination. A KIF Project Year runs from October 1–September 31, unlike a school's operational year which is September 1–June 30. However, the pilot sites' two-year commitment closely paralleled years two and three of the project and are addressed in those terms.

The First Year

The first year of the Project was spent in establishing the framework upon which the outcomes would be based. A full year was devoted to meeting with all stakeholders and conducting all of the preliminary work that was necessary for a successful experience for the pilot sites. (See List of Staff and Committees above.)

First Steps

Following the naming of a Project Director, whose administrative duties included serving as the liaison between the Department of Education and the pilot sites, and a Project Evaluator, who would monitor and advise the Project, three committees were formed:

1. **Steering Committee.** The role of the Steering Committee is to take responsibility for the overall planning and operation of the project. The committee is comprised of eight members. During the course of the first year of the project, this committee met six times and was the driving force in guiding and advising the Project staff.

2. **Advisory Board.** The Advisory Board of the KIF Project was responsible for reviewing project activities and providing general oversight of Project operations. Membership in the Advisory Board included persons from administration in basic education and higher education, assessment design, communications, curriculum design, and Education Goals 2000, as well as those whose academic specialties included the arts, gifted students, literature, reading, school restructuring, and teacher education. The work of the Advisory Board was determined by the parameters of the KIF Project as setting the direction for the project.

3. **Framework Design Team.** The Framework Design Team was responsible for the design of the "framework" (design and structure) for the project. Specifically, the members of this group were the visionaries and the writers. They were charged with the following tasks:

   a. Design a "framework" to assist the pilot sites in their planning during the Summer Institute.

   b. Design a *Framework* publication based on the expected outcomes to be field-tested by the pilot sites.

   c. Design assessment strategies.

In addition, the Design Team created a set of eight Guiding Principles which focused the work of the pilot sites, wrote a Definition of the Project, and developed a Statement of Beliefs. This team also composed or suggested the materials which would direct the work of the pilots sites.

As part of the overall plan to share the findings of the project and to assist additional schools in their own curriculum reform and redesign, individual members of the Design Team generated several documents. These include (1) *Instructional Strategies for Developing a Framework in an Integrated Curriculum*; (2) *The Keystone Integrated Framework - An Instruction Manual*; and (3) *Assessment Strategies*.

State Academic Standards Committees

Parallel to the work of the various committees that were directly involved in the planning and implementation of curriculum integration at the pilot sites, state academic standards were being developed by curriculum committees represented by content specialists across the state. Due to constraints beyond the control of the Project, these committees could not be convened until the second year of the project. This meant that the pilot sites would not have the intended benefit of state academic standards to guide them as they planned activities and designed curriculum content. However, school districts who are interested in following the lead of the KIF Project in implementing curriculum integration will have the benefit of the work of these committees.

Selection of the Pilot Sites

An essential part of the Project was announcing a Call for Proposals to all schools in Pennsylvania and to all colleges and universities that provide teacher preparation programs. The eleven sites selected were formed through a partnership between a school and a university committed to reform in teacher preparation. The partnership commitment was for a minimum of two years in which time they were expected to develop and implement a project, a unit, or a full year's program of curriculum integration. It was immediately evident from the applications that there would be eleven different ideas of what an integrated curriculum would look like. The RFP requested: "Provide an overview of your vision for the partnership (of the school and university). Following, in capsule form, are the visions of each pilot site:

1. "An Ecodrama—a blend between ecology and creative drama. Creative drama creates an environment where children can better perceive how the material learned from other disciplines relates to the world around them and their own lives. Students . . . will study different aspects of

Native American cultures through creative drama, art, English, history, geography, and sciences which will include ecology and astronomy." From the college's perspective, ". . . student teachers will gain integrated curriculum experience while working with the EPIC team . . . and will develop an understanding of and ability to use creative drama concepts for teaching and assessment. Student teachers' desire, enthusiasm, participation and ability to develop integrated curriculum using creative drama will be measurable outcomes for their assessment."

2. "The project, in both its development and implementation, will serve as a 'laboratory' for the pre-service educators who will participate in the project. The project will also serve as a basis for 'in-service' opportunities that will be conducted to expand the project beyond the 'pilot' phase. This expansion will serve to include more teachers, more students, and the establishment of additional frameworks to integrate areas of study in subsequent years."

3. "We believe teachers need training in violence intervention and prevention along with a foundation of methodology and knowledge of subjects. We believe that it is the responsibility of educational institutions to urge students, teachers, and parents to try creative solutions to the problems of violence in our schools and neighborhoods. We plan to operationalize the partnership between the school and the university by jointly establishing training seminars for teachers, graduate, and undergraduate education students on issues related to violence, conflict resolution/mediation, and computer technology."

4. "The approach of this curriculum will address the multiple intelligences that exist in diverse classrooms. Further, this curriculum encourages critical thinking, problem-solving and decision-making through cooperative learning, writing across the curriculum, and technology-enhanced instruction. This partnership forged between the school and the university will provide greatly enhanced instruction and clinical settings for pre-service teachers and for generations of area school students that will help them to excel in today's multicultural, global and interdependent world."
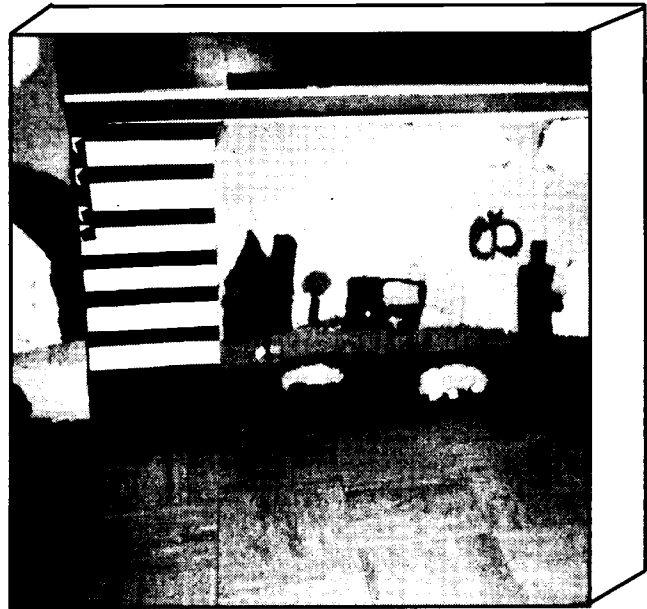
5. "Five teachers and the principal from the high school will work in partnership with selected college faculty to determine criteria for meaningful integrated curriculum. Specifically, we envision students making connections among the content in English, history, science, music, and the visual arts through a research project supported by all of these content areas. We propose that the students will design and build a musical instrument and demonstrate by public exhibition their understanding of the interrelatedness of content and process."

6. "Since 1992 the school staff has worked in partnership with the university to restructure its teacher preparation program. This partnership provides (1) stronger, meaningful connections between theory and practice, (2) an emphasis upon the middle level learner, and (3) a school context where future teachers learn the skills of team teaching and the implementation of interdisciplinary units first hand from teachers involved in implementation. Student teachers will videotape their own teaching to facilitate teaming and knowledge of interdisciplinary practices. This Project will help erase the existing barriers between school staff, university staff, and future teachers in the building and implementation of local school-based curriculum, provide a process model for "reflection in action" with a team of professionals and pre-professionals, and develop a dynamic model for integrated curriculum and standards for dissemination."

7. "A partnership between the
school district and the univer-
sity will allow the school
students to become more
active participants in their
own learning. An interdiscipli-
nary curriculum will be
developed which will chal-
lenge students to gather,
analyze, and use information
to solve problems. Teachers
and students will learn to use a
variety of information formats
including the Internet, CD
ROMs, and printed material.
In this way, the skills of
information literacy and active
learning become mutually
supportive as well as mutually
dependent. The partnership will provide opportunities for both agencies to
grow professionally. This partnership will enable the practitioner to tap the
resources at the university level. The university participants, on the other hand,
will be able to observe and apply what is learned from the partnership to their
research and graduate and undergraduate level classes. The opportunity to have
student teachers on a middle school interdisciplinary team will enhance the
whole process in the sense of giving them the opportunity to grow and under-
stand the importance of interdisciplinary connectedness."
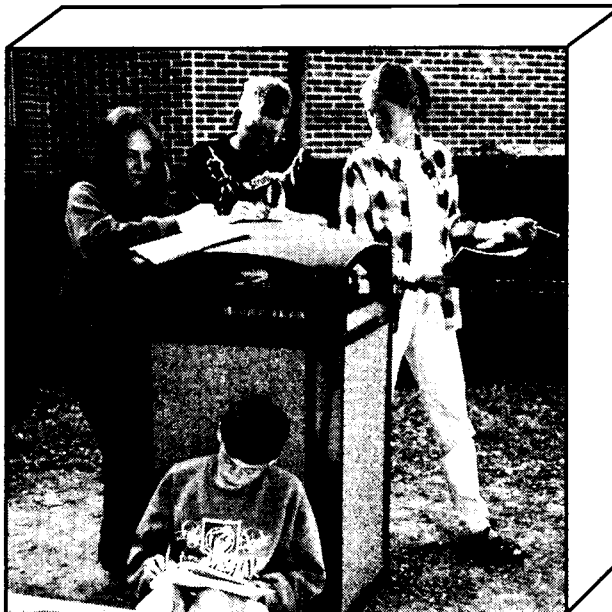
8. "*An American Adventure* is envisioned as an innovative, year-long sixth grade
curriculum integrating history, geography, economics, civics, language arts, and
the visual and performing arts. Through thematic units of study, students will
gain an understanding of how industrialization, immigration, urbanization,
global relations, and social movements shape their lives. Both the development
and the implementation of this student-centered, hands-on, innovative curricu-
lum will be accomplished through a partnership between the school district and
the university."

9. "The course of study 'Culture Shock - Welcome to the County Where You
Live,' would focus on history and culture of the local county. The foundation
would be integrated instruction in art, civics, English, geography, and history
with skill emphasis in authentic research, performance/presentation activities,
and multi-media productions. In its essence, the high school-university partner-
ship should allow students of both institutions to experience learning opportu-
nities which are unavailable independent of the partnership."

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10. "The project will center on the diversity of the student body at the school which houses the elementary ESL program for the entire district. Students at the school represent more than twelve foreign countries and five continents. Most arrive at the school with little or no English language skill. Using experiences shared by all people which can include nutrition, seasons, climate, and resources, the teaching team will use the most elemental processes such as cooking and agriculture to breach difficulties in understanding. Two grow labs will be employed in the building so that students can experience the natural cycles of growth and development in order to establish the theme. The physical integration of the products of their gardens and the processing of the foodstuff will serve as a metaphor for other forms of integration of subject matter and process. The team will also invite artists from the community to spend time in residence at the school in order to help bridge the literacy-experience gap. While students from other cultures may have great difficulty in understanding the words of their new culture, they are rich in experiences which can be shared through the arts. The arts will provide a valid assessment model for all students in subjects other than the arts to express their understanding."

11. "The school district in partnership with the college proposes to establish a model educational laboratory on-site at an elementary school for the purpose of conducting continuing educational research and training related to curriculum integration. The lab will be staffed by district teachers who will work cooperatively with college educators and their graduate education students in this joint educational venture. The partnership will involve the formation of research teams comprised of primary education specialists who direct and teach in the teacher training program, elementary teachers who volunteer to conduct educational experiments in their classrooms and work as part of a teaching team, students from both the college and elementary school, parents, and administrators."

Following selection, each school and college partnership (referred to as "pilot site") was visited by the Project Director. This was a necessary and important first step in building a link of communication.

The Summer Institute

Clearly, it was the Summer Institute that proved to be the key factor in the successful partnering of school sites and universities. In fact, it was during the Summer Institute that a true sense of "team" evolved for most of the participants. As might be expected, those from the school sites typically knew one another but did not really know their counterparts from the university (excepting those schools and universities that had worked together prior to this project). The institutional associations of the participants at the Institute were not emphasized; everyone's name badge simply offered the person's name. The composition of each pilot site team was deliberately planned to include five teachers from the school and three from the higher education institution to form a team of eight members; the plan was for the school members not to be out-numbered or "out-voted" by the university members in making team decisions.

The Institute was held in a northeastern Pennsylvania lodge which offers conference facilities in a quiet, retreat-like setting. The projected outcomes of the training were (1) team-building and (2) the production of an Action Plan for the implementation of an integrated curriculum during the school years 1995-1996 and 1996-1997. It was also expected that, as a result of participation in the KIF Project, there would be changes made in the teacher preparation programs at the universities.

During the six days of the Summer Institute each team was assigned a facilitator to guide and assist its work. In addition, various workshop sessions were offered to the participants, a sampling of which included the following:

*Dr. Susan Drake, author of *Planning the Integrated Curriculum* (ASCD publication)

*Susan Cambigue-Tracey, a dance educator

*Dr. John Gould, systems change specialist

*Manuel Barrera, instructional strategies workbook designer

*Carol Weiss, service learning (PennSERVE) fellow

*Nancy Letts, portfolio designer

*Dr. Carol Lee and Melvin Garrison, museum educators

*Dr. Beverly Cross, University of Wisconsin, specialist on integrating at the secondary level

*Susan Spadafore, assessment strategist

Additional activities included performances by Paul Tracey, a balladeer, and Maureen Sweeney & Co., a theatre improv group; a theme dinner; presentations by each team on their individual programs; trouble-shooting scenarios; and much sharing by all participants. In addition, each team, scheduled throughout the week, made a short presentation as to the team identity and the site's ideas for an integrated curriculum in each school. Some teams chose to use the performing and visual arts to enhance their presentations, thus demonstrating the spirit of arts integration. One creative musician composed a song to tell the story of the week's work!

The Project Evaluator spent the entire week as part of the Institute, meeting individually with each team to assist it in understanding what would be needed from each site in its end-of-the-first-year reports. The Project Videographer visited each team meeting to shoot video footage of the Institute in action; he, too, met individually with the team to explain how to prepare for his site visits. He encouraged those who had the equipment to keep a video record of the student activities so that some of the programs could be recorded as they happened.

Each school site was given a laptop computer to use for the project. A training session provided rudiments of instruction, and a technology lab was in operation the entire week. Participants also received training in the use of *Learning-on-Line*, a computer e-mail and bulletin board system from the Pennsylvania Public Television Network. In addition to the lab and the training, the federal grant allowed for each site to be networked in order to continue communicating between and among sites. Furthermore, each site was partnered with a "sister" site; these partners corresponded and made exchange visits throughout the year.

Another critical part of the Summer Institute was the assigning to each team its own facilitator who had been trained in the goals of the project. These facilitators served in various capacities far beyond expectations as they became the go-betweens, the buffers, the taskmasters, and the critical friends. Several of these facilitators continued to work with the teams on a voluntary basis throughout the school year. Print material prepared by the Framework Design Team served as the basis for the action plans produced by the site teams. Further, preliminary drafts of state and national curriculum standards were provided as guidelines for the teams in planning their curriculum. The week spent working together as equal partners and sharing meals, laughs, and performances resulted in each site's leaving the Summer Institute confident in a plan of action that it had developed during the week. As a result of the training, participants indicated that they now had a focus and goal and were grateful for the opportunity to work together consistently. The long days and intense work allowed for a bonding that would not otherwise have occurred and would pay dividends throughout the life of the Project and beyond.

The Action Plans

As part of the Call for Proposals process, each participating partnership submitted a proposal that detailed its vision for the partnership, the specific goals and objectives for all three years of the Project, the desired and measurable outcomes in terms of student achievement, knowledge and skills, the roles and responsibilities for each partner, and an outline plan of operation including the planned activities for both students and faculty. In addition, districts were asked how they intended to document the Project and share with others the experiences and knowledge gained by the Project.

During the Summer Institute, partnerships developed their Action Plans to detail how they were going to achieve the goals and objectives set forth in their proposals. The Action Plan form (See Appendices) provided space for the partnerships to list their goals, objectives, and activities required to achieve their objectives, the human and financial resources necessary to carry them out, and what evidence of activity accomplishment demonstrated completion of each activity. Development and honing of these Action Plans was the key to planning the work to be accomplished at each pilot site and, while such detail became burdensome to some of the partnerships throughout the week, all agreed as to the utmost importance of leaving the Institute with a carefully crafted plan.

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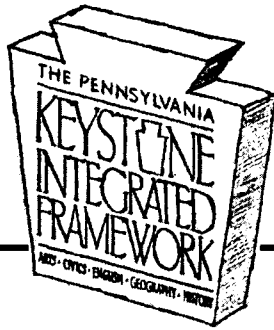
OVERVIEW

THE KIF PROJECT—AN OVERVIEW

The Keystone Integrated Framework (KIF) Project, a federally funded program, is an initiative promoting the integration of curriculum, specifically the integration of the arts with civics, English, geography, and history, through a collaborative effort of schools and universities. The Project was conceived by the Division of Arts and Sciences, Bureau of Curriculum, Pennsylvania Department of Education, and developed in cooperation with the Division of Teacher Education, Bureau of Teacher Certification and Preparation. The KIF Project is a team-based approach to curriculum integration with two main purposes: (1) to promote the arts as an equal partner with other academic subjects and (2) to encourage teacher preparation programs to include instruction in the process of curriculum integration. The components include (1) teaching and learning concepts, instructional strategies, and materials; (2) support to and training of teams in pilot sites; (3) monitoring and evaluation of those sites; (4) dissemination of information and training for other interested schools and universities.

D E F I N I T I O N

The Keystone Integrated Framework offers guiding principles by which an integrated, multidisciplinary curriculum can be developed. The K-12 curriculum in an integrated framework will be based on the relationships among national content area standards in five disciplines — the arts, civics, English, geography, and history — and will reflect many of the student standards developed to meet the local, state, and national goals.

Concept and Design

The primary classroom focus is the design of integrated curriculum in which knowledge and skills are learned and practiced across different subject areas and which reflect "real life" experiences. Included in the design is the education of children in using multiple resources, synthesizing information, and communicating the knowledge. The scope of the project is K–12 in the schools, as well as teacher preparation programs in the universities. While each of the eleven pilot sites used the Guiding Principles of the KIF Project as the framework, the grade level in each site differed. Therefore, it is the *design* and *process* which are the core and substance of the project.

The curriculum designed by each site in the KIF Project followed the state academic standards (draft) and the Guiding Principles designed specifically for the KIF Project. However, it is the *process* that has been stressed in this project: the teams of each pilot site were provided with the tools to create an integrated curriculum true to the needs and expectations of their own local public stakeholders. While core theoretical information was provided through instruction to the teachers and professors, materials for the curriculum differ according to the plan of each pilot site team.

STATEMENT
OF BELIEF

It is the belief of the Keystone Integrated Framework that curriculum integration will enhance a student's ability to make effective use of the power of multiple perspectives on the world; the ability to apply, analyze, synthesize, and evaluate information, and then to communicate an understanding of that information depends upon seeing connections and relationships among a range of disciplinary approaches to real world problems; as a consequence of systematic participation in a multidisciplinary learning environment, levels of student achievement will be enhanced.

Team Support and Staff Development

Team support was provided through released time for planning, materials, and, if needed, consultants or specialists. By virtue of committing to the project, school sites were expected to provide the support needed to implement the program. The schools also agreed to include in the planning (1) all instructional staff who would be responsible for implementation, (2) the building principal, (3) parents, (4) students, and (5) community members who expressed an interest. Core activities included on-site workshops, attendance at appropriate conferences, development of a partnership with a university, access to specialists both within the district or university and without, planning time, and communication with all stakeholders.

The first year of the KIF Project was devoted to conducting a needs assessment and building a team at each site. A trust among team members was the first goal, with time allotted to research, read, discuss, and reflect. During the first year, the current curriculum and instructional strategies were examined in light of what the research shows on curriculum integration and school restructuring. Team members read the work of James Beane, Susan Drake, Robin Fogarty, and Heidi Hayes Jacobs. Familiarity with the state and national curriculum guidelines and regulations was also promoted as was the development of a collaborative relationship with the university partner. During the second year, the team implemented a pilot unit of study, utilizing curriculum integration. This pilot built upon what was already working in the classroom, so that the comfort and confidence level of the teachers and students was not threatened. In the third year, with local support for planning time and resources, the team was ready to fully implement an integrated curriculum.

At the partnered universities, a three-year plan was also in effect. While the university team members assisted at the school site, they also reviewed the curriculum for their teacher preparation program. The site experience provided real-life experience to demonstrate the positive effect the integrated program has on teaching and learning. In year one, the universities reviewed their methods courses, making adjustments or changes for those student teachers who would be a part of the pilot year at the school

sites. Year two at the university was spent in designing, proposing, or making changes in the methods courses. In year three, the methods courses are expected to reflect the change of focus from subject specific to integrated instruction.

Throughout the entire project, from the first thought to full implementation, the process focused on team effort. Teaming was made a priority, not only for staff relations, but ultimately for classroom learning. Therefore, a great deal of time was spent retraining both teachers and students to think in terms of working collaboratively. Plans were carefully crafted to allow for student collaboration as well. The most successful pilot sites made a concerted effort (1) to involve administration and parents in the planning, and (2) to inform both their school boards and their colleagues who were not in the project of the plans and progress of the project.

Principles of the KIF Project

The KIF Project is research-based and has its roots in the school reform movements of Ted Sizer and the Coalition of Essential Schools as well as Harvard's Project Zero. It is like the Coalition in that the KIF Project supports the belief that each school must create its own individual way of doing things and is like Project Zero in its belief in the inherent importance of the arts as an integral and unifying motif running through all of the disciplines. The KIF Project is based in the arts by intent, as it is the belief of those who framed the project that the arts can best serve as a link among the other disciplines and that other disciplines can best be served by incorporating the arts. The concept, field-tested through the Getty's Discipline-Based Art Education, is further supported by *The National Standards for Art Education.* The KIF Project also supports the work of Howard Gardner and his learning styles, honoring and addressing the differences among both students and faculty. Its own guiding principles reflect these influences.

G U I D I N G

P R I N C I P L E S

The Keystone Integrated Framework, which equitably connects the arts, civics, English, geography, and history requires adherence to the following principles:

1. *Construct content that transcends subject-specific isolated facts*
2. *Develop processes that enhance organization, concept-building, and problem-solving*
3. *Use a variety of instructional strategies to open multiple ways of learning and accessing information*
4. *Emphasize higher order thinking skills, creativity, and a multiple perspective approach*

5. *Employ a variety of assessment strategies*
6. *Connect learning to life experiences beyond the classroom*
7. *Serve and respect all students with their varied needs, abilities, learning styles, interests, and career orientations*
8. *Allow for participation by the educational community in the creation and development of the curriculum.*

The KIF Project itself was field-tested in eleven school-university partnership sites in a variety of settings and grade-levels; in rural, suburban, and urban settings; in wealthy districts and in poor districts; and in locations ranging from walking distance between the university and the school site to a distance of fifty miles between the partners. Even with this variety, however, all sites adhered to the guiding principles and held these beliefs in common:

■ Belief in teacher collaboration with administrative support

■ Belief in school-university partnerships

■ Belief in the integration of curriculum that views the arts as an essential core subject.
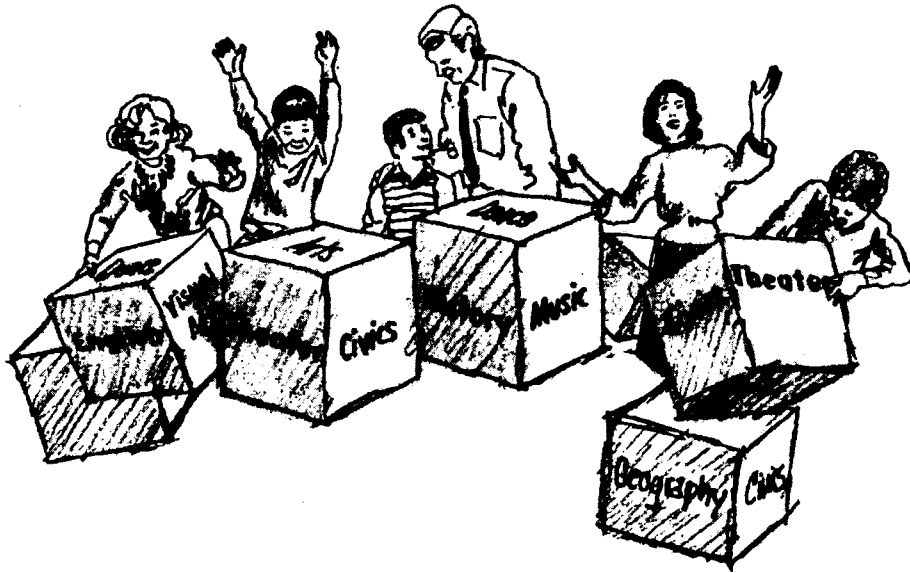
SECTION TWO

Implementation

Following the Summer Institute of August 1995, the eleven pilot site teams began their first year of further detailed planning or implementation. Again, it should be noted that during the Institute each site had designed its own Action Plan (See samples in Appendix A) according to its own needs, goals, and objectives. While some of these Action Plans were subject to change as the process progressed, they served as a solid course of direction in the first year of implementation. Specifically, sites were encouraged to adhere to their goals and objectives but to make changes in the instructional delivery and activities as needed.

This first year of implementation was one of discovery for most of the sites—discovery of the process of team planning (1) at the site by the five (or more) teachers, (2) at the university by the (three or more) professors, and (3) at scheduled meetings of the full team (school and university) for more long-term planning, such as curriculum units, joint endeavors, and special events. The integrated planning was focused on both the implementation at the school site and on changes in the teacher preparation program. In many cases, interaction went beyond the team meetings; for example, some of the professors took on a more active role in the schoolrooms and some of the classroom teachers served as "visiting instructors" in the university courses.

All of the sites faced various challenges within their institutions. Most found that these challenges could be overcome more easily because of the partnership of school and university. By virtue of the wide diversity of projects, the specific problems faced by the teams varied greatly. However, what the teams shared in common were these important elements:

- ☐ Common to all teams was the issue of time; without exception, every site reported that they needed more time to plan.

- ☐ Common to all teams was the confidence that continued to increase as the year progressed.

- ☐ Common to all teams was the realization that all team members could learn from one another.

This section of the Compendium contains two documents. The first, *Reflections from the Sites*, summarizes a mid-point self-reflection conducted during the team meetings. The second, *A Guide for Implementation*, was written for those who wish to (1) learn from the experiences of the Keystone Integrated Framework Project pilot sites and (2) follow in their footsteps, adding another chapter to this journey. The intent is not to be prescriptive, but rather to help new teams develop their own curriculum integration programs. It is, as the entire KIF Project has been, a guide through a process.

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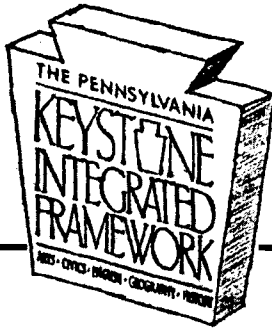
REFLECTIONS FROM THE SITES

Reflections from the Sites

During the second semester of 1996 (the first year of implementation of the site projects), the teams took the time to reflect on their journey to that point. They were asked to respond to a questionnaire designed to determine the extent to which the sites were following the eight Guiding Principles of the Keystone Integrated Framework Project. Nine of the eleven sites returned the completed questionnaires. A total of the scoring as well as a narrative synthesis of their reflections is included here to provide the reader with a view of how the teams saw their own progress as they worked through their first year's project.

(Note: Some of the respondents marked more than one answer in some of the categories, so the number of responses in each question will not always total nine.)

The Keystone Integrated Framework, which equitably connects the arts, civics, English, geography, and history, will

1. **Construct content that transcends subject-specific isolated facts.**

   ☐ Don't fully understand   0

   ☐ Did not deal with   1

   ☐ In the planning stage   1

   ☐ In progress   6

   ☐ Integration implemented   5

Comments: Most of the sites responded in terms of their own project. Overall, however, the sites were developing and implementing integrated units. Such comments as the following are examples:

   ✍ "encourage organization, concept-building, and problem-solving."

   ✍ ". . . thematic units . . . being written, revised, and fine-tuned."

   ✍ " . . . integrated units of study utilizing a literature-based concept approach."

   ✍ "Secondary students are being introduced to the integrated approach . . . in methods courses."

   ✍ ". . . unifying theme of seeds, seasons, and life celebrations . . . integrating social sciences and the arts. . . ."

   ✍ ". . . interrelationship of music and society."

   ✍ ". . . transdisciplinary with the arts at the core of student work. . . ."

   ✍ "Pre-service teachers have developed over one hundred units that do this."

   ✍ ". . . has fostered concept-building and utilization of problem analysis. . . ."

   ✍ "In social studies class, students are mentioning ideas gleaned in language arts or music, etc. They are seeing connections!"

Keystone Integrated Framework

2. Develop processes that enhance organization, concept-building, and problem-solving.

  ☐ Don't fully understand ___0___

  ☐ Did not deal with ___0___

  ☐ In the planning stage ___0___

  ☐ In progress ___8___

  ☐ Integration implemented ___3___

  ✍ "Students are involved in learning activities which provide choices."
  ✍ "Building level and core team meetings are scheduled regularly and involve classroom teachers, specialists, and administrators."
  ✍ "Using schematic maps to design their units of study, the elementary education participants develop, research, and implement a unit of study while examining historical fiction and a bibliography."
  ✍ ". . .using processes such as classification, analysis, and investigation."
  ✍ "Students applied the technological method, a seven-step problem-solving process."
  ✍ "Ours is a process of creation, documented in portfolio and will culminate in exhibition and presentation."
  ✍ ". . . students in the Canada unit do 'character report cards' on characters in the literature that they read, relate that to the theme and support their grade with evidence."
  ✍ "The need to have ready, on schedule, a timed segment, for the video is designed to elicit an organized approach to the task. . . . students must find a way to locate the data they need, identify the most essential elements of that information, and mold them into a video segment, and then into the video as a whole."

3. Using a variety of instructional strategies to open multiple ways of learning and accessing information.

  ☐ Don't fully understand ___0___

  ☐ Did not deal with ___0___

  ☐ In the planning stage ___1___

  ☐ In progress ___8___

  ☐ Integration implemented ___2___

  ✍ "Students participate in a wide variety of learning activities such as simulations, field trips, speakers, drama, music, videotape, art work, musical presentations, debates, library research, interviews, journal writing, letter writing, and sequels to literature. The purpose . . . to draw links between content and the real world to motivate (students) to acquire an interest in pursuing their own research."

✍ "Student teachers are given a learning styles inventory to develop an understanding of . . . learning styles. They then develop units which incorporate all learning styles."

✍ "Children are given learning styles inventories and team planning incorporates that knowledge into developing instructional activities."

✍ ". . . educational technology, drama, music, hands-on cooperative activities, lecture, and modeling."

✍ ". . . self-directed exploration . . . communication through the arts."

✍ "Pre-service teachers are trained in multiple intelligences and ways of integrating technology . . . incorporate cross-grade tutoring, integration of music and dance, use of CD ROMs, e-mail, and the technology lab."

4. **Emphasize higher order thinking skills, creativity, and a multiple perspective approach.**

☐ Don't fully understand _____0_____

☐ Did not deal with _____0_____

☐ In the planning stage _____0_____

☐ In progress _____8_____

☐ Integration implemented _____3_____

✍ "Students created and performed commercials and dramatic presentations which involved interdisciplinary connections and the blending of art, vocal, and instrumental music, dance, the language arts, and content areas. These activities have empowered students to take responsibility for their own learning and become knowledge-producers as well as knowledge-consumers."

✍ ". . . for example, students analyze *The Freedom Train* and *The Captive* to develop northern and southern perspectives and identify misconceptions and biases."

✍ "Students clarify, analyze, synthesize, and evaluate not only as a part of their scheduled activities, but also to extend these processes into all disciplines."

✍ "Students were challenged to provide an original solution to a problem which they themselves identified. The solution required brainstorming, comparison and contrast, evaluation, application, and synthesis."

✍ ". . . for example, students kept a journal in the Native American unit recording how events would be viewed through the eyes of Sacajawea."

✍ "The nature of the program is based on creating processes and using multiple approaches to access information about the county."

✍ "In order to produce their documentary video, the students have had to locate information, analyze it, select appropriate ideas, organize these ideas into an oral report, prepare cue cards, and create a format for presenting the report."

5. **Employ a variety of assessment strategies.**
   - ☐ Don't fully understand   0
   - ☐ Did not deal with   0
   - ☐ In the planning stage   1
   - ☐ In progress   8
   - ☐ Integration implemented   3

   ✍ ". . . performances, group projects, oral presentations, videotapes, and portfolios. Student self-reflection, peer assessment."

   ✍ "Students at all levels are introduced to all types of assessment tools, including traditional tests and quizzes, rubrics, checklists, project peer evaluations, cooperative learning evaluation, and journals."

   ✍ "The university partnership has provided informational services and practical strategies for the use of alternative assessments."

   ✍ "Students defended their solutions (to real life problems they identified) to a panel of teachers. They used portfolios as documentation."

   ✍ "Reflection through multiple art."

   ✍ "Rubrics, checklists, oral/visual/music/movement exhibitions and performances, journals, conferences, video and computer presentations."

   ✍ "Maps, murals, student newspapers, learning logs, peer and self-evaluations, and cooperative group reports."

   ✍ "Performance criteria have been developed for cooperative work, research, writing, visual arts, music and dance, and oral communication. Student journals are used for on-going reflection on progress and process."

6. **Connect learning to life experiences beyond the classroom.**
   - ☐ Don't fully understand   0
   - ☐ Did not deal with   0
   - ☐ In the planning stage   1
   - ☐ In progress   8
   - ☐ Integration implemented   3

✍ "Students have engaged in field trips, guest speakers have visited classrooms, and students have interviewed community and family members. They have also telecommunicated with people throughout the United States."

✍ ". . . true learning does not take place until someone can connect (new) learning to past learning. For example, students are asked to analyze their own bias in developing materials/learning experiences associated with their reading."

✍ "Visiting artists and community resources share their expertise with students and re-enforce the concept that learning and knowledge extend beyond the classroom.

✍ "The nature of the project is to transcend the classroom, identifying problems in the school and community."

✍ "The entire (project) simulation is based upon the leading social problems of today."

✍ "Most units begin with a KWL technique which 'encourages students to state what they know and would like to know about the topic at hand.'"

✍ "All resources for the project are outside the school and into the community and the county."

✍ "One of the most valuable aspects of this experience has to be learning to work together. The teams will not have a satisfactory segment to add to the video if they do not find a way to cooperate and resolve problems. This is very directly related to real life experience!"

7. **Serve and respect all students with their varied needs, abilities, learning styles, interests, and career orientations.**

   ❑ Don't fully understand ___0___

   ❑ Did not deal with ___0___

   ❑ In the planning stage ___1___

   ❑ In progress ___7___

   ❑ Integration implemented ___4___

   ✍ "We are trying to offer students enough flexibility in the ways they work on the project to develop their own part of it so that their differences can be embraced."

   ✍ "Students are given choices in projects, different media and cooperative groups are used, books on the same topic but a different reading levels are used, paired reading and other inclusive strategies are used."

   ✍ "All students, including learning support students, will be using and developing a variety of skills for the problem-solving and presentation."

✍ "Our group of high school students is very diverse in grade, interest, and even their course of study. We are developing strategies that work to their strengths."

✍ "The project was student-driven. The flexible design of the project accommodated the students' varied needs, abilities, styles, and interests."

✍ "The whole reason for our interest came out of the needs of our school's unique population that includes ESL, and various levels of SES whose interests and career orientations challenge traditional approaches and strategies."

✍ "Within their course work, all (university) students are exposed to the philosophy of being a fair and effective teacher. Areas of focus include teaching to different learning styles, teaching the multi-dimensional student, respecting cultural differences, and respecting the equality of all students in their quest for an appropriate education."

✍ "A wide variety of instructional and assessment strategies is implemented to meet the needs of ALL students. Students develop an awareness of a multitude of career orientations as part of the industrialization unit. They are also gaining a historical perspective on the evolution of careers in our society."

8. **Allow for participation by the educational community in the creation and development of the curriculum.**

❏ Don't fully understand	0	
❏ Did not deal with	0	
❏ In the planning stage	1	
❏ In progress	7	
❏ Integration implemented	4	

✍ "In addition to the core team, 78 university students and 125 eighth grade students are directly involved. Parents will also be invited to observe and participate."

✍ "The team has involved university students and faculty, visiting visual and performing artists, parents, local museums, and historical societies to enrich their evolving curriculum."

✍ "Presented an in-service workshop."

✍ "This has opened the community to the students."

✍ "Each step has involved team members. College faculty have worked with our students on cooperative work skills and on 'camera' skills. Student teachers have been in on the planning and have been involved in the

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classroom. Non-team members of the faculty have helped gather materials and offered ideas. All levels of administration have been supportive and helpful."

✍ "What began as an outreach initiative has become a true partnership between school and university."

✍ "The collegial atmosphere fostered by the Framework training led to open participation by classroom teachers, librarians, college professors, and school administrators in development of our curriculum."

✍ "Many resource people have contributed to the curriculum: within the school—the art, music, and technology teachers; outside the school—college professors, Native Americans, and parents."

✍ "A partnership has been established between the school district teachers and university professors who have participated in curriculum writing sessions, conducted workshops, and provided orientation for student teachers. The historical society and the local arts council have collaborated on projects with the school. Secondary district teachers have served as resources to elementary teachers."

Summary of the Teams' Progress

There were many elements common among the sites. The most prevalent ones are here listed so that those anticipating curriculum integration can read first-hand what can be expected during the middle of the first year of implementation. The reader needs to be reminded, however, that each site faced obstacles—some more than others, but nearly every site rose to its own expectations. What the Project has learned from these pilot sites is that the strength lies in the teams, and a strong team can overcome almost any challenge.

❑ A paradigm shift has taken place.

❑ Flexible scheduling has begun.

❑ Communication is the key.

❑ Cooperation between the university and the school has enhanced the work.

❑ The community has become supportive.

❑ Teachers have noted an increase in enthusiasm, motivation, and active participation of the students.

❑ Changes are occurring at the university, most notably the adoption of integrated curricular approaches.

❑ Cooperation between the district and the university has increased the interest in placing student teachers.

❑ Team members report that they are now more creative in their teaching.

❑ Teachers agree that integrated instruction provides more choices for students, creating greater interest and awareness.

- ❏ Experimentation with placing elementary student teachers to observe in the high school has begun.
- ❏ Planning time is essential.
- ❏ There has been a recommitment by the university to find more schools interested in curriculum integration.
- ❏ Most student teachers are thriving in this setting.
- ❏ Team members have learned the importance of teamwork.
- ❏ Every aspect takes more time than expected.

Next Steps

At the time of this reflection exercise, halfway through the first year, some teams were in "high gear" into their project while some were only beginning their implementation. The enthusiasm was evident as they anticipated continued success. Most all of the comments were positive—reassuring to those who are still deciding if this educational approach is right for their school district.

Many sites were planning to expand community involvement, and most had realized the importance of administrative support. Many spoke to the issue of broadening the scope of the project either because of their own strengthened belief based on the results they were seeing or because their colleagues had expressed an interest in also being involved. Others saw the need to encourage other teachers and administrators to become involved. It was at this point that those who had not spent as much time on communication with all stakeholders realized that this was essential. The need for flexible time also became a more important consideration for those who were locked into a seven-period schedule.

Next steps suggested by one of the sites which has been exceptionally successful include the following:

- ❏ Meet and evaluate what we did this year, identify strengths and weaknesses, and make revisions.
- ❏ Strengthen assessment by developing rubrics to evaluate performances.
- ❏ Adapt pupil reporting procedures (report cards).
- ❏ Pursue alternative funding.
- ❏ Provide workshops for teachers and student teachers to enable them to participate fully in this initiative.
- ❏ Plan for expanded technological advances.
- ❏ Continue to reassess and revise course work and field experiences to prepare student teachers for instructional changes associated with integrated curriculum.

GUIDE TO IMPLEMENTATION

Arts ✏ Civics ✏ English ✏ Geography

History ✏

Arts ✏ Civics ✏ English ✏ Geography ✏ History ✏

Geography ✏ History ✏ Arts ✏ Civics ✏ English ✏ Geography

Arts ✏ Civics ✏ English ✏

Content

Basic Skills

Administrators

Individual ability

Teachers

Parents

Higher Education

Students

Student Learning

Community

English ✏ Arts ✏ History ✏ Civics ✏ Arts
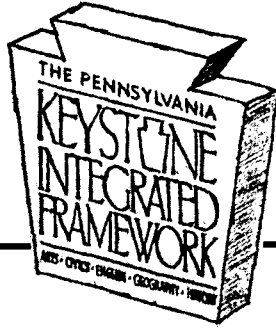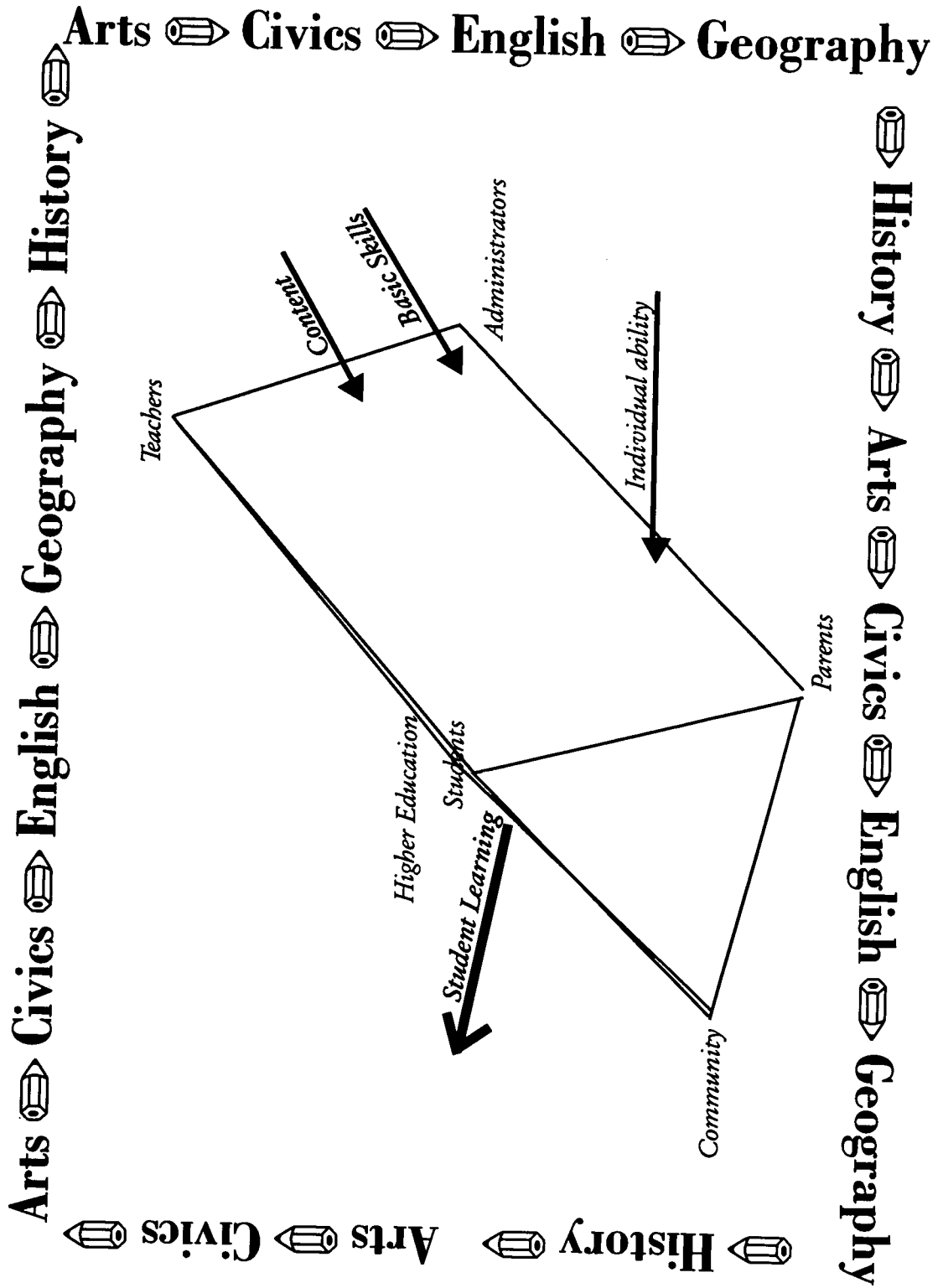
Keystone Integrated Framework—A Guide to Implementation

by Manuel Barrera, Education Specialist

This guide is directed toward basic and higher education professionals interested in starting integrated curriculum efforts in K-12 schools or school districts. The ideas presented in this document are based on the best information taken from experiences of Pennsylvania teachers, administrators, higher education professionals and educational researchers who initiated curriculum integration projects during the 1995-96 school year. These efforts have been synthesized to produce a set of guidelines composed of three major sections:

(1) Key components of the Keystone Integrated Framework (KIF) and Guiding Principles upon which an integrated curriculum should be based;

(2) School site and higher education issues found to be important in planning and implementing curriculum integration; and

(3) Suggested guidelines for planning, implementing, and evaluating a new curriculum integration project.

Definition of Terms: Integration, Equity, and Equality

It is important at the outset to understand the conception behind terms like *integration, equity, and equality*. Each of these terms has received extensive consideration throughout the pilot years of the KIF process, and all raise important considerations for educators hoping to start a curriculum integration project. These terms are discussed here to help new teams in their initial planning.

Integration

Regarding KIF projects, the term *integration* refers to varied ways that multiple subject areas can be combined and the resulting necessity for educators—professionals, parents, and community members—to use various ways to collaborate and cooperate with each other (please review *Instructional Strategies* for a further discussion). KIF projects define an integrated curriculum as "the use of a wide range of existing subject areas in a school program to formulate a curriculum in which students acquire and practice core skills and academic content through the implementation of situation-centered instructional formats." Such formats can include themes, logical and real-world problems, situated simulations, cases, projects, service-based learning, or any other format requiring use of multiple skills and content area knowledge.

The proposed subject areas under the original funding grant included the arts, civics, English, history, and geography. The arts, for funding purposes, was considered an "umbrella" term for dance, music, theatre, and the visual arts. In real terms, nine subject areas were proposed as the original base for pilot integration projects. However, despite this funding constraint, KIF projects were not discouraged from including additional subject areas. New projects, therefore, are encouraged to find optimal subject areas that enable substantive but realistic interrelationships. Primary considerations will ensure that integration efforts are neither (1) unrealistic in seeking to integrate subjects which do not readily lend themselves to integration, nor (2) superficial in content.

Equity and Equality

Equity is differentiated here from *equality*. Equality refers to equal status among individuals, subjects, students, and schools and implies that no category or individual should be denied opportunity, exposure, or support. Consequently, curriculum integration efforts assure from the beginning that all subject areas enjoy equality. This has been especially true (but not necessarily limited to) discussion of integration of the arts. Each of the arts—dance, music, theatre, and the visual arts—is considered equal in status to all other subject areas. Addressing one (e.g., dance) does not imply that the "arts" component of integration has been addressed. Thus, all subject areas have equal importance, and the intended outcome is for all students to gain knowledge and skill in all the subject areas of integration.

However, equal status should not imply sameness. Not all subject areas, teachers, students, or schools are the same. All students are expected to raise their level of ability and knowledge in all areas. Nonetheless, students (and educators) naturally do not demonstrate equal expertise in all areas. The concept of equity, therefore, refers to the process in which students receive exposure to, support for, and practice in each subject area, and teachers are afforded the opportunity to teach what they know best and learn to teach in new areas of individual interest. In this way, individual student differences are supported in a context where all students have an equitable chance to explore individual strengths and challenges. In addition, individual educators with their varied subject areas of expertise are validated as equal partners in the project.

Clarification of these three terms (integration, equity, and equality) can greatly facilitate later work as the press of events will naturally compress individual "vocabulary," and consequently, team members increasingly rely on each other's shared understanding. With these concepts in mind, this guidebook will now review the essential components and principles of the KIF.

Components and Guiding Principles of the Keystone Integrated Framework

An appropriate metaphor for the relationship among these components, the different stakeholders, and the integrated curriculum would be a **reverse prism**, as illustrated in *figure 1*. The prism is constructed by the interactions and efforts among six stakeholder groups, namely, parents, community members, and students on one end and teachers, administrators, and higher education professionals at the other end. Each of these groups provides a unique and interactive perspective by which each combines with the others to produce the integrated curriculum. Properly focused, this curriculum will take disparate content, skills, and individual student abilities and produce coherent integrated knowledge and skill among individual students. What makes this metaphor and its consequent analogy appropriate is that a prism, to produce a coherent beam of light, requires individual adjustment in the path of disparate light waves.

Prisms often are used to separate an individual beam into its various components.

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To produce a single, integrated, beam among various components requires expert adjustment. So, too, are school curricula organized to produce either coherent or diffuse kinds of learning. The building of a coherent integrated curriculum requires the participation, cooperation, and collaboration of each group of stakeholders. Thus, the entire community helps not only to construct the curriculum, but also to ensure that such a curriculum is adjusted to meet individual student needs.

Four major components of the Keystone Integrated Framework include

■ The Guiding Principles

■ Teacher - to - Teacher Collaboration

■ Partnerships with Colleges or Universities and

■ Communication with Parents and the School Community.

All of these components are equal and important aspects of the project and in turn are discussed in the remainder of this section. The order in which they are discussed implies no hierarchical schedule of importance.

Guiding Principles

In the KIF project, school sites were encouraged to develop curricula according to a set of guiding principles. The primary aim of the principles was to delineate the key attributes of integrated curricula in whatever form they may take. That is, each site with its different capacities and individual characteristics was encouraged to build a curriculum around the strengths, abilities, and interests inherent to the people and community of the school. The role of the principles was to ensure that whatever curriculum was developed would result in students' exposure to and acquisition of certain key elements associated with integrated learning.

The Keystone Principles represent core notions about what an integrated curriculum is intended to do:

1. Construct content transcending isolated facts.

2. Enhance organizational, concept-building, and problem-solving skills.

3. Vary instruction for multiple ways of learning and accessing information.

4. Emphasize higher-order thinking, creativity and a multiple-perspective approach.

5. Employ a variety of assessment strategies.

6. Connect learning to life experiences.

7. Serve and respect all students with their varied needs, abilities, learning styles, interests, and career orientations.

8. Allow for participation by the community in creating and developing the curriculum.

The principles are not a curriculum, but they are a set of practices without which

integration of the curriculum cannot occur.

Following is a discussion of the principles based on five commonly asked questions related to developing an integrated curriculum:

1. Is there specific content associated with an integrated curriculum?
2. What methods should be used in teaching and assessing students through an integrated curriculum?
3. How can one address students with diverse cultural and educational backgrounds through an integrated curriculum?
4. What role do parents and other community members play in the integrated curriculum?
5. How can I integrate the arts into the curriculum?

Because these questions cannot be answered prescriptively for all situations, it may be helpful to illustrate by example. After a brief general overview, experiences from the site projects will be referenced to exemplify how some teams addressed curriculum integration.

What Content Is Associated With an Integrated Curriculum?

Principles 1, 2, 4 and 6 represent general guides rather than specific content itself. That is, whatever the subject area, theme, project, problem, or simulation, the aim is for students to acquire knowledge in its appropriate context, to engage in problem-solving that expands their ability to think creatively about solutions, and is relates to present or future life experiences. In the KIF project sites, a variety of content was used (please see summaries of the sites projects [Framework] and the sites' stories [Partnerships and Pilot Sites]), but in each instance, the primary concern was to provide students with opportunities to learn subject matter in context and thereby see the necessity for acquiring different kinds of knowledge and skills.

Example 1

In many cases, pilot projects used themes as a means to provide context. For example, one school used a study of Benjamin Franklin as a theme through which targeted subject areas for fifth through seventh graders would be taught. This theme was organized around the concept of "shared literature" units in which literature relevant to Franklin, his diverse body of work, and the time in which he lived were studied across different subject areas. Teachers, using their individual talents and skills then developed units and lessons incorporating different aspects of the five disciplines targeted for integration. In one instance, the music teacher used the historical study of Franklin's time as a way to introduce students to the music and dance of that time period. In this way, teachers each with individual expertise chose what to present using the principles as questions to ask about the content or as guides for reconstructing content to reflect integration.

(See Clarion Elementary School's Story.)

Clarion
Elementary
School

Example 2

Not all projects used themes as the primary basis for integration. One school used a social simulation in which students studied aspects of six subject areas (the five targeted areas plus science) through experiencing life in a simulated society in the years 2113-2147. Students were organized into problem-solving teams to investigate and present solutions to various social problems within the simulation. The integration team formed the evaluation group for the student projects and worked together to develop, organize, and implement the program.

Conestoga
Valley
Middle School

(See Conestoga Valley Middle School's Story.)

What Methods Should I Use in Teaching and Assessing my Students Through an Integrated Curriculum?

Principles 3 and 5 indicate that the primary instructional concerns in an integrated curriculum are ensuring that students are able to find several solutions to a single problem as well as see similarities among different kinds of problems. Although content may vary, what is important is to place content in a context where students can readily see patterns of differences and similarities. Teaching to produce these kinds of abilities requires both an optimal environment and direct instruction for students to learn appropriate strategies or to use existing strategies more skillfully. Experiences of site projects indicate that establishing an appropriate environment through the use of themes, group projects, or simulations is necessary but insufficient. Students also require instruction in developing new skills or improving upon their existing skills. For example, many of the projects emphasized the use of investigative techniques for gathering information from primary (e.g., individuals, original documents) as well as secondary sources (libraries, encyclopedias, on-line information sources). Thus, students needed to learn how to conduct interviews, explore the Internet, and discern the difference between primary and secondary sources. In other instances, students were to produce audiovisual presentations. Those students would need to learn how to use video and other multimedia technologies. Instructional methods found conducive to many curriculum integration projects included cooperative learning arrangements, team-teaching across disciplines, combined student and teacher generation of project ideas, and instruction in appropriate learning strategies.

Example

In one school, the project team used the study of human impact on the physical environment as a theme. Development of the project centered on the additional goal of identifying multiple perspectives on this issue reflected by the needs and interests of diverse individuals and communities within the larger school community. The team set its goals to guide students toward making connections between various sources of information from different subject areas; to identify diverse instructional methods based on the needs of their diverse student population; and to investigate the diversity of

cultures and individuals representative of the community. Thus, rather than imposing a set notion for investigating this theme, the team sought to include students and their respective communities in generating content and to use this information as a basis for specifying instructional needs of diverse learners.

(See McNichols Education Plaza's Story.)

Assessment Issues

Assessing students in an integrated curriculum flows from the kind of tasks students undertake. Many projects used portfolios of student progress, videotapes of student and group projects, and student writings (essays, final written competencies). Developing appropriate assessment strategies in an integrated curriculum is ongoing, and projects continue striving to achieve a balance between quantitative and qualitative methods for assessment and evaluation of student work. The experiences of site projects and findings in other educational research, however, point to the need for flexible, multiple and systematic assessment strategies.

First, assessment in an integrated curriculum requires flexibility because of the diverse ways students are encouraged to address learning tasks. Most projects focused on the production of student projects or the generating of solutions to many-sided problems, which invariably had multiple solutions. In this context, student demonstration of learning came in various forms: video productions, final presentations, dramas and other artistic products, as well as more traditional paper and pencil evaluation products. Teachers, thus, needed to allow for variability of responses to a general learning task. Evaluation of student products required flexible criteria centering on processes undertaken as well as product viability.

Second, because of variation in student-generated products, teachers needed to use multiple assessment strategies. Rubrics were needed to delineate criteria for evaluating group projects and presentations. At the same time, because of the need for individual evidence of learning, additional measures were needed for judging individual student works. In some cases, rubrics for judging individual projects could be developed. These summative assessment procedures were helpful in assessing the different approaches to teaching and learning brought about by integrated curricula. However, additional assessment strategies were also needed to provide formative (ongoing) assessment to help students (and teachers) monitor progress and demonstrate learning in key skills and content necessary for developing the larger products (e.g., projects or presentations) required of them. In this case, portfolios documenting student progress as well as more traditional assessment strategies have been found useful. And, as will be shown by the final point discussed next, it is particularly helpful if portfolios and other alternative assessment strategies are able to show clear documentation through visible products such as charts and graphs of student progress (both individual and groups) and "before and after" sampling of student work. These multiple approaches to assessment thus have helped to demonstrate student learning in clear, measurable terms.

Third, assessment research and the experiences of the pilot sites indicates the need for systematic assessment of individual and group progress. Important elements of a systematic approach to assessment include measures that are reliable (consistent) and valid (appropriate, meaningful, and useful). Reliability and validity of assessment measures are important for two major reasons. First, assessment of student learning, especially in a project potentially challenging to more traditional approaches, must be trustworthy. Students, teachers, parents and community members, want and deserve to know that a new approach to teaching will provide true evidence of desirable results. Second, assessment of student learning in an integrated curriculum must be true to the curriculum being presented. Students must be assessed with measures that address what was taught, how it was taught, and how this demonstrated expected results.

Additionally, because curriculum integration is aimed at student learning that transcends isolated facts, is used for multiple purposes, and prepares students for a "decompartmentalized" job market, assessment of students must document two key attributes of learning: maintenance and generalization. *Maintenance* refers to the ability of students to retain learning over time. *Generalization* refers to the ability to apply what has been learned in different settings, subjects, or situations.

In short, assessment strategies must be wide enough to capture all aspects of student learning and specific enough to show desirable and measurable results for all students. For a more detailed discussion of assessment, the reader is encouraged to consult the article on Assessment, later in this Compendium.

How Can I Address the Needs of Students with Diverse Educational and Cultural Backgrounds Through an Integrated Curriculum?

Practices inherent to an integrated curriculum—solving problems through multiple solutions, approaching teaching and learning from multiple perspectives, looking at content (knowledge) within associated contexts—help create an ideal environment to support cultural, linguistic, and ability differences among teachers and students. In such a curriculum, these differences become sources of strength and opportunity as students learn to maximize learning potential by drawing upon each other's strengths and meeting individual challenges through cooperative endeavors (in the case of group projects) and deriving alternative solutions (in the case of individual work). Too, such differences can become important experiences for all students as they develop their skills in cooperating and collaborating with peers who may view the same event, problem, or situation differently and among whom they learn to appreciate similar goals, aspirations, and conclusions about their world.

Make no mistake. Developing positive perspectives of individual, cultural, and linguistic differences is not an automatic occurrence. Cooperation and acceptance of differences are learned behaviors that students acquire through modeling from adults. It is not without foresight that many of the KIF projects incorporated different aspects of Guiding Principle 8 into the fabric of their instructional and curriculum goals.

In formulating an integrated curriculum, attention to fostering cooperative skills, support for acceptance of different views, and a willingness to explore differing perspectives from one's own must consciously be addressed by curriculum developers. Site projects of the KIF approached this issue in several ways. In some cases, exploring diverse cultures constituted the content around which the integrated curriculum was built. For example, one school chose to use the study of Native American cultures as a theme for organizing student learning in various subject areas. Another school investigated the "culture shock" inherent in studying the diverse nature of their own community. In other cases where cultural and individual differences were not the focal point of the curriculum, project teams incorporated this issue by exploring different community and individual perspectives on the issues under study. Two examples are highlighted below.

Example 1

The school using the study of Native Americans as its theme set forth the following objectives for its students: (1) encourage students to express their own ideas, plan together in groups and work together as a whole; (2) afford the opportunity to explore, imagine, and experience another culture (Native Americans) in acceptable ways; and (3) develop knowledge, understanding, and respect for beliefs and skills comprising the core of Native American cultures for generations. Around this theme and its objectives, the project designed instructional and assessment activities to create an environment where students learned to use critical thinking skills, express themselves creatively, and make connections between their study of cultural and social differences in others and the inherent differences among themselves.

(See Dieruff High School's Story.)

Example 2

In the school investigating human impact on the environment (discussed previously), the project team set forth the following objectives: (1) develop a year-long theme (human impact on the environment) that would focus their development of instructional and learning strategies for integrating the five disciplines (arts, civics, English, geography, and history); (2) provide opportunities for both learners and teachers to experience integration (e.g., mentoring to pre-service teachers and student exploration of individual areas of interest); (3) help learners identify connections among people, art, and nature that serve to demonstrate self-awareness in smaller to larger contexts (family, school, community, environment); (4) establish an interchange of expertise and resources among the host school, university partners, and the community; (5) identify models of instruction that enhance integration, expose learners to advanced learning technologies, and support systematic assessment procedures and instructional methods

(See McNichols Education Plaza's Story)

that promote use of multiple learning strategies; and (6) plan learning experiences that highlight cultural and individual diversity in the community. This final objective was accomplished through study of local folklore, oral histories, and artifacts. The purpose of this objective was to provide learners the opportunity to identify cultural characteristics and their impact on the local community, compare causes and effects of human migration, and compare, contrast, and celebrate myths, ceremonies, and festivals worldwide.

This incorporation of cultural study within the framework of the project set the stage for students to honor and respect one another's varied perspectives and to appreciate how such different views affect human behavior and individual perception. It served to make the daunting task of studying cultural differences an exploration of personal differences in which learners see themselves and others as individuals with personal histories both alike and different from one another.

What Role Can Parents and Other Stakeholders in the Community Play Through an Integrated Curriculum?

A guiding principle of the KIF is the importance of linking educational experience with life experience. Parents and community members, because they engage in the practical aspects of English, civics, history, geography, and the arts every day (not to mention mathematics and science), can play a critical role in helping their children see the connection between what they are learning in school and their present and future lives. Additionally, many parents and community members have expertise in particular subject areas that can prove immensely useful in the classroom. For these reasons, parents and community members should become important partners in a project such as curriculum integration.

Although attention to this aspect of KIF principles has not been uniform at the early stages, many of the projects have enjoyed public support and visibility through media coverage of individual and statewide efforts. Initial efforts of site projects have tended to involve parents and community members in two ways: (1) through soliciting input and support for the project and (2) by investigating and soliciting resources for curriculum projects. In soliciting early support from the community, KIF projects exemplify a broad approach to community and parental involvement. Rather than asking parents to support a new project, which they had little involvement in creating, several projects immediately sought parental and community involvement at the developmental stages of their efforts. In some cases, this process began at the initial grant-writing stages prior to funding of the project. These efforts to secure public involvement in new educational programs have helped ensure ongoing support for individual projects. In this way, parents and community members become a part of the project rather than onlookers.

A second aspect of involving parents and community has been through investigating the possible community resources available for implementing the curriculum.

Because of the nature of the integrated curriculum, both its cross-disciplinary aspects and inquiry-oriented approach, teams made great efforts to secure the involvement of local museums, musicians, artists, and businesses as well as individual parents with particular expertise. Additionally, many of the projects incorporated the use of qualitative research methods in which students conducted interviews, collected primary resource data, and made observations. Thus, many students had opportunities to acquire information and learn skills outside of and in addition to traditional seat work assignments in classrooms.

Example

One of the projects, rather than specifying activities at the outset, incorporated in their planning the development of curriculum units in "neighborhood" teams where parents and community members were asked to consult in developing the learning units that their children were to be presented. Alongside this direct involvement, parents were apprised of the new curriculum effort at meetings of local parent organizations and were solicited in gaining school board approval for the project. The formation of neighborhood teams in which parents were encouraged to participate helped teachers in writing curriculum that they felt assured would meet with community support.

Abington
Junior
High School

(See Abington Junior High School's Story.)
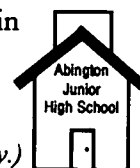
As can be observed, the nature of KIF projects leads to practices that require a commitment from parents and community members. This kind of involvement presents challenges in the way that the term "educator" is defined. From the perspective of an integrated curriculum, all individuals, including parents and other community members, who can have a positive learning impact on students are encouraged to participate directly or indirectly in planning and teaching. As a result, professionally trained educators become collaborative as they seek inclusive ways to avail themselves of human resources such as parents, artists, business individuals, and other community members. This collaborative view of teaching has the additional effect of modeling desirable behaviors, which students are thus encouraged to emulate.

How Can I Incorporate the Arts in an Integrated Curriculum?

In an earlier section of this guide, the concepts of equity and equality were defined to express the equal importance of and variable treatment for integrating each of the disciplines into a curriculum. Equally and equitably integrating the arts has often been a difficult task owing to a lack of trained personnel and available certified educators. KIF projects have made great progress toward providing students with opportunities to enhance their appreciation of and creative skill in various arts disciplines. A number of strategies were used by site projects to use the arts as part of the curriculum. Two general approaches were (1) to add artistic examples to overall themes or projects and (2) to use the arts as vehicles to meet learning objectives.

In the "add-on" approach, available arts teachers (e.g., music teachers, visual arts, dance teachers, or drama teachers) might choose works or projects associated with the overall theme or project underway. This approach, of course, has some inherent problems in that it is not truly integrative. Most schools do not have teachers in each arts discipline. Thus, schools might become inclined to integrate only those arts disciplines for which they have available personnel. However, add-on activities have been found useful as initiating steps toward involving teachers not orginally part of a project and encouraging those teachers unsure about stepping into a deeper commitment.

Example 1

One site project, upon further planning, found that it needed to include a music teacher on its team to add to their theme project on the "Life and Times of Benjamin Franklin." Integration of the music teacher's work into the curriculum began through her efforts to teach students in her music classes (also incorporated into the project) about the music and dance of the period. In conjunction with visual arts work and theatre-based presentations already a part of the project, students were able to learn various arts skills and content related to the theme project. This experience encouraged established project teachers and the new team member to further integrate the music teacher's curriculum into later stages of the project. This initial add-on to the project served to deepen further involvement of all teachers in promoting the arts as integral to the overall project.

(See Clarion Elemenetary School's Story.)

A second approach to integrating the arts is to use them as one of the vehicles through which learning objectives are met. For example, many projects used artistic presentations, either creative dramas or other visual and performing arts, as evaluation products to demonstrate integration of learning across disciplines. These products served both as student evaluation procedures and, consequently, organizers for teachers to structure teaching of concepts and skills. That is, in no way were students evaluated on skills or content without having been taught the requisite components of the evaluation product.

This approach, however, is not without inherent difficulties. Most teachers do not have artistic training and many may not possess arts skills naturally. Thus, an important consideration is the degree of artistic expertise available to individual sites. In many cases, teams will need to incorporate additional training as part of their pre-planning procedures. Fortunately, such training is readily available both through the state department of education and most likely available through local resources. Here is also an instance in which parents who are artists might volunteer to assist the classroom teachers and students.

(See Robert Morris Elementary School's Story.)

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Because an important component in developing an integration project is the marshaling of community resources, identifying arts resources becomes just one more aspect of the pre-planning process. At the same time, much can be gained through the state's "Artist in Residence" programs in which schools can apply for grants to bring state-approved artists to work with students and teachers. Many schools throughout the state have already availed themselves of this resource with much success. (Readers are urged to consult the Pennsylvania Council on The Arts for details.)

Example 2

One site project developed a cross-grade high school course to investigate cultural life in their county. Together with learning about history, geography, business, and technology, the students learned about the folklore, music, visual arts, and performing arts in their area. The project was organized such that students experienced and learned about the many variables that contribute to institutions and enterprises in their community. For example, students were exposed to the notion that visual art was not only the work of local painters, but that of architects and local advertising. Additionally, students learned of the historical aspects of all the arts as they took place in the county.

As a final project students developed a video documentary synthesizing their efforts. This production served both as an evaluation tool for the project as a whole and as a basis for students to get first-hand experience in applying the basic skills they had learned in school. Because the project was built around the cultural life of communities, students were able to see the interconnections among various local institutions and the arts' contribution to the well-being and overall success of a thriving community.

(See Mountain View High School's Story.)
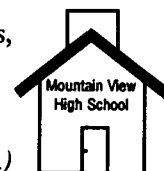
Example 3

Another site used as its core the building of musical instruments. Through the day-to-day working of the faculty team, this site was able to generate student projects incorporating research, writing, computer programming, and physics, along with the skills learned in the five subjects of the project. Through the teamwork of all involved, this site's work was honored by the Rock 'n Roll Hall of Fame and its team was invited to make a presentation at a workshop held by the institution.

(See Conneaut Valley High School's Story.)
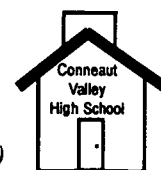
School Site and Higher Education Issues in Planning an Integrated Curriculum

The process of developing and implementing successful curriculum integration based on the principles described above has hinged on two interrelated factors: collaborative team-building at the school site and strong higher education partnerships with local colleges and universities. These factors are interrelated because in the KIF projects they were not separate activities. Collaborative team-building at the site level was a process that included local higher education faculty and their respective teacher preparation programs, and higher education involvement included the participation of school site faculty in changing teacher preparation programs. Each set of individuals supported each other's efforts.

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The following section will first address issues found important to school sites as they began to implement their integration projects. The second part of this section will address the role of higher education partnerships and important considerations in developing and maintaining these partnerships. Finally, some general considerations that the school site and higher education teams found important for future planning will be presented.

School Site Issues

Across all grades, elementary through secondary, teachers in the Keystone Project found classroom teacher collaboration an important aspect of successful curriculum integration. In particular, three factors were identified as keys to successful implementation:

❏ Team-building

❏ Time Management

❏ Instructional Management

Team-Building.

Experiences in the field indicate team-building is central to preparation, implementation, and continual evaluation of the project. In general, team-building uses effective communication and group process to address the specific conditions and constraints within the school and community using available individuals and resources.

Team building begins with a central core of educators, parents, community and higher education partners, and students, but continues on to include as many additional team members as possible through consistent, timely communication and an "open door" to encourage further involvement. Through group process, team members see that their success is tied to an overall effort in which everyone's involvement is valued. Each small contribution builds upon other contributions to result in large successes.

Specific actions and concerns were associated with team-building within the site projects. An important first step was establishing shared understanding of what curriculum integration meant among team members and those with whom they sought to collaborate. Although the Keystone Framework provided a general framework, it was important for teams to reflect on their specific school context, the views of all the people involved (including students and the community), and that of various other individuals to whom one may need explain a new project. Clarifying terms and concepts and reconciling different perspectives are primary concerns making for smoother discussions of later issues.

This need for shared understanding, of course, raises the importance of effective communication and group process among team members and other stakeholders. Site teams found it important to keep one another current on various aspects of the project as well as to maintain lines of contact with others not directly involved but affected by the project. Communication continued to be important through the implementation phases as teachers monitored student progress and adjusted for inevitable changes in schedules.

Group process consists both of appropriate use of meetings and of the need to ensure consensus-building among all stakeholders. In proposing and implementing new efforts in schools, those who are not always present at a meeting may be just as important as those who are. For example, school administrators, for various reasons, may not be able to find the time to attend some team sessions. Yet, their support and assent is always important. Parents, especially parent representatives, fall into this category as well. Often, the mere courtesy of communicating team efforts and decisions will pay dividends in added support for the project. In other terms, group process is not just how one conducts a meeting, but also refers to collaborative leadership exerted to involve all who are necessary to ensure success of the project.

Specific actions that site projects employed to assure appropriate communication and group process included active recruiting of teachers, parents, and administrators into the teams, seeking publicity about the project, and frequent updating to relevant persons and organizations. Experience also showed the importance of the following concerns. First, it is important to secure early involvement of all teachers who might be affected by or become interested in the project. In particular, involving school psychologists, special educators, and various other specialists can be helpful in maximizing involvement of students with various abilities and special needs. Second, in relation to group process, it is important to ensure shared decision-making about general issues such as conception and implementation of the project as well as more specific issues such as student placements within the project. Finally, it is important to advocate flexibility in accepting all points of view and adaptability to existing strengths and challenges of individuals and resources related to the project. That is, successful implementation is not necessarily a function of ideal conditions or resources. Rather, teams need to consider what people and resources are available, what is possible to supplement through available staff development resources or acquisition of materials, and what challenges to the project should just be considered constraints within which to operate.

Time management

The natural press of existing schedules is a constraint that can greatly inhibit building a new project. Throughout the initial stages, a recurring issue is how to manage the time needed to prepare the project, plan for implementation, and collaborate among team members. Two general categories of time management during startup procedures are project preparation and planning for implementation. The following strategies have proved helpful to site projects.

Project preparation for the site projects begins with the development of the project proposal. Although the initial incentive for KIF projects was the promise of grant funding, many projects observed that it was during this activity that such issues as team-building, partnerships, and assessment of needs became clear. For teams preparing a new curriculum project it is highly recommended that they undergo this pre-planning stage—take the time to plan their efforts thoroughly—to make the later stages of the project run efficiently and productively.

The preparation stage can be characterized as three kinds of time resources:

1. Time to conceptualize the project plan
2. Time to organize and recruit the startup team
3. Time to initiate team-building and refine the initial plan.

Conceptualizing the plan more than likely will be the work of a smaller group consisting of teachers, administrators, and community members.

The primary goal of plan conception (and why it requires time) is to produce a clear idea of the concept around which curriculum integration will take shape. The initial audience for this concept is members of the prospective core team. At this initial stage, it is more important to present a concept that will inspire team support than a fully detailed plan.

Two reasons for waiting to plan specifics are (1) it is important to allow room for prospective team members to provide input into the initial concept and (2) it is hoped that details and plans will change once new members of the team begin to participate. It is important to remember that, whatever the concept, it should have the **strong owner-ship of all those involved** to maintain team commitment. At the same time, the concept of the project should be developed enough for new participants to see the possibilities for student success. There are important questions to answer in preparing the initial concept.

1. What is the project: around what activity will this project be organized?
2. How will it help our students?
3. What makes this project an integrated curriculum?
4. Why is it needed in our school?
5. How is it different from what we have already been doing and how is it similar?

Assuming the project has inspired support, the preparation stage continues with recruiting and organizing the startup team. During this period, the core team is orga-nized and begins the final stage of preparation: planning and detailing the new project.

Many site teams attribute their success to the time taken to **build an appropriate team and thoroughly plan their projects.** In the KIF, this planning time was sup-ported through a KIF Summer Institute where prospective teams participated in a week long retreat to begin project planning. However, many of the projects had actually organized their own local institutes in the months prior to this statewide institute. These experiences attest to the usefulness of obtaining the time and support to conduct thorough planning, organization, and team-building.

An additional observation has been the benefit of including students from the beginning of the project. Although student participation in most cases occurred after pre-planning, comments from site teams indicate two reasons for earlier student involve-ment. First, because curriculum integration relies on and encourages student participa-tion in developing projects, their early involvement would establish strong commit-ment. Student commitment to the projects was a common result enjoyed by KIF

projects. Second, early involvement would greatly facilitate implementation of the curriculum. Early student input would eliminate much guesswork about whether student interests matched curriculum projects and activities. Some examples of student involvement include producing student interest inventories, engaging students in discussions about proposed curriculum integration projects, and including interested students in the pre-planning stages.

A second aspect of time management is the careful use of time during implementation of the project. Teachers need time to plan together, site teams need to coordinate activities, higher education partners, especially student teachers and their supervisors, need to get oriented to the project on site. At the same time, the focus of the project is not on meetings, but on teaching students. Following are suggestions for addressing this issue.

Two categories of time management during implementation are managing instructional time and managing staff time. Important considerations in managing instructional time are classroom scheduling and student activities. Two approaches found effective are the use of block scheduling and setting a system of flexible hours for working with students. Block scheduling organizes class schedules to provide adequate time for some teachers to be directly assisting students while others are planning and organizing. In this way, teachers working in a team can pool their combined class schedules to provide larger blocks of time to carry out various aspects of a project. For example, if students need intensive instruction for learning geography-related aspects of a project, the geography teacher (or the teacher designated to teach the geography component) is able to use several class periods rather than one short period to carry out instruction. While this activity takes place, other teachers are planning the instruction of other aspects of the project and can schedule their class time accordingly.

Using flexible hours for students involves providing students time to carry out project-related activities at times other than normally scheduled class times. Two aspects of this approach bear consideration. First, allowing students flexible hours requires a high degree of student responsibility. Generally, this kind of responsibility must be treated seriously through advance preparation of students and the careful delineation of ground rules for appropriate behaviors. Second, teachers, administrators, and parents should be apprised in advance regarding this activity and should be involved in helping develop appropriate procedures. In other words, it is important to prepare students for the kind of responsibility expected of them and ensure that they can be successful in assuming such responsibility.

Managing staff time involves the following: appropriate released time for coordination and planning; minimizing the use and maximizing the effects of out-of-class preparation time and staff development; and regular assessment and evaluation of students and project activities. Released time is often at a premium in most schools. Using released time should be carefully planned and the planning shared with appropriate administrators so that activities such as trips to other schools or to the higher education partner's site are used efficiently. The project coordinator should be provided the time to organize and facilitate these and other activities of the project such as planning meeting agendas and collaborating with higher education partners.

In managing out-of-class preparation and staff development, the actual time spent out of class should be minimized by careful planning. Concurrently, the time spent outside of class should represent a valuable and relevant time expenditure that can have a direct impact on student learning. For example, all teachers necessary to prepare for upcoming project activities should be involved at appropriate meetings so that less time is wasted later in secondary consultations. Too, staff development should be based on team-determined needs to avoid staff training sessions that are either overly general or "off the mark." In determining staff needs, care should be given to obtaining accurate information. A single list of needs gathered hurriedly is far less effective than taking the time to develop or obtain an appropriate inventory that gathers specific information.

Finally, teams need to include appropriate time for ongoing (formative) assessment of project activities and of student progress. This formative assessment is important in determining such issues as whether the project is unfolding as it was intended, what areas of the project need to be adjusted, and, most importantly, gathering information about student progress as it is evolving. In this way, teams can maintain the project continuously without relying solely on summative information gathered after-the-fact.

Instructional Management

There are many kinds of instructional approaches associated with curriculum integration. However, which approach will work best is determined by site team members investigating and discussing the best matches among curricula, instructional strategies, a school's physical and personnel resources, and the student population involved. A detailed discussion of instructional strategies and integrated curricula is included later in this Compendium. Readers are encouraged to review this material which is mainly concerned with discussing strategies currently being employed through the KIF project.

Four strategies found useful in the KIF include cross-subject teaching, involvement of students in teaching, use of outside resources, and administrative support. Cross-subject teaching involves using the same theme, problem, or project as the basis for teaching concepts in various subject areas. Teachers within a single grade or across several grades plan together and decide on the important subject-related concepts and skills that need to be taught in order for students to accomplish learning goals. This approach maximizes relevance of proposed skills and knowledge and allows students to apply learning within appropriate contexts. Most important, students are provided with an appropriate environment to see the interconnectedness of various subject areas.

Teaching across subjects has the additional advantage of facilitating block scheduling and pooling teacher resources. Teachers can deliver instruction with larger blocks of time on an alternating daily schedule or through other individual arrangements. At the same time, they can draw on each other for resources and content-area expertise to help with individual classes.

In some instances, the cross-subject approach has been extended to multi-grade settings. Aside from the advantages in scheduling and exposure to an integrated environment, this approach provides younger learners with proximal-age tutoring from older students and provides older learners opportunities to reinforce new learning through the tutoring process. However, caution must be taken when employing multi-grade settings to ensure that older students are appropriately challenged to learn and younger students are not frustrated by too-difficult tasks. As is generally true, teams must consider the specific qualities and needs of their students as well as of themselves in deciding to use any specific approach.

A second strategy found useful in KIF projects is involvement of students in teaching to facilitate learning. Although students, by definition, are primarily learners and not teachers, their learning can be enhanced by providing them opportunities to teach others. In the KIF projects, such opportunities took place in several ways. For example, students developed presentations to share research findings with their peers, made presentations to younger groups of students or to other organizations, and participated in peer tutoring. These activities gave students additional opportunities to internalize knowledge and reinforce skills learned through the projects.

A third instructional strategy is making optimal use of community and statewide resources, especially in areas not directly available within the school or through existing personnel. Projects can avail themselves of local artists, businesses, institutions, parents, and grandparents to provide information, resources, and skills of use to students and their projects. A number of former projects, for example, have used parents, grandparents, and other elders in the community as information resources for such projects as community histories and knowledge about local geography and the environment. Several of the KIF sites found community members to be a valuable resource. Local museums and libraries were also used by many of the sites as resources for information and local mentoring of students.

In addressing the arts, both local artists and the Pennsylvania Department of Education's Artist-in-Residence program have proved an effective way to bring artists into the schools. As part of a curriculum integration project, these artists do not come to "add-on" the arts. Rather, projects use these artists to support curriculum projects and enhance the integration of the curriculum. In many cases, artists serve as both consultants and teachers working together with the site team to meet project goals. For example, in developing student docu-dramas about the environment, projects can look to local community theatre groups to provide training in needed theatrical skills to students and teachers. In the process, students, teachers, and local artists develop relationships that can lead to future work together.

Finally, KIF projects have found it effective to maintain positive administrative support and encouragement for their projects. Although the importance of seeking and receiving support from school administration may seem obvious, it is prudent to see such efforts as a strategy that entails conscious planning and deliberation. First, receiving such support is not always automatic. Just like all other educators, administrators need to see the relevance and viability of the project for the overall needs of the school.

Second, several aspects of integration projects may require changes in scheduling and staff-development plans that administrators must recognize as important. Finally, administrators may have access to resources and community contacts that could prove useful to the project. Thus, administrator support for the project must go beyond initial assent, or, in the case of grant funds, support for receiving money. As mentioned earlier, receiving this more comprehensive support of administrators involves excellent communication with them and regular updates of the project. Too, site teams should see administrators as potential sources for additional contacts in other schools or in the community that can support instruction.

Team-building, time management, and instructional management as they are defined here have played key roles in curriculum integration efforts in Pennsylvania. Additional examples and confirmation of the importance of these factors can be found in the stories told by the pilot sites.

Higher Education Partnerships

An important component of an integrated curriculum effort is the collaboration between schools and universities. There is a reciprocal benefit from this work for both institutions. For the local school, more higher education involvement has meant higher quality in the work and role of student teachers as well as more direct access to university faculty and involvement in educational research than in the past. In many cases, student teachers and university faculty have helped teachers design and learn to design integrated units for classroom instruction.

For the local college or university, direct participation in the classroom has helped redesign teacher preparation programs to prepare new teachers for current needs in today's classrooms. The positive working relationships established between school site educators and higher education faculty provide an environment in which student teachers get to experience integrated education in action. Such collaboration also provides university faculty an opportunity to learn about integrated pedagogy thereby enhancing existing courses and inspiring the development of new ones. Finally, the emphasis on integration of the arts provides an avenue for higher education faculty to work with other college disciplines as resources for integrated projects.

These positive results of university and school site partnerships are a product of activities considered in earlier parts of this guidebook. Three types of activity are particularly important: early collaboration, regular communication, and reciprocal exchange of information, technology, and skill.

First, early collaboration between school site and university should begin with initial designing and planning of the project. This first step helps to solidify team-building efforts between school site and university faculty. Each set of interests is, thus, taken into account as part of the overall project.

Second, university and school site members should have regular communication with each other on various aspects of the plan. Two important steps are the naming of the team coordinator (or co-coordinators) and the establishment of regular team meet-

ings. Coordinators facilitate communication among team members, organize meetings, and ensure that meetings are productive and address essential issues in a timely manner.

Finally, an important component of school site and university collaboration is the arrangement of regular site exchanges between faculty at the school site and university. Through these exchanges, site teachers help in preparing new student teachers and university faculty help with instructional design and classroom instruction. In both cases, both faculty groups learn firsthand the concerns and issues facing each other's work.

These site exchanges have two overall purposes. One purpose is for each faculty to learn the strengths and challenges of each other's settings in order to better understand each other's potential contributions. A second purpose is for faculty from each setting to aid and support each other's work in fulfilling those contributions. Because of these purposes, the first order of business in any process of site exchanges between educators and their classrooms is the establishment of trust between the partners. It is important to respect the work being undertaken by each faculty within their own settings. Two prerequisites to this process are the suspension of value judgments and "unconditional positive regard." Suspending judgment requires individuals to observe rather than judge what takes place in other settings. Suspending judgment also means recognizing that, whatever takes place, the visitor's role is to provide assistance that can make the partner's work more effective.

Unconditional positive regard refers to making positive assumptions about each other's intent. That is, along with suspending judgment one must further assume that efforts in each setting are the faculty's best effort to be effective. Additionally, it must be assumed that each individual is seeking to learn from the process and make necessary changes when such changes become apparent.

This process does not mean that changes cannot be proposed as a result of collegial dialogue initiated through the site exchange process. However, whatever positive advice is presented will more likely be heard and seriously considered if individuals first learn to count on each other's support and collegial esteem.

A Guide for Developing a Curriculum Integration Project

One primary danger in starting an educational reform project is embarking on unnecessary, ill-conceived or ill-supported changes. The degree to which a new curriculum integration project differs from current practices determines how those involved—students, parents, community, and educators—will react. Some may consider the change more necessary than others. It becomes critical to make sure that project teams are clear about the change proposed, how it can be supported, and who will implement the change. Thus, three common stumbling blocks when a school attempts reform are lack of planning, inadequate communication among stakeholders, and lack of involvement by key role players. Lack of attention to these factors can lead to reversion to former practices, demoralization of team members because of over-extension or lack of progress, and lack of support from various stakeholders.

Previous sections of this manual have detailed how successful integrated curriculum projects through their collective experiences have addressed these stumbling blocks. Following are a set of guidelines based on this experience that can serve as steps to consider when initiating and implementing a new curriculum integration project.

These guidelines are not intended to be a recipe. Rather, they represent both crucial issues that should be addressed as well as important details that can prove helpful through initiation and implementation of a project. How and when each step should be implemented or considered should be based on local conditions.

The Process

A watchword for developing an integrated project is to "think big, but start small." That is, achieving the ultimate goal of the project is accomplished by much smaller steps along the way. It is important to emphasize quality over quantity and to prioritize efforts. This being said, the steps necessary to implement a project flow from discussion in previous sections of this guide.

First, **build a core team**. This core team, that may or may not comprise the entire site team, has several immediate tasks. Among them are defining terms, addressing the project's guiding principles, agreeing upon initial conceptualization of the project, and team-building. These tasks have proved important steps in avoiding later difficulties in implementation. Although such tasks as the guiding principles and definition of terms have already been well developed, it is highly recommended that prospective teams discuss these issues for themselves and work on them continuously as new team members are recruited. Such a process serves as an effective medium for team-building and deepening the team's understanding of the total effort. To that end, use of this guide and the various supporting documents within the general KIF compendium can facilitate core team development.

Second, **conceptualize and draft a plan for the project**. This step is where the initial core team drafts the initial concept, identifies and recruits the site team, and details a plan for implementing the project. Here also is where different stakeholders, including students, are involved (if not already) and their roles solidified as partners in the project. Essential questions to answer (discussed earlier) include the following:

1. What is the project: around what activity will this project be organized?
2. How will it help our students?
3. What makes this project an integrated curriculum?
4. Why is it needed in our school?
5. How is it different from what we have already been doing and how is it similar?

Third, **develop a framework for school site implementation**. Once a plan is drawn, it becomes important to determine time and instructional management issues.

Key questions to consider include the following:

1. What kind of scheduling will be needed?
2. What kinds of instructional strategies are needed?
3. How many students, classes, or grades will be involved?
4. What and how much staff development is needed?
5. What resources are available and what are needed?

Fourth, **develop a plan for formative and summative evaluation of the project.** Key evaluation issues include determining progress of implementation, fidelity of implementation, and results of implementation. For determining progress, it is necessary to have regular and appropriate meetings of the site team and to select a coordinator or co-coordinators (e.g., school site and university co-coordinators). Site teams and coordinators monitor the project to make sure all aspects are progressing according to plan or determine whether adjustments need to be made.

Monitoring fidelity of implementation can be accomplished through the close collaboration and consultation among site participants, especially among teachers, coordinators and other appropriate supervisory personnel. A system of appropriate inter-classroom observation can be implemented with teachers helping each other through support and discussion. This aspect of implementation is important, but difficult to conduct if appropriate team building has not taken place. It is critical that all instructional and supervisory personnel involved be afforded the opportunity to develop strong collegial relationships. In this respect, many of the issues discussed regarding higher education partnerships such as suspension of value judgments and "unconditional positive regard" are also relevant to monitoring work within teachers' classrooms. If this issue is considered a problem area, it is highly recommended that site teams inquire about available district, university, or independent consulting services to address it.

Finally, monitoring of project results can be accomplished through careful determination and study of pre- and post-project information. **It is most important to determine key indicators of success important to the school, site team, administration, parents, and other stakeholders.** These indicators become the basis for monitoring results of the project. For example, achievement indicators are often seen as important in determining success of any new curriculum project. However, given the nature of integrated curriculum, collecting data from teacher's grade books may not be the only academic indicator appropriate for monitoring a project's success. It may also be necessary to collect pre- and post- work samples of student writings, tests, or other information to determine what kind of academic progress students are making. Too, other measures, such as changes in school attendance, reductions in classroom disruptions, or parent satisfaction with the project, may be just as important as academic data. Each potential indicator of success should be determined based on **prior discussion** of information considered important.

Fifth, **develop a plan for school site and higher education exchange.** The school site and higher education exchange should be well planned to maximize benefits to both

the school site and the university partner. Activities for these exchanges can include inviting school site faculty to conduct teacher preparation classes and student teacher seminars; college faculty can aid in classroom design, teach lessons, and observe instruction, and consult with school site faculty in restructuring teacher preparation courses or programs. Further, school site and college faculty can collaborate on joint research projects and presentations at educational conferences.

As one can see, these steps are purposely not a lock-step procedure. Rather, they comprise essential components based on experiences in the KIF project. Although some of these components may follow one from the other, what is most important is that each of them be addressed and incorporated into the overall effort. For example, developing higher education partnerships does not end with receiving an agreement to participate by a university or with a few consultations. It is an ongoing process that will, no doubt, change and mature as the project moves through its stages of development. So, too, is the process of team-building and, even, conceptualization of the project as a whole. These five steps (components) represent a basis to start a project. The final product and its success must reflect the local efforts exerted.

Final Considerations

In addition to the five steps above, the following details have been found particularly useful. First, secure concrete administrative support in the form of prior arrangements, including dispersal of project funds through the business office. These arrangements are especially important when grant funds are obtained. Additionally, receive assurances for adequate planning and preparation time for teachers, and support in establishing funding and planning priorities.

Second, involve all affected teachers from the beginning. The more teachers appropriate to the project involved at the beginning, the better. The content and skill expertise of the teachers should be used as an advantage in avoiding departmental territoriality. In particular, strong links to local university or college faculty who can provide support and experience must be established.

Third, secure early community involvement through parent groups, business partnerships, and other social agencies. Establish, early on, visible symbols of the project and a system for public relations and dissemination of information. Further, ensure that students are involved from the beginning.

Fourth, keep video and journal documentation of all efforts to review your progress. This information will be helpful during the evaluation stages of the project.

Fifth, seek advice from those who have been involved in similar projects. Their experience may solve many problems and help you avoid typical pitfalls.

Finally, **focus on the positive.** Be sure to support each other by establishing strong team-building efforts that result in whole team commitment. Trust the process of collaboration, communication, and involvement. One guarantee is that changes involving the education of children do not go smoothly. It is important to recognize that problems are not necessarily an indication that something is going wrong, but, rather, that change may be taking place.
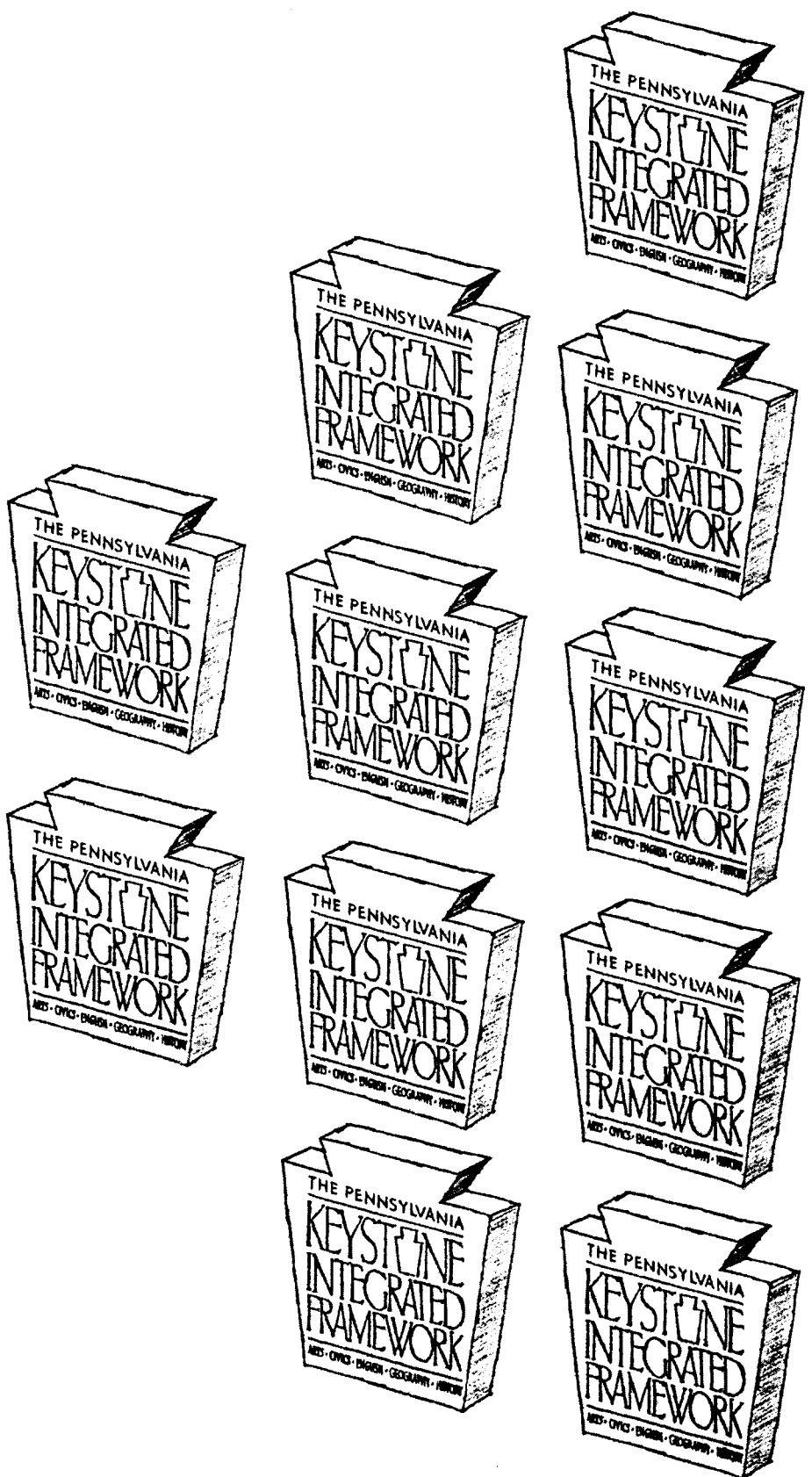
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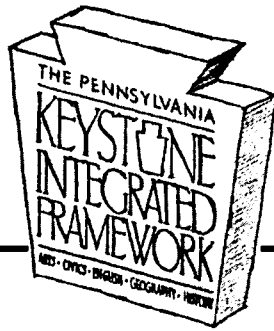
THE REAL STORIES

Partnerships and Pilot Sites

Nothing is as powerful as the words of those who actually lived the experience of pioneering curriculum integration. Like true adventurers, the teams of the Keystone Integrated Framework Project were risk-takers, educators who believed in themselves and in the ability of their students. Many had been involved in various school reform initiatives and while a few were admittedly skeptical because they had "been there, done that," all still retained a commitment that there were better ways to teach and learn. What most teams did not realize at the beginning was that they were a part of a community of learners who had not all yet found that community. A partnership with a university helped outstanding school site teachers realize the possibility and then the reality of that community.

Even though not every partnership grew to the extent the project promoted, the initial planning among teachers, both school and the university, built the foundation for successful programs. The university partners gave the site teachers the confidence, the encouragement, and the support not available through any other means. In turn, the site teachers provided for the university professors a grass-roots experience that was authentic, not able to be replicated in any laboratory school.

The stories told by each site relay the hope, the struggles, the hurdles overcome, the disappointments, and the triumphs. No two stories resemble each other in any way, neither by content nor by style. Each story has its own message and each is told in a voice that is distinctive to its site. What they have in common, however, is a human spirit, a *humanitas*, if you will, that transcends the individual and speaks in the voice of the team.

What is so refreshing in these stories is that despite the hardships, the incredible workload, the additional time and tremendous energy, three-quarters of all of the teams have retained a wonderful sense of humor. These are real stories, in the words of the writer or writers from the sites. The stories are well-written and an exceptional example of the overriding enthusiasm that remains among the team members, despite the hardships endured. Finally, the stories are unedited to retain that freshness and sponta- neity that speaks from the heart.

The reader is asked to overlook the less-than-perfect print quality and to simply enjoy the incredible scope and perspective that the teams have brought to their experi- ences. If you enjoyed *Horace's Compromise* and remember *Up the Down Staircase*, you are in for a treat!

Keystone Integrated Framework

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"Wow! This all ties together!"

"This year was a dream come true."

"This is the greatest thing our family ever did together."

Indiana Area School District and Indiana University of Pennsylvania

With twenty-eight staff members of Indiana Area School District taking part in this sixth grade, district-wide project, the Keystone Integrated Project took root in all four of the elementary schools. Subject areas included art, civics, economics, English, geography, history, music and physical education. The project encompassed a year-long, interdisciplinary course of study which was developed around the thematic units of industrialization, immigration, urbanization, global relations, and social movements. Simulations, dramatic presentations, role playing, research projects, field trips, and video productions —all were a part of the variety of instructional approaches.

One of the premier players in the Keystone Project, Indiana has begun to institutionalize their work by providing a vehicle for increased collaboration among classroom teachers and specialists across the district. Plans are under-way to expand this program into additional grade levels, with the eighth grade including a holocaust unit this year.

"The classroom walls came down and the real world became the textbook."

"We learned not to be afraid to try new things."

Keystone Integrated Framework

A Nine Out of Ten "Ain't Bad;" In Fact, It's Phenomenal

Indiana Area School District/Indiana University of Pennsylvania Partnership Report
prepared by Linda J. McPherson, IUP core team member

"On a scale of one to ten, how would you rate this year compared to other years?" When Linda Lare-Lansberry asked this question of Jordan Learn, one of her sixth grade students at Dwight D. Eisenhower Elementary School, one of the four elementary schools in the Indiana Area School District (IASD) currently involved in curriculum integration, she had no idea what his response would be. When Jordan replied, "a nine" (sixth graders are tough critics!) explaining that this year received his rave reviews because learning was easier and more meaningful, Linda obviously was pleased.

And, no wonder, since this has been the goal from day one of our involvement in the Keystone Integrated Framework Project--to provide a more complete learning experience for all sixth grade students so that they can better understand and retain what is being taught. Revision of the social studies curriculum had been well underway when Barbara Pominek, IASD Director of Curriculum and Instruction, read about the Keystone Integrated Framework Project Grant in January, 1995. This grant seemed like the perfect opportunity to enhance the social studies committee's efforts to find primary source materials rather than a traditional textbook from which to teach this updated curriculum. With the help of John Johnson, Associate Dean of the School of Education, and Dr. Monte Tidwell, a professor in the Professional Studies in Education Department at Indiana University of Pennsylvania (IUP), a committee consisting of sixth grade teachers and specialists from each of the four elementary schools and of professors at IUP who represented a variety of disciplines was assembled, a partnership was formed--and the fun began.

"What have we done?"

All team members discussed long-range plans and set goals for the project. The specific curriculum developed by the IASD/IUP team focuses on American history, from the Industrial Revolution to the present, and integrates social studies, language arts, civics, geography, library, art, and music. In March, 1995, when we received notification that the IASD/IUP partnership was one of the eleven chosen as a pilot site, we were excited--and perhaps a little scared. Nancy Cross, sixth grade teacher at East Pike Elementary school who was one of the original grant writers says she felt proud when news of the grant came. She remembers exclaiming,"Wow, it worked" then, almost immediately, asking herself, "What have we done?"

What we had done was create a framework for an integrated, multidisciplinary curriculum in which all subjects are given equal importance so that our students can have more complete learning experiences. Nancy Cross points to the importance of having students realize that social studies is not a forty minute period, that music is not forty minutes, nor is art or reading. "Life is not blocked off, but is a blend of experiences," according to Nancy. Debbie Sasala, the vocal music specialist who works collaboratively with Nancy, feels that living with and experiencing a "focused concept" helps students understand more fully

what they are learning.

After receiving the grant, the committee conducted an orientation for all sixth grade teachers, elementary librarians, and art, music, and physical education teachers during which they presented an overview of the program's goals. Smaller interest groups formed to brainstorm ideas and suggestions for the project. At this meeting, those who were able to attend the six day summer workshop in the Poconos which was mandated by the grant filled out applications. From these applications, a core team which included three classroom teachers, a music specialist, a librarian, and three IUP faculty members was assembled.

Team Building: Pass the M&Ms

Because the sixth grade teachers had met frequently to rewrite the social studies curriculum, much of the work expected of our eight member core team had been completed when we met at the Poconos in mid-August. The district teachers knew each other well and they knew Monte Tidwell because, in his role as IUP's liaison with the school district, he had collaborated on the grant writing. However, this was, in fact, the first time the IASD/IUP team members had met as a group. While as individuals, we may have been apprehensive about how all of this was going to work, our individual fears were immediately pushed aside. Bonding was instant. Even though we are from different disciplines, we all are committed to finding ways to enhance student learning. From the start, we have worked well as a team.

That's not to say that we were without our share of problems as we worked in a crowded room in the basement of the Pocono Manor Lodge. Monday and Tuesday went beautifully. Since we needed only to review what had been done and to reformat it to fit the Framework's guidelines, we felt smug. Other teams seemed to be struggling with the preliminaries which we had completed already. Nancy Letts, our group facilitator, kept us on task, but understood the importance of letting us take time to digress and to share personal stories about families, vacations, and plans for the year that didn't include school. Then came Wednesday, the day we were to tackle the unwritten territory--global relations. Perhaps we were suffering from mid-week slump, a break-down in group dynamics, exhaustion--or all three--but no matter what we tried to do that day, we felt tense and irritable. We all wanted to talk at once; we all wanted to remain silent at the same time. But we had to have a day like this to understand the importance of working through problems to make us a stronger, cohesive team.

As we worked to regroup that day, we began to realize the importance of the mandate that a full team of eight educators had to attend this six-day Summer Training Institute. We had to encounter stumbling blocks to more fully appreciate that, when we got back to Indiana, we would be faced with bigger obstacles. We had to sell this integrated curriculum to other sixth grade teachers and specialists who had not been involved in the grant writing and planning processes as well as to four building principals who would be asked to provide the core team teachers with release time to evaluate and refine the curriculum once it was implemented. What got us through that day? Sharing team member Donna Troutwine's jumbo size bag of M&Ms certainly helped, as did meeting on the dance floor later that evening after dinner to dance to "YMCA" and to do the electric slide--together, as a group, once again. On Thursday and Friday, with

renewed spirit, we tackled the global relations unit which finally did get written sometime later--much later--just this past Spring. During those last two days of the training institute, each time Donna pulled out her bag of M&Ms, we knew that we would make it through.

Overcoming "'Minor" Obstacles

We left the Poconos feeling excited about the project and the partnership which had been created. Yet, even though we were committed to implementing this newly created curriculum, we feared that the specialists and the other sixth grade teachers who would be teaching the curriculum, but who had not participated in the grant writing or in this summer institute, would not share our commitment and enthusiasm. While each of the four Indiana Area School District's elementary schools--East Pike, Dwight D. Eisenhower, Horace Mann, and Benjamin Franklin--is represented on the core team, team members don't necessarily represent all of their colleagues' special interests and concerns. Many of the original grant writers are not members of the core team because they were unable to attend the mandated Summer Training Institute; not all of the specialists whose curriculum would be modified to accommodate some of the planned activities are represented on the team.

Change is never easy, but it is especially complicated when the start of school is only a few short weeks away. Over these next few weeks, we assembled all of the materials we had accumulated during the grant writing process and over the summer and concentrated on developing a "can't resist this one" presentation at the first in-service day prior to the start of the school year. But, understandably, while most of our colleagues saw the wisdom of the revised curriculum plan, many still viewed this as "our" curriculum, not "theirs," and weren't eager to jump on the bandwagon with us. We had known that this would be one of our biggest obstacles and, in retrospect, we wish we had been able to have all of the sixth grade teachers and specialists from each of the four buildings involved at each level of the planning process. As grant writers and core team members, we had changed the entire sixth grade social studies curriculum in one year! Many who had not been involved from the ground level up saw us as asking them to abandon what they had been doing for years; many felt we were questioning the value of what they had developed independently. To them, it seemed as though we were imposing a set curriculum upon them and, with the start of school only a few days away, they all weren't eager to meet the challenge. Some specialists felt especially threatened. At first they didn't realize that we were not trying to take away their freedom, but only asking them to help us, as they could, create a more complete learning experience for the sixth grade students. As Debbie Sasala, a core team member and vocal music specialist points out, "Many of the teachers still feel that they are on the outside looking in. If they had been able to devise, write, and think through the project as we did, then this truly would have been everyone's project from the start."

Why Wait Until You're Ready?

Initially, several specialists and other sixth grade teachers depended on the core team to give them ideas. As a result of being placed in this heavy leadership role, the sixth grade teachers who were members

of the core team "felt out of control" at times, according to John Lyons, a core team member who teaches at Benjamin Franklin elementary school. "We often had to take on leadership roles for which we were not fully ready," he explains. But, John also points out that "if you wait until you're ready, you'll never do it." Trusting in our own professionalism and in our total commitment to curriculum integration, core team members saw any resistance as a "minor" obstacle to be overcome, and plunged into this newly revised curriculum with a "can do" attitude. And it worked. Core team member Linda Lare-Lansberry who was "overwhelmed" at first, now describes this year as a "dream come true" and feels that the Keystone Integrated Framework Project has been so successful because "integrated learning is what we have always believed in." Once everyone saw learning come alive in the students and realized that no one was trying to impose ideas on another, stronger professional relationships developed. Susan Kovalcik, a sixth grade colleague of Linda's at Dwight D. Eisenhower elementary school was "amazed at what we could pull off" once everyone started to work together.

The Importance of Collaboration

"Working cooperatively with other teachers in the building, sharing ideas, getting others' input when you have no ideas of your own is enriching," according to Nancy Cross. One of the most positive outcomes of the project has been that at East Pike and in each of the other buildings, teachers are working more closely together than ever before. Classroom teachers no longer feel isolated from their colleagues who teach at the same grade level. Because stronger relationships have developed between subject teachers, it's not unusual now to find the "writing" teacher teaching history and the "history" teacher teaching writing. We smile when some of our fifth grade colleagues who initially asked, "Are YOU going to make US do this next year?" now voluntarily give up their planning time to work with sixth grade students on their projects. They see us having fun, and they want to be a part of it.

Despite initial tensions, relationships between the regular classroom teachers and the specialists in art, music, and library have been strengthened as well. Barbara Kubala, art teacher at Dwight D. Eisenhower, is one of the specialists who, at the start of the school year, was asked to adjust her curriculum without much advance warning so she admits that she was "apprehensive" at first. Now, after working cooperatively with the sixth grade teachers in her building, she finds she is "anxious to do more." She more fully appreciates the regular classroom teachers and understands their goals. In fact, she has volunteered to work closely with her colleagues prior to the start of the next school year so that together they can accomplish even more.

Ellen Werner, vocal music specialist at Dwight D. Eisenhower and Horace Mann, always dreamed that others would pick up in their classrooms what she had introduced in hers and, because this is happening, she is pleased to be working more closely with the regular teachers. She, like Barb Kubala, is "collaborating constantly" with her colleagues and is blending history with music, something she "normally wouldn't have done." This integration of the visual and performing arts allows the special teachers to become important team members as it makes art and music central to the curriculum. Students are learning that dancing is

"okay" and that the performing arts are "pretty neat." In fact, during a conference with one of the specialists, one sixth grade mother expressed concern that her son no longer wants to be an athlete once he reaches junior high school next year. Instead, he wants to try out for the school plays because he likes acting more than he likes practicing sports. Right now, he wants to perform on the stage rather than on the field. We smile at this dilemma and at the student who one day in music class said, "Wow! This all ties together." What a nice discovery.

Time? There's Never Enough of It.

None of this collaboration would have been possible without having time to meet and to plan. Convincing four building principals of the necessity of providing release time for monthly meetings of the core team was no easy task since the teachers involved in the Keystone Integrated Framework Project are key members of other curriculum review committees as well. Yet, these four administrators always did come through and allow for that "one more meeting, P-L-E-A-S-E" that was needed for the core team and for the subject teachers and specialists to plan and build curriculum. We found that in-service time is crucial because it facilitates the on-going collaboration between the classroom teachers and the specialists. After seeing the success of the project because of the increased interaction between all teachers this year, the four principals have committed to meeting their teachers' needs by arranging additional common planning periods between the subject teachers and the specialists and by scheduling regular team meeting times into the calendars at the start of next year.

Taking Risks

While there were some shared activities throughout the year, not all sixth graders were doing the same things at the same time each day. Because each of the district's elementary schools is distinct in population and in resources, the sixth grade teachers and specialists in each building approached the five thematic units--Industrialization, Immigration, Urbanization, Global Relations, and Social Movements-- with a great deal of flexibility. The grant writers and the core team members had generated lists of suggested activities to accompany each unit, but teachers were not bound by these suggestions. In fact, even as we turned in the "final" plan on the last day of the Summer Training Institute, we still were coming up with more ideas for each unit.

This flexibility allowed the objectives to be achieved creatively and much more comfortably in each school. If an activity didn't appeal to some, it was ignored; if it didn't work, it was abandoned. A perfect example of this is the "table-top sized map of Pennsylvania showing major land forms, migration patterns, cities, land-use patterns and transportation infrastructure" that was to be created by all of the classes. When we were in the Poconos, this was the one project that we thought would be central to all of the schools. "What a perfect way to integrate social studies and art!" we thought. Almost daily, we talked about where we could get materials and how we could display the completed maps so that all in the community would see what the students had created this year as part of their new curriculum. We knew that other activities would

be abandoned or not tried at all, but these maps were a certainty! And...where are these maps today? Only one has been completed, one never got started, and the others died early deaths and are collecting dust somewhere in the rooms, never to be displayed at the mall.

From successes and failures, we learned not to be afraid to try new things and to remain calm when things didn't work well. While we had designed some activities that worked beautifully to enhance the students' understanding of American history, we had created "some bombs as well," according to Nancy Cross. Nevertheless, Nancy feels much calmer now than she did at the start because she realizes that, indeed, "we can do this." She explains that when things didn't go as well as she had hoped, she learned to relax and go to bed at night feeling satisfied because she knew we had taken the risks that are necessary for real growth and learning. Susan Kovalcik agrees that the willingness to take these risks and to change your own "set" curriculum are two necessary components for successful integration. She learned, also, that "all ideas are good"--some just work better than others!

Making History Real

As sixth grade teachers began to move away from their traditional teacher-centered, textbook-bound classrooms toward more student-centered, project-oriented classrooms which demanded that students assume more responsibility for their own learning, students at first were uncertain about the change. Students who were used to time-oriented schedules were confused by the changes to the usual rhythms of the day. However, once they got used to what was happening and began to feel empowered as learners, their enthusiasm grew. They seemed happy to have abandoned the textbooks that one student describes as "always heavy and usually boring," in favor of tangible learning experiences which included field trips, lectures, hands-on simulations, journal keeping, research, and performance opportunities. As Brenda Holmes, a parent of a sixth grader at Dwight D. Eisenhower describes it, "the classroom walls came down and the real world became the textbook."

While students were studying Industrialization, they were able to tour area factories to gain first-hand knowledge of manufacturing. Some videotaped their tours after they and their teachers completed a videography workshop and then submitted these video tapes as their final project for the unit. Later in the year, East Pike students visited the Johnstown Flood Museum and the Inclined Plane; Dwight D. Eisenhower students visited Fallingwater and joined students from Horace Mann on trips to Pittsburgh and Washington, D.C. For many students, these trips were the highlight of their year because they "helped us learn even more," according to Dane Watson, a sixth grader at Dwight D. Eisenhower. He explains that after studying the Holocaust, the visit to the Holocaust Museum was "more meaningful" to him and his classmates. As students began to see connections, their excitement for learning increased. Teachers now overhear students saying that they hate to miss a day of school and no longer enjoy having substitutes! James Antis, Horace Mann principal, notes the changed attitude of the sixth graders in his building and reports that their "excitement about learning is authentic." Students who were once turned off by school are now turned on to learning; the impact on students as they experience the connections between school and

their lives is real--and very positive.

Being able to see how one area touches another, makes it "easier to learn," according to a group of sixth graders at Dwight D. Eisenhower. While students continued to change classes, they didn't "change gears" every forty minutes. Commenting as both a parent and as a prospective elementary teacher, Brenda Holmes sees this removal of the "on-off switch of learning" as very positive. Because classes no longer had to be limited by strict schedules, simulations which sometimes lasted for days became integral parts of each unit. Students at Dwight D. Eisenhower participated in the computer simulation SIM City where they planned their ideal cities and in classroom simulations where they experienced different school environments. Sarah Houck says that learning about city schools helped her better understand the problems that students in such environments encounter daily. At the end of the industrialization unit, all classrooms were transformed into factories, students were employed as minimum wage workers expected to mass produce an item to market and sell, teachers took on new roles as bosses, and principals became factory owners. After participating in this assembly line simulation and reading the novel *Lyddie* by Catherine Patterson about a girl her age who works in a factory, Jessica Hart reports that she "really knew about manufacturing." Most students, like Jessica, worked hard, some got fired, others had their wages reduced, but all went home with a clearer understanding of how difficult it had been for Lyddie and other children to work in those early sweat shops.

As the year progressed, students began to take more responsibility for directing their own learning. Each unit contained integrated activities which encouraged organization, concept building, and problem solving on the part of the students. Karen Ross, Horace Mann's librarian, notes that when sixth graders came to the library to research their first social studies assignment, they were lost sheep who needed direction and assistance. By the time they got to the third and fourth assignments, they needed her less and, now, they tell her they don't need her assistance at all. According to Karen, because they are so comfortable and competent with using library resources, this group of sixth graders "moved from being lost sheep to being truly independent researchers" who are able to actively plan their own research experiences. Students developed more sophisticated research skills because their integrated projects required them to use a variety of complex sources rather than to simply quote from a single source.

Working Together

Teachers discovered that the more they did and the more they expected, the more they got from the students. They knew that empowered students who are placed in decision making roles take ownership of their learning so they had faith to allow the sixth graders to assume this responsibility and to establish criteria on which to be evaluated. As a result, grades became less of a focus; homework, according to some of the students, was "never boring;" and teachers received fewer "why are we doing this?" questions. They knew why, so there was no need to ask. As "history was brought to life, the kids were highly motivated to learn," according to Jim Antis, principal at Horace Mann.

Debbie Sasala found that, in music class, her students really like to be involved in their own assessment. At the start of the industrialization unit, East Pike students researched and reported on inventions in their

language arts and social studies classes, then in music class, they created commercials for these inventions. Students wrote scripts, created original tunes or modified existing jingles, selected costumes and props, but most importantly--as a group--they developed their own set of guidelines for assessment. Prior to doing this, with Debbie's guidance, students discussed standards of excellence in professional commercials and set realistic criteria on which to be evaluated. This was an important project for them since the grade would be a shared social studies/language arts/music grade. On the day they presented their commercials, each student evaluated classmates' commercials using the evaluation forms which they had developed as a class. "This was a total class project," according to Debbie and the students took their jobs as critics very seriously. As a group, they selected the top performances to be taped. An unexpected discovery that many of her students made after watching their own videotapes was that professionals really do have to work hard since none of their own products came out looking quite like those on network television.

Students in all schools were "constantly collaborating," according to Linda Lare-Lansberry. At first, students in her classroom at Dwight D. Eisenhower struggled to adjust to this new style of learning, but once they understood their responsibilities, they had few problems. As students worked together in groups, the teachers observed that their maturity increased and that they became much more accepting and tolerant of each other. Together, Dwight D. Eisenhower students created and dedicated a scale model of the Statue of Liberty; together they organized a dinner theater presentation of Thorton Wilder's Our Town; and together (with technical assistance from their sixth grade teachers, specialists, building principal--and custodians), as their final project, they produced a "living scrapbook" which highlighted the year's activities. As they presented this original play to the student body on the last day of school, they demonstrated how genuinely excited they were about their involvement in the Keystone Integrated Framework Project. Involved students are very busy students. There is little time to get into trouble!

Teachers note that in addition to seeing an increase in responsibility and leadership, they saw a decrease in behavior problems--an unexpected benefit of curriculum integration. Working in groups helped increase students' social skills as they learned to work cooperatively. The immigration unit at the start of the year gave students the foundation for celebrating their differences, understanding themselves and their families, and increasing their awareness and tolerance of others. Teachers point out that, since the completion of this unit, they have noticed a marked decrease in the number of ethnic jokes. Later, as students studied the civil rights and women's movements and the Holocaust, they showed increased empathy for others during class discussions and in their research projects.

Positive Parental Involvement

Students and families dedicated considerable time this year to several long-term projects. During the immigration unit, while some students collaborated with classmates to prepare for their ethnic fairs, others worked at home designing family genealogy projects. As they sorted through old letters and pictures and shared family stories, families and extended families--together--traced their roots. John Lyons recalls one parent at Benjamin Franklin who told him that this project was "the greatest thing our family has ever done together."

Parental involvement at all levels is higher than it has been in the past. While at first some students found having their parents in the classrooms and involved in their projects was "awkward," they grew to like "having parents work with us," according to Jessica Hart, whose mother assisted her teachers frequently this year. As parents worked with their children, each began to better understand the other. Jordan Learn, one of Jessica's classmates, feels that when parents are able to work in the classrooms, they have a more complete understanding of the teachers' expectations and of their children's work.

John Lyons' "homeroom moms" were more involved than ever before and, according to John, "they loved it." During the study of the depression, for example, these sixth grade parents at Benjamin Franklin planned a soup kitchen for the day of the Stock Market Crash simulation. For weeks, they purchased can after can of Campbell's soup which, on the day of the Crash, they watered down ("as much as moms can do," according to John) and served to the students at lunchtime. This watery soup, a slice of bread, and a glass of water for lunch helped make real the economic hardships faced by those who once had money to invest but now had not enough to buy an extra slice of bread. The moms charged heavily for extras that day!

Impact on Student Teaching

Sixth grade students in the Indiana Area School District aren't the only students who are benefiting from this newly formed partnership. Students in the IUP professional studies in education department are benefiting as well. Monte Tidwell points out that he and his IUP colleagues are "working to stress the new things happening in classrooms, including this integrated curriculum project, within the teacher training course work. We need to appreciate the dynamism going on in the classrooms and understand that these IASD teachers are doing cutting edge work." This year, there has been increased cooperation between district teachers who are participating in the Keystone Integrated Framework project and the teacher education department at IUP in the preparation of student teachers. Undergraduate and graduate courses and field experiences are being reassessed and revised to better prepare student teachers for the instructional changes associated with curriculum integration.

Those who did their student teaching in the four elementary schools during the Spring semester were given a unique opportunity to design and co-teach a unit on the Depression and the Roaring Twenties. Walter Kealey, principal at East Pike, describes as "fabulous" the interaction between the student teachers, teachers, and specialists in all four building that occurred as this unit was being developed. In addition to requiring their student teachers to attend the monthly core team planning meetings, the supervising teachers arranged for them to have release time so that they could increase their understanding of the time and effort that must be devoted to plan integrated learning activities. The outcome of these sessions was the unit on the Depression and the Roaring Twenties with its lessons on money management, banking, investments, stocks and bonds, as well as lessons on 20s music and fashion, and, of course, a Stock Market Crash simulation.

Principal Paul Gallagher describes the students at Benjamin Franklin as "highly motivated, especially during this stock market simulation." At his school, on the morning before the market crashed, "90% of the kids came to school dressed up for Roaring Twenties Day," according to John Lyons. On similar "dress-up occasions"

in the past, only 30-40% of the sixth graders would dress up which is what makes this percentage so significant. Not only are sixth graders tough critics (remember Jordan's "a nine out of ten"), but also they will do nothing against their will that makes them appear to be any thing less than "cool." Clearly, on the morning of the "Crash," the "cool" thing to do was dress up and, in the multi-purpose room which was decorated with scenes from the 20's that the students had designed in art class, to dance the dances and sing the songs that they had learned in music, and to watch the market fluctuations taking place before disaster stuck. No wonder after all this excitement, the watered down soup served by the homeroom moms at Benjamin Franklin that day had such an impact.

Where Do We Go From Here?

"Keystone came along at a good time for the sixth grade," according to East Pike principal Walter Kealey. Indiana Area School District was ready to change the focus and structure of the sixth grade social studies curriculum, so the timing couldn't have been better. As a result of the integrated approach, students have been given a "fantastic view of American history this year," according to Nancy Cross who taught "social studies"-- and so much more--to every sixth grade student at East Pike.

Deborah Mahaffey, principal at Dwight D. Eisenhower, who has always advocated the T.E.A.M. approach with its philosophy that "Together Each Achieves More" feels that integration worked well in her building because she adjusted schedules and let teachers have the freedom to plan and carry out their vision. For other teachers who have this same vision, Susan Kovalcik who teaches at Dwight D. Eisenhower offers this advice: "Be a team, cooperate, meet often--and don't be jealous." Nancy Cross, Susan's colleague at East Pike, emphasizes that curriculum integration is "not a competition, but something where students and teachers together can enjoy education much more."

Integrated curriculum has given teachers and students increased opportunities to make connections between and among the disciplines and to connect classroom learning with real life. Justin Cassiday, a student who has been at Dwight D. Eisenhower for only one month says that "learning here is better. When you learn something here, you really get into it and it makes it easier to see connections and to understand." According to Carol Tanweer, one of Justin's teachers, "if we, as educators, want students to become life-long learners who are invested in their own learning experiences, then this is the way children should learn."

Another positive outcome of the Keystone Integrated Framework Project has been the strengthened relationship between the school district and the university. In entering the partnership, IUP hoped to establish a more personal, non-hierarchical relationship with the district and to make the university's resources and services more accessible and user friendly for school district personnel. According to IUP's Monte Tidwell, "even if we had not received the grant, the collaboration has been worthwhile. IUP wants to be seen as a resource for the teachers for this project and beyond." Speaking on behalf of the IASD, Barbara Pominek agrees that "one of the goals that will last beyond the years of the three year grant project is to strengthen the mutually beneficial, collaborative efforts between the university and the schools. Our team has worked to enhance instruction and to build a foundation for an on-going relationship that can be extended in scope and over time. We're very excited

about the project and the partnership and the collaboration it has created."

Plans to extend the integrated curriculum into the fifth grade in each building next year are underway and, at the junior high school, selected eighth grade history, geography, English, and art teachers are developing an integrated unit on the Holocaust to be tested in the classrooms next Spring. As these teams of teachers begin to work on their curriculum for next year, we offer them some solid advice: be willing to try new things; put aside jealousies and work as a team; be good communicators; be patient with yourselves and others; be open minded and flexible; be supportive; buy big bags of M&Ms; and, most of all, be proud. When you leave school each day, Nancy Cross advises that you look back and say, "we're doing the best that we can," remembering that curriculum that doesn't change stagnates.

As she reflects on the successes of this first year and on her personal growth as a result of her involvement in the Keystone Integrated Framework Project, Susan Kovalcik, sixth grade teacher at Dwight D. Eisenhower, perhaps becomes a spokesperson for all of us when she says: "I'm a better teacher. I've learned. I've taken risks. I am amazed at what could be pulled off. It is phenomenal!"

Indeed, it has been phenomenal. We're aiming for a "ten" out of ten next year.

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Indiana University of Pennsylvania is a public institution, one of the fourteen universities in the State System of Higher Education. Located in western Pennsylvania, sixty miles northeast of Pittsburgh, IUP is a residential campus which supports six undergraduate colleges and two schools: the Eberly College of Business, the College of Education, the College of Fine Arts, the College of Health and Human Services, the College of Humanities and Social Studies, the College of Natural Sciences and Mathematics, the School of Continuing and Non-Resident Education, and the Graduate School. The departments in the College of Education offer programs leading to the following degrees: Bachelor of Science, Bachelor of Science in Education, Master of Arts, Master of Education, Master of Science, and doctoral programs leading to degrees of Doctor of Education in Elementary Education and Doctor of Education in School Psychology. All teacher education and public education professional programs in the College of Education lead to certification for public school teaching or supervision in Pennsylvania. The teacher education programs at IUP are delivered in a spirit of collaboration with the support and commitment of school districts in the region.

Indiana Area School District supports IUP education majors by encouraging full time master teachers in the district to supervise pre-service teachers. These cooperating teachers work collaboratively with university supervisors to design learning experiences for prospective teachers at both the elementary and secondary levels. The district serves approximately 3,800 students who are enrolled in one of the four elementary schools, the Indiana Area Junior High School, or the Indiana Area Senior High School. According to its mission statement, Indiana Area School District "is committed to excellence in educating students to become lifelong learners and responsible citizens in a changing global society". The District believes that education should encourage students to think critically, synthesize information, and apply knowledge. The educational programs offered by the schools correlate with this belief. Parental and community involvement in the schools is encouraged, in keeping with the District's philosophy that community, family, and schools share the responsibility for education.

"Bands of students roamed the halls in search of information. Their tools included telephone numbers of district personnel and area businessmen, measuring tape, surveys, blueprints, bus routes, and more. They started to scare people. . ."

"Too late, we realized that a faculty meeting would have allayed some fears. . ."

"The team developed a support system as we worked together!"

Donegal School District

Donegal Middle School focused on the development of an interdisciplinary unit for students in grade eight. The major components of this "information literacy" served as a framework for the development of study units. The Keystone Project served as the process for the integration of English, library science, music, social studies, and technology education.

The students, in teams, chose real-life problems to research, document and find solutions for. These were grassroots concerns, relative to the interests of the students themselves. Due to their efforts, bus routes were re-routed for efficiency, and the lunch lines were redesigned to lessen the time waiting in line for service. A highlight of the project was seeing their work in action, reenacting the process for the school board, and receiving recognition from their peers.
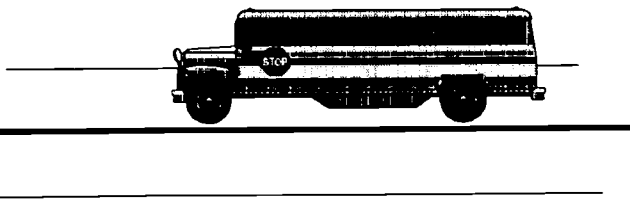
A Change in Time Saves Nine

INTRODUCTION

The students of Donegal Middle School changed the world. Their world, anyway...

THE GRANT

It was a dark and stormy night. News of the Keystone Framework Project Grant reached Dr. Dave Poore, Supervisor for Curriculum and Instruction at Donegal School District. At the next curriculum council, Dave shared the state's request for proposals, thinking some of the high school teachers may want to pursue it. They did not. However, there were two teachers present who felt a spark of interest. They grabbed the paper and exchanged glances.

English teacher, Sue Ursprung, and social studies teammate, Liz Sauber, were already immersed in the concept of integrating the curriculum. In fact, they combined their eighth grade classes frequently and had even negotiated the removal of the wall between their classrooms, so they could have a folding divider to further facilitate their team teaching. They decided to discuss the grant with colleagues at the Donegal Middle School.

The group did not gel instantly. The amount of time required for the planning, not to mention the execution, of the project seemed daunting. At last, Sue and Liz had constructed a group. Joining the ranks were Kit Ryan, general music teacher at the middle school, Liz Smedley, resident Jack of all trades and current computer literacy instructor, and Sue Miller, the librarian, also well-versed at integrating curriculum with teachers throughout the building. The grant would be written!

As we began to mull over the impending project, Dave Poore did the same. His mind was on technology. He talked to middle school technology education instructor John Bear about joining the group. John was in. Dave called Millersville University's Dr. Joe McCade, who had worked with the district previously in designing their tech. ed. program. Joe was in. Together Dave and Joe wrote the grant. The technology aspect was in place. Filling out the group were Tom Bell, a recent edition to Millersville's teaching staff and a colleague of Joe's, and Robert Coley, archivist and library instructor at M.U.'s Ganser Library. Dave also planned to join us for some of our work in the Poconos, but had other fires to tend at home.

NEWS OF THE POCONOS

The brochure came via district mail, full of talk of the enticing activities the group could look forward to at Pocono Manor. Horseback riding, golfing, swimming, shopping and other diversions would fill in the times of leisure that our Framework correspondence told us we would have.

What would we take on our sojourn? Several participants talked face-to-face and over the phone lines. Kit discussed some ideas with Judith. It seemed that we had our focus - one which linked the eighth grade social studies and music courses. We filled boxes with books on African American music, art and dance, and packed them into our cars, along with several sets of golf clubs. It would be a working vacation!

POCONO MANOR

On Sunday, August 13, several cars headed north. What should we expect? Some of the group were content with waiting to see what would happen; others were more anxious. As we pulled up the long and winding driveway that marked the end of the trip, the decadent glory of the Pocono Manor came into view. Or was it the decaying glory? Check in was not eventful.

We settled into our new home. At first missing tiles, broken lights, unreliable phones and roaring air conditioners seemed to be little more than part of the quirky ambience of the once splendid vacation mecca. But the building itself foreshadowed the coming gloom and strife that would mark the Donegal/Millersville group's first hours together.

But first, an "informal buffet" in the dining room where we would gather many memorable anecdotes. Here we sat at large round tables and often discussed the progress we were making as well as the Manor's latest foibles. It was here that we were to wish for a waiter who would bring us tea, or ice cubes, or butter; it was here that we saw a diminutive woman who was a mirror image of a Donegal parent who was legendary in our building for her faux pas; and it was here that we discovered not only Kit Ryan's love of deserts, but her habit of spreading chocolate cake with butter.

After the buffet came another first: "A Gathering." This turned out to be our time together with all of the participants, facilitators and presenters involved in the Keystone Integrated Framework Project. We received information meant to aide us in the planning of our project, heard what other groups were working on, and, in our first gathering, joined Susan Tracey in an improvisational dance exercise.

Some of us joined her. As everyone was cajoled into moving into the back of our large meeting area, John and Sue U. worked their way stealthily to the exit door. As Susan Tracey began to demonstrate the second set of movements we were to mimic, they were gone. While Liz Smedley and Sue Miller participated with some reluctance, Liz Sauber became one with the dance. She later asked if we had seen her interpretive movements on the final group exercise. "Mine had sound effects!" she exclaimed. Her exuberance, like that of the rest of the group, waxed and waned frequently during the week.

THE FRAMEWORK REVEALED

It was Monday, August 14. The Donegal-Millersville group gathered for breakfast with our fearless facilitator, Ron Ziegler, who was to become our assigned companion and guiding light during the Pocono workshop. The group continued the bonding process which had begun the previous evening.

The first team meeting began in the "Friendship Room" at 1:30 PM. Now, the big question, just what was going to be our Framework Project? We had come to the Poconos with various ideas, some suitcases, a few boxes of what we thought were related materials, and some golf clubs. What would evolve? It became quite evident after a short discussion that this group would not be able to come to a conclusion during this meeting. The African American idea was not meeting with consensus from the group. What would meet with consensus with this group of very strong willed persons?

Maybe if each member shared his respective disciplines, a fit could be found. We started with theory and hoped to develop an action plan. As this meeting continued, the roles of the participants began to emerge. Five members had a preconceived idea as to the direction the grant would take. One of them said very little but thought seriously of going home. Two of them were trying to keep the group connected, while the remaining members focused on their vision oblivious to the turmoil in the minds of the others. And so the group left the "Friendship Room" wondering whether their friendships would weather the storm.

Donegal-Millersville was originally scheduled to share with other workshop participants the direction their project was taking at the gathering that evening. Lady Luck shined on us as we were rescheduled for Thursday morning following breakfast. Obviously we would have had nothing to report Monday afternoon.

THE VISION

Day two, August 15, dawned early in the Poconos. The team was scheduled to meet most of the day. Would they have something/anything to report at the end of this time? It was hard to say.

And so the meeting began with each Donegal participant describing his/her discipline. When Liz Sauber and Sue Ursprung shared their curriculums, the subject of multiculturalism emerged again. John, Sue Miller and Liz Smedley all emphasized the use of technology in the classroom and the library.

Where were we headed? The above discussion didn't clarify a position. The fishbone technique was employed. Sixteen themes were generated. They included a service related project, school space problem, impacts and tradeoffs, reduction of prejudice, inventions and inventors, contributions to society, and others. A discussion followed. After five long hours, the vision was born. It would focus on "change". Students would be charged with identifying a problem and using the technological method to solve the problem. This was a wonderful idea, but where did the arts fit into the scheme?

Tuesday night as Donegal-Millersville went to the gathering and learned what three other groups were doing, we were secure in the fact that we finally had a direction, a vision. Did that mean that the entire group was content with the direction of the vision? Of course not! There was a bit of mumbling and grumbling among some of the group members until late in the night. Other members were entertaining themselves with the local nightlife. Others went to bed. Dr. Poore went home.

FLEXIBLE TIME IN THE POCONOS

Wednesday was a day full of workshops and a gathering for the purpose of group sharing. Participants eagerly looked forward to the flexible/free time which could be used to pursue such activities as shopping, swimming, hiking, and golfing. John and Liz Smedley, along with Joe, looked forward to an afternoon of golfing in the Poconos. The Sues, Liz Sauber, Tom, Kit, and Bob all went shopping. The shopping trip was successful. The golfing expedition was hot, dry, and a lot of fun. Thus ended the only flexible time for the duration of the trip.

Since the group had chosen to take their flexible time in the afternoon, we were faced with having a team meeting all evening. And just what had to be accomplished? We had to report at the gathering on Thursday morning outlining our vision for the Framework. It was approximately ten o'clock in the evening, and the presentation was still not complete. Group members were slowly losing their personal control. There was a lot of laughter. Some team members created aliases. Liz Smedley, alias Abeth and the photographer, decided to take a group picture. We

practiced our presentation. We were exhausted. The flexible time had done us in. Of course, the exceptions to that were John and Tom, bonded brothers, along with Lloyd (a member of another group),who never seemed to tire and helped keep the night life at the Pocono Manor hopping.

WHAT WAS OUR TEAM DOING?

It was Thursday morning, August 17. Breakfast was over. The Donegal-Millersville team was on stage. What were we doing? Actually we weren't doing a lot at that point. However, it didn't sound that way as Joe, alias Seph, talked on and on during the presentation. Finally shy, quiet John stepped forward with uplifted hands indicating Seph needed to stop. Tom and Liz, alias Queen Zabe', joined John. Seph talked on. The entire group moved forward. Seph stopped. The presentation was over.

The rest of the day was spent in team meetings. Ron, our fearless facilitator, keep us on task. Queen Zabe', Sue Ursprung, alias The Sue, Sue Miller, Seph, and John began the brainstorming session which produced a basic framework for the "change" project. A hearty discussion on assessment took place in the afternoon. It was not conclusive. Did anyone think that such an issue could be settled so easily? Of course not.

So what should emerge before the day's end? A fifth theme. Finally the group had developed the artistic component of a project which was supposed to center around integrating the arts. Some members of the group had continually pointed out that it appeared the project was missing the boat. And it was!!

Thursday's team meeting ended at 4:45PM. The Donegal-Millersville clan still had a lot of work to do before we would be ready to execute the project. Yes, we had a framework complete with five themes. A cover sheet for the project was born. The actual steps were yet to be developed. That would happen back at the ranch when the clan would reconvene.

THE CLAN SAID "GOOD-BYE"

It was Friday. It had been an emotionally and mentally wrenching week. The group had agreed, disagreed, and agreed to disagree. We were leaving the Poconos, the place we had called home for five days. We were happy. We were sad. We had worked hard. We had bonded! We went home.

THE CLAN RECONVENED

The clan reconvened on September 12 at Donegal Middle School. School had started several weeks earlier. We were into the routine. Now we had to polish the project and tie up all the loose ends. Our initial group with the addition of four students teachers from Millersville University, Stephanie Seip Patrick Morrison, John Charles, and Janay Miller, and our principal, Dr. Lawrence were charged with this mission. The work would continue through several future planning days.

Slowly the project reached its final dimensions. Student activities were defined. A packet, showing students how to use the technological method to solve their problems, was born with the able assistance of John, our own technology guru. Assessment was addressed with Joe presenting a short dissertation on the subject followed by lengthy group discussion and a decision as to how we would assess each group. It would be done in a round table discussion format. The project time frame, fourteen days, was established. Student activities and presentation formats were defined. Students would be required to have an arts, English, and technology component in each presentation. The kick-off activities were designed. Teachers would present

pantomimes reflecting "changes". They would also give presentations illustrating change in history, music, literature, the arts, and technology. Thus "Campaign for Change" was growing.

THE KICKOFF

October 17 arrived. The double classroom was set up to accommodate several activities, including the pantomimes we were to present with the help of our student teachers, and administrative and Millersville cohorts. As students streamed in to the room at the beginning of third period, they may have been surprised to see some unfamiliar faces, or to see their principal wearing a lab apron. They knew that they were embarking on a new project, but little more. Sue Miller made the opening remarks and the pantomimes proceeded. Kit Ryan as a gum chewing teenager elicited some giggling from the audience as well as from some of her colleagues. John Bear, usually seen in only the most casual attire, had the same effect in his borrowed tuxedo and bow tie. As the groups of adults went through their skits, we hoped the students would discern the common thread among them - CHANGE.

Other teacher-directed activities and presentations that day illustrated changes as seen within disciplines - history, music, literature, communication and technology. Little time was left in the period as John gave the students their mission; they were each an **agent of change**. They were to answer the question, "What can I change to improve my school or community?" They had all evening to ponder this.

The introductory activities were repeated for the second group of students after lunch, with minor adjustments and a few character changes. "Yes, you should **write** your responses to the pantomimes on the worksheet." "No, the change you select should be one **you** personally would like to make; this is not a group response." Our consensus was, that in spite of some confusion as to where all of this was leading, we had gotten off to a good start. We did not know the consequences our modeling would have on the future of the project. We did know that tomorrow, we were once again facing an "unknown" - the visit from Maureen Sweeney's improvisational group. After numerous phone calls to Maureen, Kit had arranged their presentation to coincide with the kickoff of our project.

AN AFTERNOON AT THE IMPROV

Eighth grade students do not always excel at activities that require risk taking. When Maureen Sweeney and her cohorts - Eric Giancoli and Christine Cowin - took the stage it became clear that to play the game, one had to take down a few barriers. And by the end of the program, many of the students had done so. That included one eighth grade boy, not a master of constraint to begin with, who joined Maureen and Eric in a skit where he went through the motions of going into labor. It was a memorable sight. The improvisations were to have a profound effect upon later activities.

BACK IN THE CLASSROOM

It was now time for the "agents" to take the project by the horns. Unknown to the students, The two Johns and Sue Ursprung had sorted the papers on which they expressed the change they wished to make. The students were grouped with others who had matching or similar statements. As names were called off, they found their matches in groups ranging from two to seven members. Their reactions were varied. Some were clearly concerned about working with people with whom they perceived no common bond. Others were glad to see buddies at their side.

Most of the students' concerns focused on the middle school. In many ways, that was their world. Issues like cafeteria crowding, bus crowding and building vandalism/beautification would be explored by several groups. Some of the other areas that were targeted for change were freedom of expression (these people wanted to have the dress code modified), cafeteria food, and elective classes for eighth graders.

John explained the activity packet that had been given to all of the students. It followed the seven step technological problem solving method, with which some of the students were familiar. This would take each group step by step through the process, starting with "identifying a problem" and ending with "evaluating and refining." Also included were a presentation plan, a checklist for evaluating the plan, and a self evaluation form which would be used in our final discussion and evaluation with each group of students.

Many groups were eager to begin. Students who were grouped with partners they had worked with before, or with students whose problem or idea for change matched theirs exactly moved quickly to step three, where they were required to brainstorm possible solutions. Others did not fare as well. Some had to dig for the common theme of their change idea. Others had to negotiate or simply surrender to the majority in deciding what the change should be. Fortunately, all of the framework teachers and their four student teachers were on hand to facilitate and mediate for the struggling eighth graders.

This was not to be the case in the days to come; while Sue Ursprung, Liz Sauber and their student teachers remained with the groups and the project for the duration, other teachers returned to their regular routines. No longer freed up by substitutes who had been hired to take over their normal duties, they were available sporadically to continue their work on the Framework Project. John and his student teacher, affectionately known as John Junior, took turns working on the project and with the regular technology education classes. Liz Smedley joined the group during unscheduled periods and worked with students in the computer room over activity period and after school. Some students spent time in the library with Sue Miller, getting help with resources or technology. Others went to Kit or her student teacher, Stephanie, during their limited free time.

THE AGENTS DO THEIR THING

For the next six days, project work was often frantic. Bands of students roamed the halls in search of information. Their tools included telephone numbers of district personnel and area businessmen, measuring tape, surveys, blueprints, bus routes and more. They started to scare people. Other teachers in the building started asking questions. "Am I going to have to teach Spanish next year?" "Is our schedule going to change again?" "I can't believe we're going to let them wear hats in school!" "We addressed this before - no iced tea in ala carte." "But this is part of my curriculum!"

Too late, we realized that a faculty meeting would have allayed some fears. We had one. With the help of the group, John gave a succinct description of our work and its possible - but not definite - outcomes. There were some sighs of relief.

So the agents continued to gather data. New charts, graphs and schedules were generated. Members from each group worked with Liz Smedley and the Johns to develop computer slide shows using the PowerPoint presentation program. These would be part of the presentions they made to the class. Musical and theatrical numbers were rehearsed and songs were chosen or written. The groups practiced their presentations during and after school.

SHOWTIME

The classroom was humming on the morning of October 30. Joe Aponick and his assistant set up lights to aide them in the videotaping they were doing for the project. Several groups would be taped, and possibly appear on the final video that was to showcase the Keystone Integrated Framework Project. John had set up two television monitors and a computer for the groups to use for their Powerpoint presentations. The center of the double room remained empty, ready for the first group to present its project.

As third period began, everyone crowded into the room. A small group of students converged in the center and began preparations. The slide show disk was inserted into the computer, chairs were aligned, a tape recorder was plugged in, papers were placed at hand for future distribution. Then it was show time.

Most of the presentations were given over the next two days, as planned. The amount of time they took, the student's level of comfort, the quality of the handouts, music and slide shows varied from group to group. The presentations showed the distinct influence of our stage-setting activities. Theater was usually pantomime. Art work was usually a Powerpoint slide show or maybe a poster. Original music was composed and performed by students in one group; a few others used music to enhance their work. Our modeling left a bit to be desired!

But we were very pleased. We watched as eighth grade students spoke with authority on problems in the school district and how they should be solved. We marveled at the data presented on issues like busing, cafeteria overcrowding and distance learning. This was not kid stuff.

The crowning achievement may have been the fact that some of these changes had not only been tested, but were now in place. We had nachos in the a la carte line now, thanks to a group who felt that the students needed more variety on the cafeteria menu. We would soon have a new lunch bell schedule as well, due to problem solving skills of one of the several groups of students who had addressed that issue. While many possible solutions had been explored, including adding on to the cafeteria and using different types of tables, one group had come up with the solution that cost nothing and was ultimately the simplest. Was this a problem of concern only to these students? Not at all. Teachers and students had battled with the crowded conditions in the lunch room ever since the building had been constructed. Finally an answer!

HOW DO YOU THINK IT WENT?

We had had some lengthy debates on what type of assessment we would use at the end of project. The round table discussion format that we chose turned out to be a eye opener. Students received the nine-question list prior to their group's meeting with us. Many of them prepared ahead of time. The self-evaluating queries included, "What was your individual role within the group?" "What did you learn from the "Campaign for Change?" "What purpose was served by including the arts in your project?" and "How did you locate useful information and use it to solve the problem?"

Students were very articulate in describing their group's work and their individual achievements. They were able to pick out the strenghts and weaknesses of their presentations and their overall projects. Many said that they would like to keep working to make their idea a reality...

PARTY!

The unit ended in a way that 95.5% of all middle school students would choose; we had a pizza party. Principal Jim Lawrence treated and was the guest of honor. Congratulations for a job well done, the event said to teachers and students alike.

IT WAS A WRAP

It was November 4. Research, problem solving, presentations, and evaluations had all come and gone. It was over! What had we and our students learned from this endeavor? Comments heard from our eighth graders included, "I didn't think I could make a change," and "Now I understand why we have to do it this way." Students felt they had some power in deciding how and why certain rules were established. The group of students who had tackled crowded cafeteria conditions actually established a new lunch schedule which eliminated the problem. This group also made a presentation to our Donegal School District school board. Students were empowered to tackle a problem which concerned them and provide solutions. They saw each other in a different light. Students learned to work in their cooperative groups and to work out intrapersonal problems within their groups. It was a time of growth for them. They learned that eighth graders could change the world!

As we looked back on our time spent planning and executing the unit, we all felt that we definitely would do this again. While interdisciplinary unit learning activities have been an integral part of several Framework participants' curriculum for many years, this was the first unit of this magnitude involving teachers from several teams. Those several weeks during the unit were extremely hectic. Most participants worked feverishly to maintain plans in their classroom for substitutes and keep up with the Framework Project. Even though our district provided substitutes for speciality teachers, this was far from ideal. Realistically, the ideal may never be reached as long as our district continues to have budget funding problems. We will have to work under less than perfect conditions if we want to continue interdisciplinary planning with our unified arts teachers.

The group developed a support system as we worked together. We got to know other members better and as a result saw their strengths and weaknesses. We learned to draw on each others' strengths and help one another with the weaknesses. We were all able to draw on John's computer expertise. Liz Sauber and Sue Ursprung were excellent organizers. They carried out the unit when the rest of us were back in our classrooms conducting our classes. Two students teachers, Steph and John, were able to bounce back and forth between their classrooms and the "project" classroom.

Would we do this unit again? Maybe not. Would we do other interdisciplinary units together? Certainly! We believe providing interdisciplinary experiences for students helps them make the connections between subject areas that are necessary for learning more effectively. We were and continue to be a group committed to providing exceptional learning experiences for our students.

PS

Donegal School District is situated in rural western Lancaster County. Our district has four elementary schools, one middle school, and one high school. The student population of the district is approximately 2550. Our school, Donegal Middle School is located outside the Borough of Marietta along the Susquehanna River. We have a population of about six hundred sixth, seventh, and eighth grade students. These students are divided into teams. Our unit, "Agent of Change", was completed with one of the two eighth grade teams, The Gold Team.

"Agent of Change", an interdisciplinary learning activity, is an activity which charged groups of eighth graders to institute a change that would improve their school or community. They were required to identify a problem, conduct research, employ technology, and incorporate the arts as they prepared a plan of action. Students used the seven step technological method to solve their problem. After choosing a solution, each group of students prepared a presentation which would communicate clearly their problem and its solution.

Project members from Donegal Middle School included Susan Ursprung, Gold Team language arts teacher, Elizabeth Sauber, Gold Team social studies teacher, Susan Miller, librarian, Kathleen Ryan, music teacher, John Bear, technology teacher, and Elizabeth Smedley, computer literacy teacher. Representing Millersville University were Joe McCade, technology education professor, Tom Bell, also a technology education professor, and Bob Coley, archivist/librarian.

"*Radio control, we have a problem – None of us has the same students in common for this project!*"
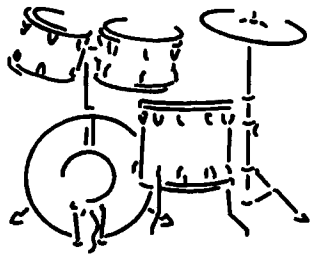
"**The exhibition is Friday. Have any of us seen any of the students' rough drafts of their performances yet?**"

"Active learning is a real bonding experience! "

Conneaut Valley High School and Allegheny College

Conneaut Valley High School's Keystone Project was targeted to high school seniors who shared three of the following five subject areas: English, history, music, physics, and computer science. The five teacher team members worked together to plan their project around "Music/Culture/Change." Using music as the center piece, the students investigated the relationship of music to culture, specifically how music affects cultures and how culture affects music.

The students, who never met totally together as a group, were able to research, design, and build a musical instrument. In addition to building the instrument, the students composed their own music with culturally significant lyrics. Their culminating event was the development of a final public exhibition and performance. This exhibition incorporated their musical instruments and also demonstrated their knowledge and use of computer technology.

Year two brought intensive scheduling to the high school as well as a second visit and presentation to the Rock 'n Roll Hall of Fame.

Memo: January 7, 1995
To: CVHS Faculty
From: Donna Baker

I received a grant application that deals with creating an interdisciplinary course. If anyone is interested in working with me next year, please contact me as soon as possible.

Memo:
February
To: Glenn, Todd, Sharon, and Dan
From: Donna B aker

We got the grant! Now we can start work on the actual planning of the course.

Memo:
February
To: Donna
From: Glenn Cameron
   What grant?

Memo:
February
To: Grant Teachers
From: Donna

The Keystone Integrated Framework grant will give us a chance to work together in integrating some of the things we teach. I got more information from PDE yesterday. We need to do some paperwork and plan our courses. Did you know eight of us will spend a week at the Poconos with teams from all over the state? In August . And don't forget about the week we'll be spending at Allegheny's Center for Curricular Change in July. I hope we can get the core of our idea there so we can flesh it out at the Poconos.

Memo:
March
To: KIF teachers
From: Donna

The Keystone Integrated Framework grant will give us a chance to work together in integrating some of the things we teach. I got more information from PDE yesterday. We need to do some paperwork and plan our work. Did you know we will spend a week in the Poconos with teams from all over the state? In August. Someone from the state is coming to meet with us next month. Can we meet sometime next week to refine our plan?

Memo:
March
To: KIF teachers
From: Donna

What a great meeting!! Using music as the center of the curriculum and building a musical instrument and combining English, civics, geography, history, physics, and the arts! Wow!! Now if our schedules work out for fall so that we can share the same students!! Have any of you heard from Central Office about the decision on intensive scheduling?

Memo:
May
To: KIF teachers
From: Glenn

The band members have agreed to change the date of band camp so that I can be at the Poconos in August and be a part of the project. Now we won't have to drop out of the grant See you at Allegheny.

Memo:
July
To: Grant Teachers
From: Donna

Wow! What a week! Since we did't kill each other , I think we've bonded into a group! I think putting music in the center of the webbing is really the solution to the whole puzzle. And building an instrument is an exciting project! Now, how do we connect English and Social Studies?

Memo:
August
To: KIF teachers
From: Donna

I can't believe we survived the Poconos!   Dan and I left our planning session to get the computer, but we missed some of the instruction. I hope somebody knows how to work this thing It is great to have a portable computer. Even though we needed more time together, we did solve the missing link: Culture!   That will connect the English class and the social studies class with physics and music. And the computer class will include the means of demonstrating the connections.

Memo:
August
To: KIF teachers
From: Todd
We have a problem!! None of us has the same students in common!! How can we do this project without common students? Help!!

Memo:
August
To: KIF teachers
From: Todd

        I finally got a look at the class lists (it's only a week before school starts!).
I think we'll have to include the students that are taking the five classes, but come up with some criteria for inclusion. How about if we pick students who have 3 out of the 5 KIF classes?

Memo:
To: KIF teachers
From: Todd

        I put the students into groups. I arranged the groups so that each group has one person from each of the 5 KIF classes. I hope this works. We'll see.

Memo:
August
To: KIF teachers
From: Sharon

I only have 3 KIF students in my classes! How am I going to be part of this project? I guess the kids will have to come in during study halls or stay after school.

Memo:
September
To: KIF teachers
From: Donna

Well, we got through the first hurdle. I'm not sure whether the students are very eager to be a part of this project. They were really excited about the journals!!! I did see their ears perk up when we mentioned no written finals in the KIF courses. However, I also don't think they understand the exhibition/performance component of the project. They were mumbling something about being guinea pigs. Wonder where they got that idea? But I do think they were impressed with the information that Valley is the only school in Northwestern PA to receive the grant, and that peope fromthe Department of Education in Harrisburg actually know that Conneaut Valley exists

Memo:
September
To: KIF teachers
From: Sharon

How are the students to integrate computers into this? We don't "do" music in the computer room. Any ideas?

Memo:
October
To: KIF teachers
From: Donna

Maureen Sweeney and her group IMPROV CHALLENGE will be here. Can we put the seniors in the gym? Can we invite some juniors to participate? Who will ask the phys ed teachers for permission to use the gym?

Memo:
October
To: KIF teachers
From: Donna

IMPROV CHALLENGE was terrific! Some of the students who never participate in anything and who never say "Boo" were in front of the gym participating in the improvisations. The group was going to do a performance in the afternoon, but our students were working with them so well that they decided to continue the workshop.

Memo:
October
To: KIF teachers
From: Donna

     Can we meet Wednesday after school? We need to work on the criteria for the exhibition/performance so the students know where they are headed.

Memo:
October
To: KIF teachers
From: Donna

     Do we know what we're doing?   A meeting is set up with Teresa and Karen from Allegheny College about pre-student teachers and student teachers. I think the idea of having college students has mentors for our students is really exciting

Memo:
November
To: KIF teachers
From: Donna

     How are the classes going? The students are complaining that we are all using the same language--culture and music. They ask in English class--is this social studies class? Some students are complaining about the people in their groups! They don't like the arrangement. Well, in the real world they will have to work with people they don't necessarily like!!

Memo:
November
To: KIF Teachers
From: Glenn

When should we go to the Rock and Roll Hall of Fame and "Forever Plaid"? We can't go on Mondays, Tuesdays, Thursdays or Fridays because of basketball games. So I guess it will have to be a Wednesday!

Memo:
To: Glenn
From: KIF teachers

You have all the information and are making all the plans. Pick a date and let us know . Should we invite anyone else to go to fill up the bus?

Memo:
To: KIF teachers
From: Glenn

How about if some of my music students go (paying their way, of course)?

Memo
To: Glenn
From: KIF teachers
Whatever you say. You're in charge.

Memo:
November
To: KIF teachers
From: Donna

The students are writing their ballads. They have to record them with a melody. I wrote and recorded one first--that was part of the deal I make with them. My voice is terrible, so if I can play my ballad for the classes, the students can at least record theirs. Students are working in the halls, in the shop,and in the music room to write and record music for English class. I think they really understand that early poetry was really song, and how a ballad works. It's really neat to see the students using keyboards and playing music--especially students who know nothing about music. We're all learning together. Those students who are musicians are teaching me a lot about music too. We are collaborating--teacher and students together.

Memo:
December
To: KIF teachers
From: Todd

The instruments are coming along. The students are using their physics equations to get the correct notes It's taking a lot longer than I originally anticipated. Do we have to have the exhibition in January? Can we move it to February?

Memo:
December
To: KIF teachers
From: Dan

What are we supposed to be doing? When is the exhibition?

Memo:
December
To: KIF teachers
From: Donna

How about May for the exhibition? We're not any where close to being ready in January.

Memo:
January
To: KIF teachers
From: Donna

Can we meet for a half day on Friday? I'll call for subs?

Memo:
January
To: Donna
From: Glenn

I'll be at a music festival on Friday. Pick any other day. My schedule is free for the next two weeks.

Memo:
January
To: Glenn
From: Donna

How about next Wednesday for the meeting?

Memo:
To: Donna
From: Glenn

Sorry, the band is playing at the Meadville Mall on Wednesday. Pick another day and I'll be there.

Memo:
From: Donna
To: Glenn
You pick the day, and we'll be there. Just let us know, O.K.?

Memo:
January
From: Glenn
To: Dan

How about visiting the Rock and Roll Hall of Fame before the KIF trip? Then we can really put together a worthwhile work sheet for the studets when we take the on the school trip.

Memo:
January
To:KIF teachers
From: Dan and Glenn

Here is a copy of the student worksheet for the Rock and Roll Hall of Fame. Look it over and give us any suggestions.

Memo:
January
From: KIF teachers
To: Glenn and Dan

The worksheet looks good.

Memo:
January
To: KIF teachers
From: Dan

The students are getting frustrated. They need some time to work together in their groups, but since they are not with their group members in their classes, can we get them excused from their non-KIF classes some afternoon so that they can work together?

Memo:
January
From: Donna
To: KIF teachers

Jan Hyatt from Alleghey College will be here to work with the KIF students on presence and movement. We will use double periods each of the days she will be here. You are invited to attend if you have a plan period during periods 5 and 6.

Memo:
From: Donna
To : CVHS faculty

The KIF students will be working with Jan Hyatt from Allegheny College on February 1, 8, 22, and 29. The KIF students will be in room 123 periods5 and 6 on those days. Please excuse the students from your classes. They are responsible for any work missed. Thank you for your cooperation.

Memo:
February
From: Todd
To: KIF teachers

What a wonderful trip!! We didn't spend enough time, however, at the Rock and Roll Hall of Fame. It was so neat for the cast members of "Forever Plaid" to talk to the students after the performance. I wonder how many students realized that the performers were mostly college graduates. I didn't know whether 1996 seniors would appreciate the music of the 50's, but with the style of the show and the great talent of the performers, the students really were involved and really like the show!! The Italian restaurant was a real trip!! The waiter was a show himself. What a good experience for rural Pennsylvania students to take!! They were so appreciative, too. One important aspect of the trip was that all five KIF teachers went on the trip with the students. We went not as chaperones, but as partners in an educational experience!! The whole KIF project's success depends on common experiences.

Memo:
March
From: Donna
To: KIF teachers

Jan Hyatt has worked with the KIF students for four weeks. They worked on movement and presence and also self-assessment skills. Some of the students are so remarkably creative. Jan was really impressed.

Memo:
March
From: Sharon
To: KIF teachers

I have only had one student come in to create a presentation. It's GREAT but what about the other groups?

Memo:
March
To:KIF teachers
From: Donna

Do the KIF students have anything to exhibit or present? I am getting worried. It's getting close to the performance date, and they don't seem to know what they're doing.

Memo:
March
To:KIF teachers
From: Todd

Have you seen a rough draft or an outline of the performances? The performance date is Saturday. Here it is Wednesday, and I haven't seen anything yet. Are you worried? I am . I don't want this to crash and burn.

Memo:
March
To: KIF teachers
From: Donna

I can't believe the seniors pulled it off!! Although there were some problems in the performances (like too many curtain closings per group's performance) which could have been fixed if the students had practiced more and had a finished product a week or more before the performance date, the exhibitions and performances were remarkable. The parent attendance was outstanding. We should have planned more time for parents and others to view the exhibition tables in the cafeteria and talk to the students before the performances. We also needed to have an interactive computer program ourselves explaining what exactly the KIF program is/was. But all in all, the Saturday evening was a huge success. It was also interesting to have the students assess themselves at the end of the evening We will need to meet together with the Allegheny KIF staff to figure out student grades and to assess the program's success (and to think about changes/adjustments for next year).

Memo:
April
To: KIF faculty
From: Donna

Well it's over! All that's left is to do the paperwork and put grades on the report cards. Should we do it again next year? Can we get other faculty involved? How about another grade level,like 8th grade?

Memo:
May
To: KIF teachers
From: Donna

Don't forget about our Rock and Roll Hall of Fame presentations on June 27.
We still need to get a packet of information together about what we did this year. It is
really exciting to be invited to Cuyahoga Communty College as part of a summer
institute for secondary teachers called "So You Want to be a Rock and Roll Teacher--
Using Popuar Music in Interdisciplinary Learning."

Memo:
June

Well, what an experience that was!! Students kept journals, worked in groups,
wrote music and lyrics, built an instrument, and learned about how music reflects
culture. They even did some self-assessing. And the exhibition/performance really
made the students demonstrate not only their knowledge,but their understanding of
the knowledge they gained this year. We also got to see talents of students that many
of us were not aware of--Courtney's dance and David's computer program were
amazing!! The KIF teachers are a real team, and the students could see the difference
in our dealings with each other and with them. Active learning is a real bonding
experience. Now all that's left is to see what our schedules are for next fall so that we
can plan for a new group (or two) of students.

Memo:
June
To: KIF teachers
From: Dan

What are we doing? Are we going to do this grant stuff again this fall? What will the
groups be like? Can we get a copy of our schedules and class lists?

Memo:
June
To: KIF teachers
From: Donna
Well, we really figured it out!! Our framework is to use the arts (in this case music) as
the core of the curriculum. "Culture/Music/Change" was a stroke of genius (or luck).
Now we need to "spread the word" about our framework, and about interdisciplinary
teaching. It's the only way to go!! Have a restful summer. See you at Alleghny
College Center for Curricular Change in August.

**"The hard drive crashed, fried, died . . .
This couldn't be happening to us! "**

*" We placed no blame, we remained
positive, we refocused, and we solved
our problem . . . just what we
wanted our students to learn to do. "*
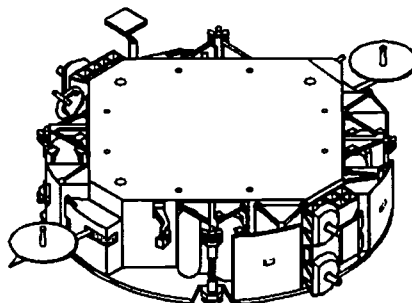
"They spoke it. They wrote it. They drew it, painted
it, built it, and mimed it. Next, they would sing it! "

Conestoga Valley School District and Millersville University

Conestoga Valley Middle School and the Educational Foundations Department of
Millersville University have formed a solid partnership and a warm personal and
professional working relationship. The project involved five teachers; up to seventy
student teachers, junior-year placement and student observers; and three to ten profes-
sors with varying degrees of involvement.

Operation Keystone, as the project was titled, is a role-playing simulation integrat-
ing the arts, civics, English, geography, history, and science. Heterogeneously grouped
eighth grade students, including a class of learning support students, worked in prob-
lem-solving teams of 10–12 students. Their task was to address current societal prob-
lems in a simulated society housed in "space capsules" in the year 2147. These societal
problems included air pollution, toxic waste, natural disaster, crime, disease, starvation,
drugs, and totalitarian government.

Student teams were charged to research the problem confronting their space capsule
habitat, convince their peers that a problem existed, propose solutions to the problem,
and create a view of the future for their habitat. Each stage of the process was demon-
strated through individual or group performances using one of the arts forms.
The university students wondered if their professors were crazy and they worried about
their roles in this strange adventure. What began as two teams, university professors vs.
middle-school teachers, became one team with one mind, one goal, and one voice.

Creating a Monster :
the Story of Operation Keystone

as told by Cheryl Desmond, Millersville University,
and Suzanne Fisher, Conestoga Valley Middle School

They circled the table on which it lay. Silence hung heavy over the shapeless mass before them. To breathe life into this being... they had longed for this moment. Those hours of labor that stretched through the night, the soul searching, the countless unanswerable questions, the doubts that plagued their every move. Would this creature, the embodiment of their collective ambitions, rise to glory or would it turn on its originators with every vicious ounce of its tortured soul? What lay ahead? Would these creators live to rue the day they brought the beast to life, or would they bask in the honor its conception would bring? There was no turning back. They reached out to the massive hulk before them ... and sent the final copy of "Operation Keystone" to the printer.

Winter :

(**Cheryl**) : The basketball circled the rim and dropped in. Amid the din of the cheering fans and youngsters pounding on the bleachers during my son's game, Wayne Heim, the principal at Conestoga Valley Middle School, and I hammered out the details for the Keystone Grant Proposal. With only a few weeks until the deadline and no other common time for school and university planning available, we knew the game was the only time to discuss the opportunities the grant offered. If the CVMS Blue Team would join forces with an interdepartmental faculty team from Millersville University to create and implement interdisciplinary curriculum centered around the arts, we knew we could write a winning proposal, one that would unite the goals of the middle school with the restructuring of MU secondary teacher education program. Could we do this? The buzzer sounded, signaling the end of the game and the beginning of the Keystone Project.

Spring :

(Sue) : When Wayne Heim, our principal, first approached us with the proposal for the Keystone project, our ears perked up. Another "opportunity of a lifetime" for us to explore. Dan Daneker and Mark Olcott and I had been working together for five years, and we were always looking for a new hill to climb, another cave to spelunk. This grant could offer us a veritable ocean to explore, with federal funds to boot. We had written interdisciplinary units and simulations before, even taking our 8 Blue Dog and Pony Show to various conferences and workshops across the state. We were middle-level groupies, devoted to the student-centered learning that the philosophy embraced. We had traveled with our students back to the colonial era and engaged them in the lives of early Americans. They sailed with Columbus and walked the long trek back to Pennsylvania with True Son in The Light in the Forest. We entered them in the Space Academy as cadets with a mission to explore new worlds, appointed them as executives in energy-producing conglomerates, and hired them to be advertising wizards in new companies. We believed in integration and had long sought out opportunities to infuse the arts into our classroom projects. Now, finally, was a chance to develop an entire unit of study focused on the arts. We were excited at the possibility of a new adventure.

We needed a team for the Keystone project. Ron Chamberlin, our math teacher, bowed out. He is a wonderful team player but finds comfort in participating in rather than leading innovative projects. Jerry Beekler would be joining our team this year as the learning support teacher, and his creativity and input regarding inclusion would be invaluable. We had often worked with Donna Burkholder, the music teacher, but never to the extent that the Keystone project could afford us. The students had written songs in conjunction with our historical studies, but those classroom connections paled in comparison to what this project could provide. New possibilities abounded for ongoing partnerships.

(Cheryl) : To field an MU team that included the arts, I had to move across campus to the School of the Arts and Humanities to the Art Department and Marianne Kerlavage. Marianne and I had worked together on several committees, but more than that, we shared the hometown of Pottsville during a time when Yuengling was an unknown, local brew. Elliott Seda, a colleague of mine in the Department of Educational Foundations, would bring to the team another background in interdisciplinary curriculum and student teaching supervision. The CV Blue Team had given us the nod: we had achieved a Keystone team of eight.

Where grows the seed of life?   From which garden,
from which pond, from which   galaxy will it come?
Select the right seed, and the creature will be true and

just; select the wrong, and the devastation will be overwhelming. You've never seen anything more terrifying than an eighth grader with glue, tempera paint, and an imagination.

Summer :

(Cheryl) : In early June all eight of us met awkwardly in the middle school. For two hours we tried to get to know each other, to discuss sketchy plans, and to lay the foundation for a week together in the Poconos. "Blind teaming," one might call it. We university folks sensed the apprehension from the middle school team. They seemed worried that we might try to play the expert and tell them how to do interdisciplinary curriculum when they had already been doing it for years. That was the last thing on our minds. We were too concerned with our own challenges : how would we bridge across schools, courses, and schedules in a way that our own students would learn to teach and work with middle school students? How would we build new connections, strengthen existing bonds, and improve our education program?

(Sue) : We soon found ourselves cloistered in an aging Pocono Manor for a week-long brainstorming and theorizing session. "Specialists" spouted their theory while we chomped at the bit. We knew what we wanted to do, and we were anxious to get started. We came with an idea and left with a plan. We wanted our students to understand the value of arts in the human experience; to experience the connectedness of literacy, history, and all disciplines; to solve the problems of the universe; to ensure the continued existence of the human race; and to have a good time doing it. We met, we worked, we brainstormed, we argued, we planned, we fought, and we started from scratch all over again. We knew where we wanted to go, but how were we going to get there?

(Cheryl) : Nuts and bolts! During that week of hard work and play, the CV team pushed us to chomp on the nuts and bolts of the role-playing simulation. Where were the arts? How can we pull in Donna's music program? Chomp, chomp. "Pulling in" the arts won't do. Music, the visual arts, movement can't be add-ons. Chomp, chomp. Where will they fit? New webs, wheels, and spokes of the interdisciplinary themes, topics, and subtopics were drawn. Donna's voice grew stronger; she joined the circle and started to add ideas. We began to hum. Maybe, too, the nightly dancing in the Lamplighter Lounge helped, by creating a subliminal press for the importance of the arts to life and living. Chomp, chomp. Eureka! Dan shouted, "Pillars, that's it. The arts will be the pillars of the content areas in the simulation." Donna smiled. An obstacle had been "flushed out."

Now, how about an afternoon talking about the MU students? How will the

schedules of MU junior art students work with this? Will the project satisfy their field requirements? What about the interdisciplinary unit middle level student teachers must write and teach? Although we missed Elliott, whom we shared with the MU-Donegal team, Marianne and I began to see how the simulation would co-ordinate with the university's spring semester. We brainstormed on the ride home. We had been trying for the past year to integrate our secondary methods courses with our MU computer technology course. Would Troy Isaak, the computer technology professor and a jazz musician who was a strong advocate of the arts, join the team? If, so, we could create a section of art students for the course, create a field experience, integrate the work with graphics design, and use his advice on the development of the CV-MU videotape of the project. The intensity of the Pocono week created strong bonds. An authentic collaboration had begun.

> "Electricity," he repeated, "electricity. The spark that brought light to this world will bring life to this creature."
> "How foolish," his partner chided. "The key lies not at the end of a kite string but in the tiniest atom. We must go back and examine each particle, each tiny fragment of this beast until we- "
> "Enough!" she shouted. "Enough! We can't afford to impede our progress with this endless review and debate. We must push on at all cost. Midnight cannot find us alone with this creature."
> They turned back to the examining table with one question burning in their brains : when do we break for lunch?

Fall :

(**Sue**) : There in the middle school's seminar room were eight very creative people with diverse learning styles and agendas, who represented a full range of point values on the hemisphericity scale, whose artistic abilities ranged from 1 to 11 on a scale of 10, eight people who couldn't be as different from each other unless it were planned, yet we all had the same goal - we wanted to create a memorable experience for our students that would allow them to learn, to create, and to grow. Were we idealistic? Sure, but how could we not be? We're dealing with eighth graders and we see the potential in them. We know what they can do. How do we get them to do it?

Being the logical folks we are, we had to examine every tiny aspect of the project. We wanted a simulation, full of group activities, excitement, hands-on

learning, and movement. We wanted the project to be student-directed, but we knew we had to establish guidelines and parameters in which they would work. We needed to establish specific tasks, design appropriate activities, and construct realistic assessments. We over-planned. We troubleshot. We ate chocolate chip cookies. We looked at each minute detail and speculated where the students could take it. We looked at schedules, curriculum requirements, facility limitations, and administrative leeway. In those aspects we were indeed blessed. Our administration designed a program which allows the teachers to be decision-makers. They procured the playing field, built the goal posts, picked the teams, then handed us the ball. How we scored was up to us, a frightening prospect for some, but a happy challenge for us. We knew that whatever we did (without causing "educational damage," as our principal once commented) was OK and encouraged.

This was the plan. It was the year 2137 and the earth was dying. Man's negligence was causing its inevitable decline. Pollution, toxic waste, crime, drugs, disease, government corruption, natural disasters - all were taking a toll on the planet and the human race. To the rescue - the famous philanthropist Dr. Suzi Hamebooboo... let me explain. During one of our brain-draining work sessions in the Poconos, Wordmeister Dan, famous for such verbiage as "it would behoove us" and "let's flush out that idea," wished that we would have a catch-all word that would adequately sum up our ideas, "something like 'hamebooboo'," he said. What a stupid word, we thought. And it stuck. Dr. Suzi Hamebooboo was born. She built habitats in space that would house the remaining humans while the planet had a chance to heal. But we know how people are. They never learn. They took their bad habits with them to their new homes, and soon the cylinders were infected with the same problems that threatened to destroy the earth. Who would solve the problem? Why, the brightest problem-solving minds in the universe, the students on the 8th grade Blue Team at Conestoga Valley Middle School. They would have to learn all they could about the problems, convince the people that the problem was serious and had to be solved, propose solutions, and finally present a view of the future once the problem was solved. Sounds pretty simple, huh. Here's the catch. All communication had to be done through the arts - music, art, movement, dance, theater, pantomime, or speech. Operation Keystone was born.

"It's ALIVE!"

Once the intensive planning started, the problems started, too. What will each task look like? How do we explain it clearly to the students? Who will evaluate their work? How? Donna was certainly capable of evaluating the music component, but what about the art? None of us had a background in art instruction. Who can pass judgment on the quality? What about Millersville's role in this production? What will the student teachers do? MU wanted to

actively involve 70-some students in the project. How can we keep them connected? Where will we find guest passes for all of them? How will we handle the chaos? Supplies! What will we need? Where do we purchase the paint? Where will we store all the stuff they need and all the stuff they create? When are we breaking for lunch? Grades! How do we motivate the students? On what do we evaluate them? Their performances? Their cooperation? Their journals? Shall they write essays as English grades or do research for history grades? Can we fairly give group grades without incurring the wrath of parents? Do we strive for individual accountability? Shall we give awards for the top teams? What will the award be? A button (Dan's favorite) or jelly beans (Mark's choice)? Assessment! We need to write rubrics and provide models. Where will we put these kids when they are working on the project? What sort of schedule will we need? Do we use mini-schedules? How will we divide the students into groups? What will we expect of them? Who will pay the bills when all five of us are taken away in those white jackets with the arms that buckle in the back?

We did solve one problem : grouping. The students would be grouped according to their English classes. Since the primary class work would involve research, an English project, that arrangement would be most convenient. It would also allow special grouping for the learning support students. We debated the pros and cons. Should the LS students make their own group or would they benefit more from being included in heterogeneous groups? There they might be forced into the role of follower, but if grouped within their own English class, their natural leaders might emerge. Their talents would still be seen by all students on the team during the presentations, but they might benefit from the security their own English class could offer. Jerry suggested we try it. If it doesn't work, we'll try it the other way next year. Experimentation is the name of the game.

We were mad scientists in a dungeon laboratory, creating a monster that would either exist peacefully in its cage or devour us in one bite.

(Cheryl) : Meanwhile, back at MU, we met over lunches to determine just how we could integrate our courses and student teachers into this project. Troy had agreed to cast his EDFN 330 "Microcomputers in the Classroom" course into our project. We worked with the registrar to reschedule a block of art education students into the class. Marianne reconstructed her junior art methods field experience so that her students could be actively involved in working with the middle school students on the visual arts component of the simulation.

We also hoped that all nine student teachers at CVMS could participate. Four student teachers had been assigned to the Blue Team and would certainly join in the day-to-day implementation of the simulation, but would we be able to involve the other five? Four were on the other eighth grade team, the Red Team, while one would be paired with the Spanish teacher on the Purple Team, the unified arts team. Elliott would supervise the Blue Team and the Spanish teacher

while I would try to integrate the Red Team and continue to coordinate the project. The Red Team did not participate in Operation Keystone, but we hoped that their student teachers could find time in their busy schedules to assist the Blue Team. We met with the Red Team in November, but they seemed a bit hesitant about participating in the project.

Winter :

(**Sue**) : The planning continued. Our focus narrowed. Our deadline loomed. Back in the fall February 26 seemed like light years away. Our student teachers would be on board by then, and the date fit so neatly into a schedule already hemmed in by the school play and our Washington field trip. We'd be done by then, we assured ourselves, but all the advance planning in the world cannot erase those last-minute details that kept us on our toes right up to the kickoff countdown. We had already used five in-service days and countless individual hours to prepare for this project. Somehow it just didn't seem to be enough.

(**Cheryl**) : The end of January arrived. MU's Spring Semester began with classes of new faces. Operation Keystone's weekly schedule had emerged. The CV Blue Team had transformed their six-day cycle into one that accommodated a five-day university schedule. Anxious students in both Marianne's and Troy's classes listened as they were given maps to Leola and Conestoga Valley Middle School, an unknown destination for almost all of them. They heard tales of the Year 2147 and of space modules of earthlings trying to save their habitats from pollution, toxic waste, crime, drugs, disease, government corruption, and natural disasters. They tried to imagine their roles working with 8th graders who were responsible for problem-solving their way out of these futuristic messes. The MU students wondered whether their profs were crazy and worried about their roles in this strange adventure.

Meanwhile, several problems were happening with the CV Red Team student teachers. One's placement with two cooperating teachers was not working. Another became ill with bronchitis and was absent for two weeks. The schedules for joint planning periods did not mesh. With little hope for an inter-team tie-in with Operation Keystone, we decided the Red Team would work on a week-long interdisciplinary unit on the Olympics, one that would not disrupt the regular schedule of the Red Team. The Spanish student teacher was working in two schools and had minimal contact with the 8 Blue students. Any glimmer of integrating these five student teachers into the simulation faded rapidly and died.

The four Blue Team student teachers, however, quickly became involved in the project. They worked well with their co-ops and stood ready to help with anything we asked. Marianne, Elliott, and I practiced our lines for the Kickoff with our CV colleagues and friends. We had shaped a strong connection between

the lives of sixty-eight future teachers with a real world of the public school in a middle school where they could observe and participate in cutting edge, exemplary instruction. What began as two teams, university professors versus middle school teachers, became one team with one mind, one goal, and one voice.

Monday, February 19 ~ At our last meeting we made the final preparations. We finalized the tasks, completed the rubrics, problem-solved the scenarios, and polished the kickoff presentation. Marianne joined us for part of the day and agreed to act as Dr. Hamebooboo in our skit. We left school that afternoon very pleased with our accomplishments but still a bit overwhelmed with what we had to accomplish over the next few days. Packets had to be printed and compiled, supplies had to be purchased, and logistical problems had to be ironed out.

Meanwhile, in English class the groundwork was being laid. We introduced the students to their groups but did not let them in on the secret. They knew some major project was about to start, and our secrecy made them anxious and excited. For the entire week the students would work in their groups on cooperative, problem-solving puzzles and games, solving mysteries, deciphering codes, building tiny structures - activities that stressed patience, cooperation, brainstorming, and the value of leaders and followers. By the end of the week they would be ready to tackle - as a cooperative group - the tasks of Operation Keystone.

Wednesday, February 21 ~ That evening Dan and I met after play practice and hammered out the final copy. We came to the realization about 8:00 that evening that extreme expenditures of creative energy drain us of all self-control and dignity. There is just so long that two people can work diligently without losing all sanity, and by 9:00 we laughed ourselves silly. Yet, by 10:00, the final copy of both the teacher and student manual were completed and ready for Thursday's press run. We left the middle school late that night exhausted but confident in our project and amazed that two such diverse thinkers could pool their efforts without bloodshed.

> *We held our breath and focused on the beast that lay before us. Complete. Massive. Intimidating. Though we knew the creature was ours, we were fearful. Would the beast gratefully lick our fingers... or bite them off? We tensed, watching for the slightest movement, an infinitesimal sign of life that would assure us that the mission was complete. Did that eyelid really quiver? Did that finger really twitch? No one blinked, dare he miss that vital flicker of life that would signal success.*

Friday, February 23 ~ That morning we awaited Marianne's arrival. We intended to film her segment of the kickoff presentation - the Hamebooboo address to the people of earth in 2113. The laser disk/Hyper Studio portion had been done for weeks, and the rest of the opening would be a live action skit that we would rehearse Monday afternoon right before curtain. Instead of Marianne, though, a Millersville student arrived bearing Marianne's apology and her costumes, for she was to be our Hamebooboo. Several practice sessions later, Dan, Mark, and the young "Suzi" emerged from room 23 with a decent tape of the address.

Next, we hauled the equipment down to the auditorium for a dry run. Everyone pitched in. We set up the computers, the TV's, and the VCR's and prepared for the moment of truth. If this worked, if the Hyper Studio program ran as planned, if we could coordinate the music with the narration and the video, if we could splice in the Hamebooboo tape and create a smooth segue into the live action - if all would go as planned, we would be set for Monday afternoon, and we could turn all of our attention to punching holes in the manuals and stuffing Duotangs for the rest of the afternoon. Dan turned on the computer, pushed a button, and - nothing. Absolutely nothing appeared on the screen. We stared in astonishment, the silence of the auditorium punctuated by the sound of chimes, death chimes, to be exact. The hard drive crashed, fried, died. For a moment we froze in disbelief. This couldn't have happened to us. The Hyper Studio program, the laser pictures, the video narration - all gone. We all looked at Dan. What happened, we wondered, but even Dan didn't have an answer. We called the district's computer specialist, but all she could do was confirm our worst fears. The death chimes signaled the demise of our kickoff video.

No, this could not be happening to us, not after we had prepared so meticulously, not after everything had been going so perfectly... too perfectly. But, hey, we're teachers. We're trained to think on our feet. And that's what we did. After all, we were trying to teach our students problem solving. Wasn't it appropriate that we began our project with a monumental problem to solve?

There was no time to lose. Bemoaning our fate would be useless and wasteful. Our task was clear. It was almost 1:00 Friday afternoon. We had seventy-two hours, a whole weekend, to create a new kickoff video. We could do this.

Dan, Donna, Mark, and I gathered in the cafeteria and spread our pollution and disaster slides on the table. We surveyed the slides, chose the best ones, and wrote a script to match. We felt a bit overwhelmed and harried at first, recognizing the deadline that was looming, but we soon gained momentum and by 3:00 had a script and slide series in hand.

While Ron, our student teachers, and I stuffed Duotangs with the student manuals, Dan devised a contraption to hold the slides in front of the video camera and prepared the presentation. All would be done on video. No computers this time. No chances.

As odd as it seemed, the crash of the hard drive turned out to be a blessing in disguise. Yes, the Hyper Studio program was great, but this second version was even better. It was smoother, clearer, and more emotional than the first version. I felt more comfortable with it.

As I look back at that afternoon, I am amazed at how calmly we reacted to the "disaster." What could have discouraged us instead challenged us. We placed no blame, we remained positive, we refocused, and we solved our problem... just what we wanted our students to do.

Sunday, February 25 ~ Dan, Donna, and I met at the middle school at 1:00 on Sunday afternoon to finish the video and copy the research data. Wayne met us and opened the doors for us, and we showed our gratitude by forcing him to narrate the video for us. Dan and a friend had completed the video Saturday morning, but Mark was dissatisfied with their final copy. The sound was garbled, he claimed, so the video had to be redone. By 4:00 we had complete data banks of research for each cylinder and a terrific video for the kickoff. We were ready to roll.

Monday, February 26 ~ Monday afternoon finally arrived. We set up the video projector, not the computer this time, and divvied up the responsibilities. Dan would lie low and run the projector. Since he had been a key player in "Colony Quest," he wanted to stay invisible during the Keystone Kickoff so the students would not make a transfer from that simulation to this one. Ron, Greta Rohrbaugh (the health teacher who joined our team second semester), Tom Wallace, Rich Kratz, and Amy Hackman, our student teachers, handled crowd control. Marshall Krebs (Dan's student teacher), Jerry, Cheryl, Elliott, and Marianne, Pocono facilitator Richard Forsythe, and I took lines in the play. Unfortunately Mark could not be with us. He was in Boston spending time with his mother. We wished he could have been with us to see this momentous event, but more than that we wished his mother would recover quickly.

It was the proverbial Moment of Truth for Operation Keystone. This was the moment for which we had planned for several months. What was merely a spark in the Poconos had grown into monster that we were about to unleash on our unsuspecting students.

By 1:00 all the bigwigs had arrived. Judith Witmer, several department chairs, and our own middle school brass took seats in the auditorium as the students filed in, curious and excited. They had been prepped for this project for a week and understood its importance. The presence of people in suits added to its weight.

Backstage we had been rehearsing our lines. "Dr. Hamebooboo, you must do something!" we emoted over and over again. We "memorized" our lines, Jerry practiced smacking Marshall around, and we tried to figure out who said what when.

The lights dimmed and the words "It was the year 2113" appeared on the screen on stage. We waited anxiously in the wings for our cue to begin the play. The slides, Hamebooboo's address, the cylinders - all breezed effortlessly by. Then it was our turn. We made our grand entrance and launched into the most dramatic performance to ever grace the CVMS stage. Well, at least the audience didn't fall asleep.

Our students are accustomed to us being a little left of center, so nothing surprises them any more. They listened attentively, smiled politely at our goofiness, and gamely took Hamebooboo's charge. They returned to our classrooms, now dubbed the Keystone rooms, and dove into the student manual. They read the information, absorbed as much of it as they could, and studied the scenario that confronted them. The first session was a brainstormer, and by the end of the double period, most of the groups had a handle on the tasks that lay ahead. Most of the groups, but not all.

Tuesday, February 27 ~ We devoted English class that day to setting the pace for the project. We reviewed the tasks to assure that each group had a firm understanding of their goal. Periods 1, 2, 8, and 9 seemed to be right on target, but period 3 was troubled. They didn't understand what they were supposed to do, and their confusion translated immediately into boredom with the project and outright refusal to get involved. We discussed the project in detail and they seemed content with my explanation, but a negative energy still hung over Cylinder 6. There would be trouble.

Wednesday and Thursday, February 28 and 29 ~ Research continued in civics class today, and I could spend my classtime finishing the verb unit. I periodically checked in with Mark, and everything seemed to be progressing smoothly. Cylinder 6 seemed a bit confused and adrift, but they appeared to be poring over their research materials. Having the data base prepared by the student teachers was a true advantage. Our time for research was limited; we wanted the students to spend most of the time using the data to discover facts about the problem.

Friday, March 1 ~ The way these kids work amazes me sometimes. They had worked extensively in groups earlier in the year in "Colony Quest," so they had a strong idea of how an effective group would work. Most of them launched right into their work and quickly pooled their ideas; others seemed stymied by the language of the research or the implications of the statistics. Some had a hard time selecting pertinent details to include in the report. What would be interesting to the rest of the team? What would be too boring?

The final research sessions provided some memorable moments. I eavesdropped on one discussion among six students who were discussing the impact of toxic waste and pollution on society. Which problem was worse - air

or water pollution? One girl had never heard of Love Canal before and couldn't wait to get home and tell her parents all about it and ask them if they had heard of it before. Was toxic waste dumped around here, she wondered. Others were amazed that juveniles committed so much crime. What's wrong with kids today, they questioned. One boy stated that no one around here is starving, so why should we be worried about this problem. Another student set him straight. As long as someone is starving, we must all be concerned even if that person doesn't live in our country. What a teachable moment, that moment when students make such discoveries. That is exactly what we wanted to happen.

Tuesday, March 5 ~ Today the students presented their Task 1 speeches in the auditorium. Some of the students very obviously lack confidence in their public speaking ability. Maybe we should have given them more time to rehearse their speeches on stage with the microphone. Even though they could have used more prep time, their speeches went smoothly. I was impressed by the abundance of information they found on the topics. Some of them added visuals and graphics to their speeches. Many realized by comparing their performances with others that they were sadly lacking in preparation. Was that our fault or theirs? This is the same question that plagued us for the rest of the project. Should we give them more time and drag the simulation out to ten weeks or more, or should we stick to the time schedule and keep it at a trim seven weeks with little breathing room?

One of the highlights of Task 1 was the presentation by the students in Jerry's learning support class. We had originally divided the class of seventeen into two separate groups but gave each group the same problem to solve. During their first planning session they decided that the "wall" that separated their groups in Cylinder 15 should be torn down so they could all work together. And work together they did! Their research was thorough, their speech was impressive, and their project received accolades from their peers. Our grouping "experiment" worked.

And Cylinder 6? I held my breath during their speech. It was disjointed and weak. Instead of gathering information, they had spent their research time staring at the articles and each other, hoping someone would take the lead...or maybe do all the work. The Task 1 presentation caught them very unprepared. Will they get their act together for Task 2?

Wednesday, March 6 ~ Hooray for flexible block scheduling. We were able to build some extra time into our schedule this morning for the overflow of speeches.

In the afternoon, a group of Millersville art students arrived laden with boxes, posters, graphics, crates, puppets, wooden skids - all kinds of interesting stuff. The MU students looked about as nervous as our students did up on stage. For some of them I'm sure it was the first time they had addressed a large

audience like this. In mini-lessons, they showed the students how to use color and bold figures to make a statement, to create 3-D props and symbols, and to fabricate puppets and creatures out of simple materials. Eighth graders can be a tough crowd, but our kids were great. They were quiet, respectful, and receptive. The displays their "art teachers" made were wonderful. I could see the light bulbs popping in the students' heads. "Hey, we could do that," they mouthed to each other as they pointed to a backdrop or a puppet or a 3-D display.

They rushed back to their rooms and immediately launched into a brainstorming session about the artistic project... well, almost everyone did. Cylinder 6 from period 3 hit the wall. They did nothing. They simply sat and stared at each other. No one took the lead, no one suggested a direction, no one offered to do the work. Remember what I said earlier about trouble? Here it was.

The creature stirred. It lifted its ugly head and rested its sullen eyes on its captors. "You're not gonna make me jump through your hoops," it hissed as it skulked to the dank recesses of its cage.

Weeks before the simulation began, we had carefully created cooperative groups, five to seven students each, three or four groups per class. The key to a successful group lies in its composition. It must be equally balanced with leaders and followers, workers who will motivate and non-workers who need motivation, left-brainers and right-brainers. The teachers who form the groups must know the students and their strengths and weaknesses so that one child's skill can compensate for a teammate's inadequacy, so that each piece can contribute something unique to the whole. So we created eighteen teams and presumed them balanced. But an eighth grader is a creature-in-flux, and a positive attitude in one project may not flow into the next. Such was the case with Cylinder 6. A team of two strong leaders, a skilled worker, and two weak followers soon morphed into five individuals who didn't want to work, take responsibility, be creative, or explore. It became easier to follow the voice of the loudest complainer and spend the class period whining or stagnating.

Sometimes it's easier to threaten a dysfunctional group with discipline. Straighten up and do what you're told, or we'll split up your group and make you sit in the corner or give you an F or, worse yet, send you to the principal's office. All tactics have been tried before. And the end result? Zeros in the grade book and five bitter, resentful students who missed out on an opportunity to achieve. That's not what we wanted.

No matter how exciting the venture, there will always be students who, for one reason or another, just won't come on board. We had anticipated this, though we could not predict which group, and early on enlisted the aid of the guidance counselor to create a group management component : therapy for a

dysfunctional family, an opportunity to sit down with a third party to vent and grumble without fear of reprisals from the teachers, a safe environment in which to air grievances, a concerned counselor who will help them iron out their disagreements, and most of all, a second chance to succeed.

Thursday, March 14 ~ While the other cylinders were in the auditorium presenting their Task 2 projects, Cylinder 6 was feverishly working in the hallway to put the finishing touches on their artwork. They finally shared a vision, but they wouldn't have gotten that far without the group session. The problem? They were tired - tired of group projects, tired of responsibility, tired of pushing themselves. They wanted a regular day at school, a "normal" day. They found the project too difficult, with too much thinking and problem-solving and not enough social interaction and physical activity. They couldn't think of good ideas and felt that the only acceptable product is perfection. Wow! When we read the counselor's recording of their comments, we were stunned. What was wrong with this group? Why couldn't they come on board the way the others had? What was their problem? We took a long hard look at each other and swallowed. Maybe we were the problem. Maybe we were pushing them too hard, expecting too much, demanding perfection. The eyes of the middle school, the district, Millersville University, and the entire state of Pennsylvania were on them...and on us. We were holding up under the pressure; they weren't. They were afraid they'd let us down if they didn't succeed, so rather than fail honestly they decided to give up.

Sometimes we overlook the most obvious element as we push our educational agenda: we are dealing with children who struggle each day with success and failure, and we cannot afford to lose sight of this human element in our teaching. We talked with the students, soothed the hurt feelings with our assurances and encouragement, and told them that we understood. That's what it took. They approached Task 2 with a new resolve, and though their presentation suffered from their delayed start and weak organization, we were proud of them.

The Millersville students who had been observing the team for the past few weeks were pleased with them, too. The art students had been looking over their shoulders while they brainstormed and created; the computer students had been acting as Dr. Hamebooboo's representatives, collecting data for a Power Point presentation on the project; and the student teachers had been coaching, encouraging, supervising, and guiding the students every step of the way. At times they were discouraged and thought this would never work. But the smiles on their faces as the cylinders displayed their art conveyed their overwhelming pride.

Monday, March 18 ~ They spoke it. They wrote it. They drew it, painted it, built it, and mimed it. Next, they would sing it. With each task, we asked our students to take a new risk, to take a tentative step into an untested territory.

They were afraid at first, fearful of failure, of foolishness, of exposing a side of themselves even they didn't know.

Last week Donna began laying the groundwork for this next venture. She and Michelle Kindt, another music teacher who taught one of our classes, helped the students work out their melodic ideas, but until the students completed Task 2 and came up with a solution to the problem, the text could not be added. Classroom work in anticipation of the task moved slowly but accurately as the students gathered background information on melody and rhythm. They experimented so when the time came, they could plug in the text and fine tune it with notation.

Task 3 proved to be the most difficult of the four. They have sung before; that was no problem. But to create an original musical composition, perform it, and have it mean something was daunting. And here, we, as facilitators, fell apart, too. During Task 2, the students were guided by dozens of knowledgeable hands, as the MU students prodded them toward a final project. But for Task 3, that huge safety net was gone and our music teacher shouldered the job. Hard as she tried, she couldn't be fifty places at once (twenty, maybe, on a good day) and the teams labored without the benefit of a cadre of supervisors.

In music class the students, individually, wrote their songs. The end products reflected a multitude of abilities; some were long, complex melodies while others were simple, but all were satisfactory. Some surpassed Donna's expectations. So far, so good. But an individual performance was not the ultimate goal. The dilemma came when the students met again as a group in English class to share their compositions. They were to choose one song, learn it, add percussion to it, select a singer, and prepare to perform for the team. This is where the process broke down. Instead, an "English class" mind set overtook the "music class" mind set, and they concentrated more on the lyrics than the tune. They combined lyrics and melodies as they focused more on getting the message across and less on producing a lovely melody that would serve as a medium for the message. As the deadline neared, they seemed to get farther off track.

> *Its gleaming eyes scanned our anxious faces. They darted from one to another, finally locking in on Donna's tense brow. What would the creature do next, we wondered. It had been so cooperative, completing each step in the regimen with amazing agility. We were pleased; it was learning well. But now something was wrong. It threw back its head and unleashed an unearthly howl.*

Monday, April 1 ~ Donna felt the pressure as her single-handed frustration grew, and we heard it in some less-than-melodious chants and dirges during the Task 3 presentations. While some groups composed lovely, rhythmic melodies

that sang of solutions to the earth's problems, others offered awkward, poorly rehearsed tunes, some original, some copied, most accompanied by embarrassed giggles and pauses. Again we took a long hard look at ourselves, but this time we knew better than to ask what was wrong with these students. The blame lay with us.

Since an art teacher was not on the middle school team, we compensated (over-compensated?) by utilizing Marianne Kerlavage's Millersville art students as our instructors. Emphasis here goes on the plural. What took nearly thirty art students to accomplish was now turned over to one music teacher. See the inequity? We underestimated both the volume of work and the amount of rehearsal time needed to produce fine pieces of music, and our poor planning translated into weak performances by the students. Sure, they could have done better, but, as we found earlier, placing blame does no good. Fixing the problem does. And next year, we assured ourselves, we'll fix the problem. If we can tap the resources of the art students, we must be able to find music students who would jump at the opportunity to gain some practical classroom experience. If we can find a way for Donna to work with the English class groups in the music room so we can keep the "music class" mind set...if we can refine the project...if we can polish our own music skills so we can better help the students with that aspect of the project...if...if...if...

Each day we learn a little more.

Tuesday, April 9 ~ And so we reached the home stretch - Task 4, the final individual presentation. Every task before this had been a group effort, a chance for each student either to shine or to hide, to lead the group or to sink into the shadows. There was no hiding now, as one by one, over four days, the students used their best talents to talk of the world, to sing their dreams, to draw their plans, to create the future. They dissolved toxic waste, dissipated air pollution, eradicated corrupt governments, dispelled crime, wiped out drugs, cured disease, and visualized a future in which they had a role as a problem-solver, a decision-maker, and a leader. And we watched each one, encouraged by their determination and heartened by the connections they were making to real life. They got it.

Tuesday, April 16 ~ The Final Debriefing. We assembled the team in the auditorium and brought Operation Keystone to a close. So what did you learn, we asked them. What did you think? Should we do this again next year? Be honest, we begged. You're not getting a grade for this. And honest they were. They told us it was tough, that it was hard work, that they had never before been asked to do things like this... and we'd better do it next year because next year's 8 Blue needs to learn the things they learned. They need to learn about the problems of the world, but, more than that, they need to learn to cooperate in a group, to solve problems by listening to the opinions of others, to be patient and

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understanding, and to be a good follower rather than a bad leader. One student voiced a shared sentiment : they wanted to do well on the project because they knew it meant a lot to us. They wanted us to be proud of them. They learned a great deal, too, beyond the research facts. They learned that they can communicate effectively through music, theater, and art, and that it actually can be cool to be artistic. They also learned that the world is in trouble, and if they can't solve the problems, our future is in jeopardy. And in a bold move for an eighth grader, one boy thanked us for doing Operation Keystone with the team because, as he put it, "these are the skills we'll need in real life."

The MU professors and students returned to campus, amazed at the accomplishments of the project. We assessed our roles in the simulation through journals and reflection papers. The art computer technology students worked in teams to develop computer presentation programs of what they had witnessed during their field experience at CV. The project had built many lasting bridges. Bridges that joined computer courses, computer technology, student teachers, and two university departments, and a team of eighth grade teachers with some very special middle school students.

So diligently they worked to build this creature. And now they were done. The countless hours, the soul searching, the questions, and the doubts were all put to peace as they opened the door to the cage. The shapeless mass that lay dormant on the laboratory table a year ago now had form, substance, and spirit. They had helped it examine its potential, explore new avenues of creativity, uncover new talents, and believe in itself. They hadn't performed any miracles. Teachers don't do that. They are just the catalysts who open new worlds to their students, who support them as they learn and grow, and who help them discover the talented person within. And when the project is complete and the year is over, they stand back and watch their charges move on, carrying with them the skills and knowledge they'll need to face their next challenges. And their teachers watch and hope for the best.

Mountain View Junior-Senior High School

Mountain View Junior-Senior High School's project is titled "Culture Shock—Welcome to the County Where You Live." This one-credit humanities course is offered to students in grades nine through twelve. These humanities students studied the art, culture, history, and life styles of Susquehanna County. Through field trips into community archives and through guest speakers, students found an appreciation of their rural environment and for the arts. The students' final project was a video tape tracing the development of the county from its early days to the present. Students also performed at an "Arts Alive" program which was a dance choreographed by the Scranton Ballet Company and danced by the company and the students.

Don't let the seeming simplicity of this program fool you; it is powerful and in the true spirit of curriculum integration happening under difficult circumstances.

" The students were overwhelmed by the prospect of having such control and responsibility. "

" Welcome to the county where you live"

" The students needed time to grow into their new roles and so did the teachers."

" Finally, and perhaps most profoundly, we noticed a change in student attitude toward the arts. "

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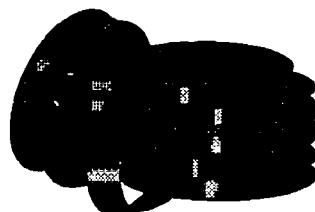
Peter Regeski
Storyteller's Report
Mountain View H.S., KIF Grant
June 29, 1996

"They don't really know what they're doing."

This was the way several of our students assessed our performance when interviewed by the videographer from Pennsylvania Department of Education (PDE) who had come to capture the essence of our experiment in integration. Initially mortified and indignant, we had to acknowledge that there was some truth in what they had said. This was not the course we had prepared last August in the Poconos. Some of our plans worked; others didn't.

Frequently, we weren't sure if our lessons were on the right track. Yet, our students were learning and achieving the nine basic goals we had established for them. They had developed a set of skills and knowledge which they were using to create a video on Susquehanna County and to produce a variety of other projects.

Our course is called *Culture Shock: Welcome to the County Where You Live.* It is an elective humanities course for students in grades 9-12. As a full credit course, it meets five days a week. It has a core staff of three teachers with two others who regularly come into the classroom to carry out activities and mentoring. Other members of the faculty are invited to work with the class when their expertise and schedules allow.

The focus of the course is the culture of Susquehanna County. Using a web model of integration developed by Dr. Susan Drake, the students and teachers developed a list of components that, when considered as a whole, would represent the county's way of life. The areas included history, geography and environment, government, business, art and architecture, literature, religion, tourism and social activities. A second intent is to provide the students with the skills and knowledge necessary to carry out their work. In addition to the areas on the web, we also taught and practiced research, written and oral communication, team work, the elements and principles of design as well as instruction in the use of a video camera and editing equipment.

"We're not used to learning this way and they're not used to teaching this way."

We intended, from our earliest planning, that Culture Shock would be a different learning experience for our students. They would become independent learners who would help determine the learning content and the pace at which activities would move. Each student would develop a personal performance plan (P-3) based on the nine goal areas. He/she would write objectives for a six week marking period, as well as the steps he/she would take to achieve them. Everyone's plan would reflect his/her own individual needs and levels of academic accomplishment. We would help to guide their progress and facilitate their learning.

Culture Shock was a most prophetic name. Some students broke into a panic at the thought of such responsibility. They were overwhelmed by the prospect of having such control and responsibility. Even periodic small group meetings with mentors did little to supplant these attitudes . Although we outlined possible strategies and suggested various avenues to accomplish the necessary goals, these students had great difficulty. Others saw this as the opportunity of a lifetime. Having control over this aspect of their learning, they planned to do as little as possible to get by.

We took action. Our P-3 form underwent several revisions, each giving more specific expectations and directions for the students. Eventually, we had to pull back. We gave students some assignments in which they would have a choice in selecting topics, methods of completion, etc. This worked. The students were more comfortable with the limits and those who had planned a laid back approach now had standards to meet. We gradually gave students more freedom and responsibility so that by the fourth marking period they were able to develop projects with minimal input from us. When they split into video production teams they were clearly in charge of the direction and pace of their work.

The students needed time to grow into their new roles and so did the teachers. We found that we too had carried attitudes and expectations from our prior experiences that were not going to work in this course. This course would require us to share planning, teaching and evaluation tasks. It was difficult to determine a division of labor. We started out by assigning each teacher a particular part of a lesson to plan. This proved to be a disjointed effort at best. We started to work together in class and, through practice, developed a style of teaching that worked. Training in team teaching techniques would have helped. But, by the middle of the year we had developed a system. It seemed as though one of us could finish a sentence started by another.

"There are so many teachers telling you so many different things."

The beginning of the year centered on developing skills. Students worked on written and oral communication and team building activities. We also introduced the research component of the course. Students were to identify an area of interest from the web diagram and use it to develop a topic for research. Each student would conduct research using a combination of primary and secondary resources and would finish the project by submitting a completed paper. Needless to say, there was a great deal of directions and teacher instruction during this early phase.

Complicating matters was the schedule we followed. We follow a six day cycle. On odd days, two teachers met with all the students. A third teacher was in the class on two of those odd days. Later that day, this third teacher met a second time with eight of the students as a small group. The other students met on the even days in the cycle with the other two teachers in their small group. There was a certain amount of confusion in knowing where we were all supposed to be until we had been through the cycle several times.

The real confusion emerged as students began to work on their writing and research. As teachers, we were all confident in our knowledge of the writing process and the steps to undertaking research. We were careful to plan instruction for large group days so that all students would receive the same directions from the same teacher. Yet in individual consultations as mentors for research or while simply monitoring students during a class, differences in interpretation arose that caused great consternation among the students. We found that we needed to be very clear and precise in what we said. We had to develop a shared concept of each assignment so that we could give students help that was consistent. Perhaps we were so used to being our own bosses that we assumed others did things exactly the way we did. It took a good deal of discussion and compromise and growth for us to get this aspect of our team effort in order.

There is always a second side to every issue. While the students complained that each teacher kept changing requirements, they also used the situation to their own advantage. They invoked one of the basic rules of teenagers, i.e., "If you don't like what Mom says, go ask Dad." If they didn't agree with something one of us said, they would check in with another teacher. They tried to manipulate the situation into extended deadlines, easier requirements or a changed assignment. We learned rather quickly the importance of clear, consistent communication among the faculty team members.

"This is stupid."

One of the most fascinating developments of the Culture Shock experiment in integration was the way some student attitudes changed during the course of the year. The more independent approach to learning and the increased responsibility gave students a broader base of experience which influenced their outlooks and judgment in some interesting ways. Not all change was profound. It wasn't always positive. Nor did every student grow at the same rate. Yet in the long run, we noticed a difference in the attitudes of most students regarding themselves, the way they learn and school in general.

The students in this class were in grades 9-12 and came from a wide variety of academic abilities and previous records of success. As it happened, most of the older more successful students were in the small group of eight that met on alternate days with one of the teachers. Their progress tended to be faster than the other eighteen who were mostly in ninth grade and less academically inclined. This grouping also reflected a lack of social connections that was reinforced by the separation of the students during their other courses. All of these factors created a feeling of *"Us" vs. "Them"* on large group instruction days. Even when we engaged in team building activities the separation persisted.

The event that started to bring the groups together was a stop at McDonald's on the first field trip to the county seat. During lunch, older students and younger ones started talking to each other. One senior commented, "This kid is funny. I never thought of him as a person before, just a freshman." From then on group activities lived up to their names--no matter the composition of the team.

Attitudes toward learning improved for some of the students. One student went from a daily litany of the stupidity of Culture Shock at the start of the year to chastising another student for not having a serious attitude about the class's work in May. Another, who had been quiet and reserved earlier, began to speak up when we broke into small groups. In some of her team's activities she even assumed the leadership role. One boy, who wanted to drop the class after the first six weeks because he felt overwhelmed, persevered and passed the course. He started to ask questions when he didn't understand, a behavior he had not exhibited regularly in the past. Culture Shock was not responsible for all of the growth exhibited by these students. Yet it did play a role in shaping these changes. The increased student choice in what would be studied and the increased responsibility, either through the P-3 forms or the Video Production Teams, made the students more aware of the ways they learn. They were more aware of their learning than they had been previously. The wide variety of topics and activities gave different students the opportunity to take the spotlight as resident expert. The teaming of students

also helped to get them to invest in each others' performance. Success for the individual was accepted as success for the team.

Finally, and perhaps most profoundly, we noticed a change in student attitude toward the arts. During the month of activities focusing on aesthetics student perceptions were clarified. Instead of seeing art as decoration, their discussions led them to discover they really valued it as a more integral part of life. Perhaps the best example of this is the week long workshop given by the Ballet Theatre of Scranton. When we announced they were coming assorted giggles broke out among some students. When we said the artists in residence would help them to prepare for a public performance, the room fell silent. By the second day of the workshop, students, especially the athletes, couldn't believe that we didn't have dance as a regular part of the curriculum. "Do you know how it affects balance and flexibility?," asked one wrestler. On the night of the performance, the investment of effort and pride couldn't have been more apparent. Our students were clearly expressing themselves in a way words could not. Later, when they attended a dress rehearsal of the ballet company's performance of Carmen, our students viewed the dance with a greater appreciation of what the artists were doing.

"You don't focus on one thing every day. There's a lot of stuff in and out."

One of the most appealing aspects of this course for most of the students was its wide variety of topics and activities. Throughout the year teacher instruction and lecture were kept to a minimum. Students used class time to write, research, discuss, plan, interview, videotape, etc. In addition to the three teachers assigned to the class, students worked with six other faculty members who provided a wider area of expertise and instruction for the students. Speakers from community organizations and local government provided first hand knowledge for the class. An artist in residence as well as a theater arts program provided experiences unavailable in our program of studies.

This continuous rotation of activities and instructors did more than just give variety. Information tended to be broken into smaller units which were easier for students to handle. The varied activities gave students numerous ways to demonstrate their knowledge. In addition to the more traditional tests and papers and oral reports, students were drawing, acting, dancing, editing, interviewing,etc.

The connection of their class work to the production of the video proved to be an important part of this course. Instead of researching to write a paper that only the teacher would see, they were preparing a work which would have a public viewing and would be sent to a variety of community organizations. This increased the students' attention to doing a thorough job and helped to motivate them to do their best.

For teachers, the implications were both positive and negative. There was much more scheduling and coordinating than any of us faced in our other courses. Planning also became more complex. We learned to have contingencies to deal with speaker delays and cancellations. We learned how to effectively review and support lessons taught by others. Yet, with all the varied activities, we developed a strong sense of shared responsibility. No one ever carried the full burden alone.

The variety also facilitated the incorporation of more alternate assessment. While we still gave tests and quizzes, they formed only a portion of the student's grade. Projects, presentations, performances made up the larger part of the evaluation techniques used.

"You see how everything is intertwined."

The concept of integration was difficult. During the summer training workshop we debated whether an activity or lesson was really demonstrating integration or simply co-curricular teaching. At one point we were so frustrated that we asked one of the visiting experts for a definition or at least a solid explanation of where we should be headed. Very politely, she told us what we needed most was experience and the issue would be clearer as we worked with it.

The need for time and experience marked our students' progress in discovering integration. We taught the web model early in the year and made reference to it throughout. However, the concept of integration didn't gel for them until they started to prepare the video outline, approximately day one hundred of the school calendar. In this brainstorming session they started to understand how everything they had researched fit together. They came to realize that they didn't have a true understanding of a topic until they knew its component parts and the relation of these components to each other. Susquehanna County did not just have a history, government, geography or art that were to be studied separately. To really know the county, they had to know how all of these topics related to one another to form the way of life in the county.

Students carried some of their new attitudes and new skills into other classrooms. When interviewed by one of the officials sent by PDE, several students remarked that Culture Shock was helping with their other subjects. They found it easier to remember some information or to organize their writing. One student remarked that he started to get a better idea of the ways things he was learning related to each other. Seeing these relationships made him more successful. Teachers also remarked on these changes. The librarian was able to identify Culture Shock students when they came to the library because of their facility and thoroughness in conducting research.

"We control more of what we do. It's more interesting that way."

While teachers didn't give up control of the class or its planning, students in Culture Shock did have a greater say over what they did. This control increased as the students got more involved in the production of the video. They were divided into five groups: scriptwriters, primary and secondary researchers, videographers, and editors. Each group was given responsibility over a certain area of production. The teams held regular meetings to plan strategies and delegate responsibilities. Students also used class time to carry out their work. This took some to the library while others reported to the shop classes to work on editing film and still others to a computer lab to write. While it was a bit of a nightmare keeping track of everyone, the increased independence gave them a sense of ownership over the work that wouldn't have occurred otherwise. They were willing to invest more of their time and effort into their assignments.

Students used class time to work on individual projects. These personal work days alternated with video production work and regular class instruction. While they gave the kids time to direct their own work, they also provided teachers with opportunities to monitor progress and offer suggestions. It allowed us to develop our role as facilitator rather than dispenser of information. Eventually, the students came to us as consultants. They didn't want us to tell them what to do; they wanted suggestions, input or a sounding board for ideas.

"If they don't like to work then they shouldn't be in here."

The issues of student independence and control over their learning led to a new set of obligations toward each other that the kids hadn't expected. As the Video Production Teams got deeper into the preparation of the final product, students realized how dependent their success was on the work of the others in the class. Toleration for persons not pulling their own weight became strained. Students were not shy about rectifying these errant behaviors. Sometimes, teachers found themselves acting as referees. While we hadn't expected it, the teaching of group processing skills became part of our curriculum.

"It's a lot of pressure. I hope we can pull it off."

Students were overwhelmed at several stages during the year. The research process was more involved than most had imagined. Yet, with various amounts of prodding, they persevered and completed the assignment. The development of the video caused a good deal of panic as well. As teachers, we thought that it was good for them to realize just how complex their task was. Mostly, they were able to work their own way through these crises. Sometimes, they weren't and they had to accept the consequences of failing to do what they were supposed to accomplish.

"Everything I've learned, I've remembered."

While an obvious overstatement, this student did retain a good deal of what she learned in this course. Other students reported similar conclusions. When asked why, they said because they made use of what they had learned. In one way or another their learning related to the county or to their discovery of the county. The connections of new information with old and one area of study with another helped students to keep ideas fresh. The repetition of themes and ideas helped them to retain what they had learned over a long period.

Another reason for such good retention according to the students was that field trips either helped to expand concepts they had studied or related to something studied in the class. The field trips added an element of reality that was missing from regular classroom instruction. Sometimes, the opportunity to see the artifacts enhances their understanding of the people who used them. The comments of a person who was being interviewed about his/her own possessions or activities made the past come to life. For example, the students were invited to tour the home of a 93 year old resident of Montrose. His house had been a local stop on the underground railroad. As they toured the house, they heard much more than facts about the pre-Civil War era. They heard many anecdotes about the man's own life and how things have changed since he was young. This personal contact made the lesson the high point of the course for a number of the students.

"It's a lot of work but, a lot of fun too."

While the teachers are still questioning the amount of fun they've had, they all concur that it was a worthwhile experience. It gave us and the students a new role in the learning process and it helped foster some new attitudes. Most of the students have a greater appreciation of their home and its place in the world. In August, most students would have denied that Susquehanna County had any culture at all. By year's end they were aware of its unique character and some of the contributions its people have made.

It has helped to foster closer relations between the school and members of the community. People have taken an interest in the project and regularly ask the students about their progress. Some residents and agencies have a better idea of the kinds of activities and learning taking place at Mountain View because of their contact with these students. As the students have developed a new pride in their county, the county has developed a better image of these students.

The real demonstration of the students' opinion of the course came in June. As teachers prepared to send the work to a video editor, we realized that files were missing from the computer disk and some of the film footage was not as focused as it should be. We called a number of students to come to school and help make up

the incomplete work. No one refused even though there would be no credit earned for their efforts. They came willingly and finished the script and the filming.

Mountain View Jr./Sr. High School is a small rural school located thirty miles north of Scranton in Kingsley, Pennsylvania. The school is located on the has 750 students in grades 7-12. The townships which make up the school district all have small populations of people who farm, own their own businesses or commute to jobs in the greater Scranton or greater Binghamton, NY areas.

Allentown School District (Louis E. Dieruff High School) and Kutztown University

"I'll never forget when I first saw Steve at camp and he gave me a stare that said: 'You're going to teach me what, Lady?   Drama?   I don't think so!' "
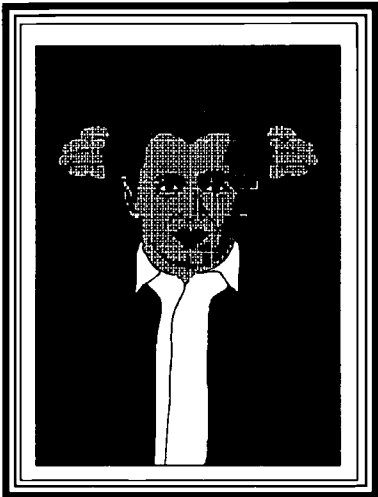
" *I am no longer a creative drama teacher, but have become an Ecodrama facilitator. The kids are taking charge of the destination of their final presentation.* "

Students in the Keystone Project at Dieruff High School began the 1995-96 school year with some skepticism. Uncertain as to the place of drama in their education, they soon found, however, that the "Ecodrama experiment gave them an opportunity to explore and assess what they had learned in a way unlike what they had been used to."

Environmental studies, astronomy, English, social studies, art, and creative drama were all integrated to create "Ecodrama." In the drama class students were challenged to share and demonstrate what had been learned in all other subjects. They discovered that the possibilities for expressing their knowledge were boundless. One important result was the emergence of student leaders. In addition, the creative drama classes provided an arena to try new things, take risks, and encourage students to use skills from all areas. These classes also provided a forum for students to focus their energy in a different way.

The Ecodrama students easily made the transition from the role of student to that of instructor as they presented their final demonstrations to elementary school students, and, in selected cases, to their classroom teachers and to students and professors from Kutztown University.

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What does an Environmental Studies Academy, an adventurous group of college professors and high school teachers, a drama consultant, and 24 unsuspecting students enrolled in the pilot year of the Academy all have in common? **The Ecodrama Project!**

Our story began in December of 1994. Unofficial word drifted into Allentown from Harrisburg suggesting that grants might be made available to teams who develop plans to integrate curriculum with a focus on the arts. What did we have to lose? We took our chances, and applied, and we got the grant! Our team was comprised of 3 professors from Kutztown, 5 teachers from Dieruff and me - the drama consultant. Then, shortly before we were to attend a week-long orientation, one professor had to drop out. A mad rush began to find a replacement, a new professor was found, and

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Dan Schaffer, 04:35 PM 12/18/94, Grant Application

To: Sandy Tenney <sandy10e@prolog.net>
From: dschaffer@dieruff.edu (Dan Schaffer)
Subject: Possible Grant for Science Academy!

Sandy,

Heard through the grapevine about a grant that might be perfect for the Academy. It must include arts within an integrated curriculum. Focus of grant is more humanities than science, but with your theatre background I think we should give it a try. I'll give you more info as soon as it's available.

Have a good holiday!
dan

Printed for sandy10e@prolog.net(Sandy Tenney)   1

J. McAdams, 02:35 PM 3/08/95, Grant Award!   1

To: S. Tenney <sandy10e@prolog.net>
From: McAdams@admin.edu (J.McAdams)
Subject: Keystone Grant

Sandy,

We just received notice of the Keystone Integrated Framework grant being awarded to the Dieruff-Kutztown team! I wanted to let you know since you wrote the grant.

John

P.S. Dan requested that you be the drama consultant on this project!

Printed for sandy10e@prolog.net(Sandy Tenney)   1

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we were finally ready to begin! The entire summer was filled with conflicting schedules for all of us and we were never able to get together as a team. Although at times during that summer we thought we would never meet, we finally began our adventure together in the registration line at Pocono Manor! The 6 members of our team from Allentown and the 3 professors from Kutztown stood in line at the hotel, not knowing that the group registering in the line next to them were actually their teammates! At last we were finally on the same schedule!

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The end of August, 1995: The Academy students attended a week-long camp in Dallas, Pennsylvania. **Wait a minute** . . . these kids don't know each other . . . . they are in a 9th grade pilot program for the Environmental Academy. **Wait *another* minute** . . . . Ecodrama is a pilot program too! A pilot program *within* a pilot program? And what is Ecodrama? No one, except our team, knows that *Ecodrama is the study of the environment through creative drama. Creative drama uses games and improvisations to create an environment where students use their imaginations to explore reality, make interdisciplinary connections, and develop creative ways to solve real-life problems.* The kids are not impressed by this addition to the Environmental Academy!! *We have our work cut out for us!*

School starts. We give the kids time to adjust to being 9th graders in high school for the first time. They also have to adjust to being in the pilot environmental program with the same classmates *all day.* We all know that they are guinea pigs! But then, so are we! Creative drama classes are not introduced yet, the kids are not ready. They are given the time needed to concentrate on their other disciplines and adjust to their new schedule in the Academy.

Kathy Dolgos, 11:46 PM 08/26/95   1

To: Kathy Dolgos <dolgos@kutztown.edu>
From: sandy10e@prolog.net (Sandy Tenney)
Subject: Yikes!!

Hi Kathy,

Wanted to write to you a.s.a.p. I just returned home from teaching the kids at the environmental camp in Dallas. The kids had no idea that they were going to be participating in Ecodrama. They had that confused look...they were all staring at me...I don't have to call the psychic hotline to know that they think this is a bad idea, a *really* bad idea. So...they didn't cooperate. They didn't want to participate in drama exercises. I could tell that they were wondering silently "what does this have to do with science?" Their parents were also in attendance. It was the kids' last day at camp. *No one* got what I was teaching except one lady who was teaching

Printed for sandy10e@prolog.net(Sandy Tenney)   1

Kathy Dolgos, 11:46 PM 08/26/95   2

another topic at the camp. I don't know, Kathy. I'm somewhat intimidated! They are all bigger than me! I feel like Sally Field *before* she won that famous academy award!

Anyway, that was my experience with the high school kids. Yesterday I taught KU students an intro to using creative drama in the classroom. As science majors, they didn't exactly understand why I was teaching them how to use creative drama, but at least they were welcoming and had fun while we were in class. There is hope yet!!

"Talk" with you soon!
I'm exhausted!
Sandy

Printed for sandy10e@prolog.net(Sandy Tenney)   2

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To: Sandy Tenney <sandy10e@prolog.net>
From: mwsweeney@theatre.edu
RE: Workshop, 10/24/95

Hi Sandy! - Just confirming our 'appearance' at Dieruff
for Tuesday October 24th. Our plans are to get into
town the night before and arrive at Dieruff around 9:00
a.m. We will present a workshop for your students and
then facilitate an improv session.

After we leave Dieruff, around 11:30, we will travel to
Kutztown for the 3:00 workshop for student teachers.

Where is a good place to stay in Allentown? Who will
be attending the Kutztown workshop?

Regards,
Maureen

Another taste of drama is provided!
The Keystone Drama Troupe visited Dieruff
and the students had a blast!. Most of the
boys interpreted an improv session as a time to
shoot 'guns' and play dead. But, in the middle
of the improv exercise, and what appeared to
be chaos to the traditional discipline teachers,
a story began to unfold. The students turned a
common, ordinary book into the setting for a
poignant scene right out of the jungles of Viet
Nam, 1971.

The book became a grenade, then a canteen, and finally a first aid kit for a "soldier" who
was "shot". The students, who were originally somewhat, well, *wild*, began to play out the story

unfolding before us, conveying a sense of
compassion and dignity. The students, or I should
say "soldiers", began to come together as a group
and work as a team. The stage was now set.

We needed to see if the Dieruff students
were ready for the introduction of Creative Drama
into their weekly schedule. Members of our team
observed classes during the following weeks to
assess whether or not to begin weekly drama
classes.

To: Kathy Dolgos <dolgos@kutztown.edu>
From: sandy10e@prolog.net (Sandy Tenney)
Subject: Workshops!

Hey Kathy!

        Just finished with all the loose ends I left at
my office while attending today's workshops at
Dieruff and Kutztown.
        The students at both places didn't seem to
have a 'clue' why they were participating in the
workshops, but they seemed to have fun. The high
school kids wanted to improv guns & killing. Are
we ready for this?

Have a good rest-of-the-week!
Sandy

To: sandy10e@prolog.net (Sandy Tenney)
From: Kathy Dolgos <dolgos@kutztown.edu>
Subject: How's the Ecodrama Coming Along?

Hello - Just checking in to see how the Ecodrama project is going. How far has the Dieruff team integrated? Are you teaching creative drama yet?

How is the article coming along that we are writing on assessment? As soon as your draft about using drama for assessment is done, send it to me so I can add my part of the article. Then we can meet for lunch to discuss revisions. O.k.?
How about coming out to KU for a 'grande tour'?

Kathy

Printed for sandy10e@prol

To: Kathy Dolgos <dolgos@kutztown.edu>
From: sandy10e@prolog.net (Sandy Tenney)
Subject: Drama, Assessment & Lunch!

Good evening!   I observed the kids yesterday and spoke with Danell. I have decided to wait until after the holiday break before I start teaching. The kids are just getting acclimated to being in the Academy.   My part of the article should be finished soon & lunch to discuss it would be wonderful!

Take care,
Sandy
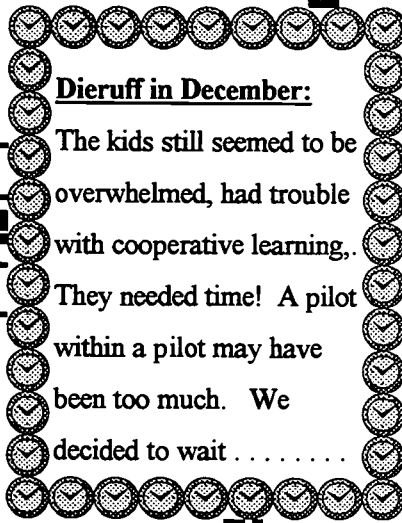
Printed for

Dieruff in December:

The kids still seemed to be overwhelmed, had trouble with cooperative learning,. They needed time! A pilot within a pilot may have been too much. We decided to wait . . . .

JANUARY '96
It snowed!...
and snowed!!...
and snowed!!!

1/10/96

Dolgos<kut
dy10e@prol

Subject: **Will this snow ever end?** ☹
Hello from the Dieruff Huskies*, home of the Ecodrama tundra!   We're really tired of all the snow, how about KU?

Keep warm!   Sandy

*Dieruff Huskies - Mascot & Names of Dieruff High School's Sports Teams

Printed for sandy10e@prolog.net (Sandy Tenney)					1

To:Kathy Dolgos
<dolgos@kutztown.edu>
From:sandy10e@prolog.net
(Sandy Tenney)
 Subject: Ecodrama!! Finally!!

Kathy - Well, this was it - the 1st official day of Ecodrama class! The kids have grown since August but they still seem skeptical. Have that same look of confusion, detachment, disinterest. It is pretty clear that they don't want me there, but I **WON'T GIVE UP!!!!!** Stubborn huh?
          Actually class wasn't bad. Explained why & what we are doing re: integration. We talked about the connection between drama and how it can be used to study the world around us, and how, through drama, we will assess what they have learned in their other disciplines about Native Americans. The kids are a little uneasy with the "freedom" they have been given in their Ecodrama classes - they are allowed to sit on desks, move around, and *call me by my first name!*   More to come later!!
Sandy

Printed for sandy10e@prolog.net (Sandy Tenney)					1

We finally went back to school in mid January. Maybe the snow was just what we needed? The students began to willingly participate, move around in class, and actually *seriously* respond to what was being taught. Students started to ask questions about the Keystone Integrated Framework Project. They wanted to know how the Ecodrama classes were part of what was going on throughout Pennsylvania. The students were kept informed every step of the way. Nothing was taken for granted. They became very curious!!

To:Kathy Dolgos <dolgos@kutztown.edu>
From:sandy10e@prolog.net (Sandy Tenney)
Subject: Incredible Day at Dieruff!!!

Kathy!

I wanted to email you right away. We just had an incredible Ecodrama class! The kids have been starting to grasp the Ecodrama idea and are beginning to transfer what they have learned in their other disciplines into their creative drama sessions. Anyway, today I brought Native American music into Dieruff so that the class could use the music to help them concentrate on their lesson. The students were told to close their eyes. I led them through a creative journey and told them to imagine that they were a Native American teenager having to leave his or her village. I had them imagine they were wandering far away, crossing plains and mountains. Then I told them to stop. They had to decide what to do next. Do they return to their village? Do they go to a new village? Why did each one of them have to leave? The students were then given time to think, and were told to act out their personal scenarios, at their desks, while their eyes were still closed.

Kathy, that's when I saw the class evolve from kids who were just taking another class to kids who were integrating what they had learned in other classes and using it in Ecodrama class! With their eyes closed, listening to the music, the students began to timidly and slowly act out what they were imagining. One of the students, Steve, was very dramatic in his interpretation. While the other students were moving about while sitting in their seats, Steve suddenly climbed onto his chair and then onto the lab table in front of him. (Class was being held in the science lab.) Steve stood up tall, faced the ceiling, and raised his arms high in the air. He then began to move his arms lower and around him and began to face the floor. Throughout what he was doing he was **very** serious. It was amazing to watch! After the lesson was finished, the students shared what their own personal journeys had been. Steve told us he imagined that he was a boy who had gone to the top of a waterfall to perform a ceremony required to be accepted as a brave who was entering

manhood. He told us of the waterfall below him and the great eagle above. He told about the peace he felt and how proud he was to be reaching a stepping stone of his life through his ceremony at the waterfall.

I can't tell you how amazing it was to watch him using creative drama in such a powerful way and then listen to him describe his experience! (I wish I had a camera with me!) I did see some of his classmates, who were not comfortable with the process and didn't close their eyes for the exercise, watching him in awe. He was oblivious to everyone around him and was truly focused on his own journey. Those classmates ceased being silly and concentrated on what Steve was doing.

The other students who fully participated in the journey told stories of going away to marry someone from another tribe, looking for a better place to set up camp because of changing weather, following the scent of a deer, and going to the river to wash their clothes.

This whole experience was incredible! The students showed me that they were listening and learning. They were demonstrating what they've learned in other classes. It became clear to everyone that Ecodrama class can be used as a window to assess what the students have learned!

Talk with you soon!
Sandy

The students selected the story of "The White Buffalo Calf Woman and the Sacred Pipe" from *Keepers of the Earth* by Joseph Bruchac as a base for their final presentation to evolve from. Everyone had a copy of the story which tells how the native people were taught to live in harmony with the earth and its inhabitants.

Beginning in February students took turns reading in front of their classmates. This enabled students to: 1) feel at home in front of an audience, and 2) have an opportunity to memorize the story during classtime, through reading and/or hearing. At first they had to be

persuaded to read, but quickly began to feel comfortable volunteering to be the next reader. A natural progression developed from my critiquing the students readings, to their critiquing of their classmates' readings. They were *helping* each other, not competing *against* each other. Their story was soon memorized and they began to research and explore creative drama games to determine which would best complement and reinforce the story's lesson for elementary students.

To:Kathy Dolgos <dolgos@kutztown.edu>
From:sandy10e@prolog.net (Sandy Tenney)
Subject: Mountainview Visit!!

Kathy!

Yes, I know, today is April Fools' Day, but this is not a joke! The Dieruff students did something that astounded all of us and let us know "the joke's on us!" It's unfortunate that you had to leave Dieruff before this happened. I won't hold you in suspense any longer and I'll tell you what happened.

Last Friday, the "Dans" told the students that our partner team from Mountainview and Wilkes would visit today to observe Ecodrama in action. They suggested that the students be prepared to show what Ecodrama is. The Dieruff students created a presentation that incorporated things they had learned in math, English, social studies, astronomy, science, and creative drama. The students asked to use the auditorium, and both the Mountainview and Dieruff teams watched the presentation together for the very first time.

Our mouths were open! Their presentation went far beyond showing Ecodrama in action. The students are amazing! They are getting it! They are truly **INTEGRATING**!!

Subject: Subject: Mountainview Visit!!

I'm so proud and pleased with the Dieruff students. What they presented was a story they had written about the Native Americans' tradition of respect and caring for the earth and all its inhabitants. The students were wonderful and very proud that they had demonstrated Ecodrama for our guests!

This was a definite demonstration that they are integrating what they have learned in all their disciplines through creative drama. Ecodrama is alive and well and living at Dieruff High School!!

The kids have come an incredibly long way from last summer. They are not only cooperative and enthusiastic, but they have actually created a presentation which pulls everything together to demonstrate what they have learned!!

I can't control my enthusiasm.!!! They explained what Ecodrama is and showed how drama games are used to demonstrate what they have learned in other disciplines!

I'm so proud of them, they were terrific!!

So far, so good. The next presentation they have to prepare for is the Environmental Fair on April 18th and 19th. They will be doing at least two presentations for elementary students who come to the Fair. They are a little nervous and not totally prepared, but after today's presentation, I don't think they will have any trouble pulling it together. They will be using the White Buffalo Calf Woman story for those presentations.

I'll call you soon. *Today was great!!*

Sandy

"Chairs for deer?"

"Rulers as tools?"

"A trash can for a drum?"

"No shoes or socks?"

"They call you *Sandy*?"

This is Ecodrama!!

To: Kathy Dolgos <dolgos@kutztown.edu>
From: sandy10e@prolog.net (Sandy Tenney)
Subject: Ecodrama Final Presentations

Hello Kathy!

Another milestone today for the Dieruff students! They have decided that, although they worked hard to establish rapport with Joseph Bruchac's story, they would rather take the presentation that is their own creation (the one they did for Mountainview & Wilkes) and use it for their final projects. I can't believe how they have taken ownership of this presentation. They have been making all kinds of plans to enhance the story and have been creating lessons to reinforce what they want to teach through the presentation. I am no longer a creative drama teacher, but have become an Ecodrama facilitator. The kids are taking charge of the destination of their final presentation.

When Grace, the KU students, and I went to NCCC to hear Joseph Bruchac speak we had the chance to talk with him after his presentation (wonderful experience!!). Anyway, he told us that a story should take on a life of its own after the storyteller knows it intimately and has told it many times. I think that is what has happened to the Dieruff students. They used Bruchac's story, told it many, many times, and have now created a story of their own that will grow with each telling.

These are really great kids! They are all working cooperatively and each one is participating in some way in the creation and planning of the final presentation. They have agreed that everyone has a part! Steve and Laura have really become the leaders of their class! Who would have thought? At first they were the least interested and as boyfriend and girlfriend, only interested in each other. Things have really changed! I'll let you know how tomorrow's Fair presentations work out.

Until then,
Sandy

P.S. I'll never forget when I first saw Steve at camp and he gave me a stare that said: *"You're going to teach me what, lady? Drama? I don't think so!"* Things sure have changed!

The Dieruff students worked hard to revise their final presentation in time for the Environmental Fair. Even though they had made revisions, they were able to use many of the same activities they had created for their original presentation.

Our students wanted to make sure that the elementary students really understood what they were being taught through the presentation.

The Environmental Fair arrived. It took what seemed like an eternity for our students to begin their presentation. What partly held them up was that they experienced minor cases of stagefright. There were at least 150 elementary school children and their teachers in attendance!

Finally Anne, the student narrator, began to tell their story of a Native

American village's search for food. The students created their own instruments and the whole story was emphasized by the beat of a drum that one student, Jerry, had carved out of a small log and stretched a deerskin across. The part of the presentation that took me by surprise was the students' face paintings. They had studied, on their own time, the different styles of face painting which Native Americans used. I found out, as soon as they walked on stage, what had taken them so long while getting ready backstage - they had meticulously painted each other's faces! I later found out something that amazed me even more - the boys in my class were the ones who had become the "experts" in applying the face paint! Only one of the girls helped and her input was minimal.

To: Kathy Dolgos <dolgos@kutztown.edu>
From: sandy10e@prolog.net (Sandy Tenney)
Subject: Ecodrama Final Presentations

Hi There -

The Environmental Fair was lots of fun. Exhibits at the Fair ranged from a composting booth to snakes, hawks & bunnies. The Lenni Lenape Museum also had an exhibit. It was all very interesting and the elementary school children who visited seemed to have an exciting time. (I wonder if it was the stand that sold candy that provided all their energy & enthusiasm?)

Well, the Ecodrama students pulled it off!! They gave one presentation to about 150 students and teachers, some from Allentown and some from Northern Lehigh School District. The younger children were mesmerized by the presentation. I think it may have been all the face painting that our students used. Wait until you see the video! These are definitely not the same kids who looked at me in August with that "who me? do drama? you've got to be kidding" look that I received when I first told them about the 'Ecodrama experience'!

They were a little bit nervous at first and then they pulled it off! I can't wait to look at the

video! At one point I could swear the whole Ecodrama experience clicked for the entire class. One minute they were doing their presentation, and the next they suddenly began explaining what Ecodrama is, how improv works, how drama can help them to understand what they are learning in all their subjects, and how they created the presentation to include a lot of the things that they wanted to share with the younger students through their presentation.

Next thing I knew, the Dieruff kids began pulling the audience members, students & teachers, out to the front of the auditorium to participate in creative drama exercises! It was wonderful. They have developed a spontaneous side that did not come out until today! The audience of kids & their teachers loved it. There were plenty of volunteers and our session even ran a little bit over the allotted time. The best drama activity the kids created was to create a human bowling alley, with the younger kids as the pins. The children were randomly picked from the audience and most of them didn't know each other. As the imaginary ball rolled down the 'alley' the pins waited, and then with perfect precision, all toppled as the 'ball' hit! It was so much fun to watch ! Later we had a critiquing session and our students were ecstatic over their day's success. Additionally, other teachers attending the Fair heard about the Ecodrama performance and we have been requested to do two performances tomorrow. The Ecodrama students are really excited. They had only partially planned their presentation and today's was really a trial run for them before they begin to visit the elementary school classes that have been scheduled.

So far, so good! I'll let you know how tomorrow turns out. **Next week we work on a rubric!** Bye! Sandy

Ecodrama classes became more and more exciting for all involved. The students began planning more fine-tuned activities to support their presentations that were given at three elementary schools in different areas of Allentown. Their first journey away from the high school was the result of an invitation for them to be presenters at an environmental, ecological, multi-cultural day called Mosser Woods Day.

Held at its namesake (Mosser Elementary School), Mosser Woods Day was an all day event for Mosser's students. Also in attendance were School District Administrators, the President of the Allentown Education Association, reporters, and the Mayor of Allentown!

The Dieruff students were a big hit with their elementary school students, had a great time, and have been invited to be presenters at next year's Mosser Woods Day !

Kathy Dolgos, 08:02 PM 5/3/96, Ecodrama   1

To: Kathy Dolgos <dolgos@kutztown.edu>
From: sandy10e@prolog.net (Sandy Tenney)
Subject: Ecodrama Final Presentations
Hi Kathy!

Today was our visit to Mosser School for Mosser Woods Day. What a morning! Our students especially liked the fact that they were fed both breakfast & lunch! I forgot how much food a 9th grader can eat!

They gave two presentations. Each one was different. During the first session our students worked on the drama exercises (mirrors, caterpillar game), taught Native American symbols, and helped the younger children (1st graders) make rattles. The activities went well, but the Dieruff students quickly learned how important time can be when teaching. They spent so much time on the activities that they didn't have time for their presentation.

We had 25 minutes between sessions, so we all sat on the floor and participated in a critiquing & planning time to work out the problems that they had encountered with the first group of children. It was decided that a consensus would be the best way to come to agreement so that all the Ecodrama students would feel as if the changes were ones each one of them wanted to make.

The second session went much better. The Dieruff students all pitched in and worked well together to make it work. The only problem they had during this session was finding out that you can quickly lose your audience if you give rattles to 1st graders!

Printed for sandy10e@prolog.net (Sandy Tenney)   1

Kathy Dolgos, 08:02 PM 5/3/96, Ecodrama   2

One of the highlights for the Dieruff students was observation by various visitors to Mosser Woods Day. The President of the Allentown Education Association stopped by to watch while the students were having their critiquing session. Then, during the second session, the Mayor of Allentown stopped by to observe. He was very interested in watching the Dieruff students teach what they had learned about Native Americans through drama. The Mayor is, himself, active in one of Allentown's theatre companies, so he was particularly interested in the Ecodrama "philosophy". He spent a lot of time observing my students, talking with me about the Ecodrama project, and circulating among all the students, both from Mosser and Dieruff, to get an idea of how the project was working and how the students feel about it.

The reaction of the Dieruff students after the Mayor left really surprised me. A lot of them knew that they had been talking to the Mayor, but some of them didn't know who he was. What surprised me was how excited the students became when everyone knew that they had been talking with the Mayor. Comments like "I can't wait to go home and tell my mom!" to "Wow, the Mayor stopped to watch us for a long time!" were what actually surprised me. I really thought they would be rather blasé, not really caring whether the Mayor was there or not. Well, I guess you can never second guess teenagers!

Talk with you soon,   Sandy

Printed for sandy10e@prolog.net (Sandy Tenney)   2

May 6 through May 10: Elementary Education students from Kutztown, who have

volunteered to student teach during the 1996-1997 school year in Allentown classrooms, attended a week-long inservice at Dieruff to learn about the Environmental Academy and the Ecodrama Project. Their first day was spent with Dieruff students at an EcoSummit held in the Poconos. During a day of non-stop, pouring rain they were "exposed" to the wetlands and learned how to use a canoe. The Kutztown students left the Poconos with dampened spirits and terrible colds. They hadn't really learned anything new. The day was a "wash" and left them questioning why they had become involved in the Ecodrama Project. The main problem was that neither Dieruff nor Kutztown had any control of the EcoSummit's quality of presentations. The rest of the week was geared to providing Ecodrama experiences at Dieruff for the Kutztown students.

Kathy Dolgos, 03:45 PM 5/10/96, Ecodrama   1

To: Kathy Dolgos <dolgos@kutztown.edu>
From: sandy10e@prolog.net (Sandy Tenney)
Subject: Ecodrama Final Presentations

Hi Kathy!

Just wanted to let you know that the rest of the week with the Kutztown students went well. Wasn't their skit about Monday's trip to the Poconos hysterical? I'm glad that we could give them an outlet to find humor in what probably was a discouraging day for most of them. I certainly hope their experiences this week at Dieruff made up for their day in the pouring rain!
        Dave's English/Shakespeare/drama class went really well. He gave the students (and myself) lots of great tips on how to use storytelling, language and games to stress what they want their students to learn. Dave's whole approach used creative dramatics to make his lessons fun, informative and interesting.
        I really enjoyed the integrated curriculum class that both you and Joe Elias taught using corn. The more the KU students are exposed to all of our methods, the better they seem to understand what the Ecodrama Project is all about. Later in the day we visited the Planetarium while Gary was teaching a group of third graders from Central Elementary. Again, the KU students saw how Gary included the students and used creative dramatics in his presentation.
        Today, Friday, we (the KU students, Grace and myself) traveled with the videographer from the Keystone Project to Muhlenberg Elementary where the Dieruff students taught two multiage classes, both made up of 2nd and 3rd graders. It was fun to watch the Dieruff students completely take control and teach not only the elementary students, but their teachers and us "visitors" as well. Earlier in the day the Dieruff students also 'took over' a class I was teaching and insisted on teaching the KU students about improvisation. They became the teachers and the KU students and I became their students. I do believe we have truly reached the goals of our project!
        Take care, talk with you soon! Let me know what the feedback on the past week is from everyone at KU!
        Sandy

Printed for sandy10e@prolog.net (Sandy Tenney)   1

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To: Kathy Dolgos <dolgos@kutztown.edu>
From: sandy10e@prolog.net (Sandy Tenney)
Subject: Ecodrama Final Presentations

HELLO, HELLO!!

Well, I can't believe our project is done for this school year! Tuesday was the final Ecodrama presentation by the Dieruff students in a Jefferson Elementary 4th grade class. A reporter and photographer from The Morning Call came to observe and talk with both the elementary and high school students and their teachers. Check this morning's paper for the article and photo .

My final class with the students was this morning. We spent our time assessing the Ecodrama Project according to the rubric the students helped create a few months ago. I'm so proud of them. These students approached their creative drama classes with trepidation in the beginning. They have since shown enthusiasm and confidence when teaching others what they have learned. A party is being planned to celebrate their accomplishments .

Creative drama in the education of these Environmental Academy students has helped to make their curriculum come to life, interesting and fun. All of the students have shown me that they have the desire to learn and show others what they have learned. All of them have expressed interest in continuing with creative drama in collaboration with their other studies. All of them played an active role in their final presentations, including the one boy who is an ESOL student from Mexico. Even with his limited command of the English language he was able to not only understand but also collaborate and participate in the presentations. Creative drama not only gave the students a creative outlet to explore what they had learned in their other disciplines, but also provided the opportunity for communication where there was a language barrier!

The partnership between Kutztown and Dieruff has been rewarding for both teachers and students. Here's to a long lasting relationship!

ECODRAMA LIVES!!!

Sandy

And so, the long journey that brought us from Allentown to Kutztown to Pocono Manor and back is now complete and Our goals have been met:

1. *Disciplines have been integrated.*

2. *Assessments of what the students learned, and deemed important, from those disciplines have been achieved through their creative drama final presentations.*

3. *Collegial relationships were begun and have been strengthened.*

4. *Students have bonded and discovered that what they learn in one subject can be related to what is learned in another.*

5. *The Kutztown students have learned that creative drama helps to bring their lesson plans alive and make them more tangible for their students.*

6. *The high school students learned that they can also be effective teachers.*

7. *And, last but not least, our students no longer feel like guinea pigs because they have become comfortable using creative drama during class and as a way to express to others what they have learned!*

The Ecodrama Project was a success

" The project director wants us to respond to some questions about the project—pizza is on the way—let's see how we can . . . ."

" *Has any one looked at the map? We're somewhere in Philadelphia, but I think we're lost.* "

Clarion Elementary School and Clarion University of Pennsylvania
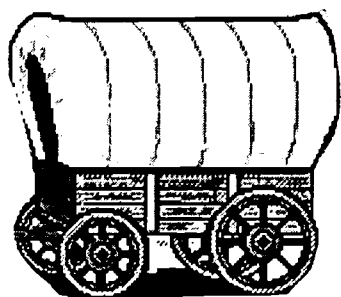
Clarion Elementary School's Keystone Project has been implemented in grades three through eight as part of the social studies curriculum. However, true to the principles of curriculum integration, the specific subject areas in the project include the visual arts, music, health, language arts, social studies and science technology. Working with the four team members from Clarion University, the six team members from the elementary school, representing each of the grades in the project, chose an area of the basic social studies curriculum to develop and expand.

Each grade selected literature around which to develop a unit on whole language; the following list summarizes specific examples from each grade level:

Third Grade—Students read *Town Mouse, Country Mouse* and established an exchange of culture kits, videos, and photos with their exchange school. They also reenacted historical scenes from pioneer times, and one parent constructed a full-size covered wagon for the students' use.

Fourth Grade—In a Pennsylvania historical unit , students made pouches in art class, conducted scientific experiments with yeast and starter, kept class journals, made their own slides, and did a mapping and timeline of Pennsylvania.

Fifth Grade—In a Native American unit, students reenacted the Lewis and Clark expedition, writing journals from the perspective of the Sacagawea Indians and welcomed native visitors. In the Civil War unit they simulated a newspaper and incorporated the science of light and sound through the work of Matthew Brady.

Sixth Grade—In disparate units on Canada and Peru, students concentrated on various art-related activities including the construction of a totem pole and an interactive slide presentation.

Seventh and Eighth Grades—Students designed alphabet books and songs based on historical events; they used these materials to tutor fourth graders who also study the same historical period.

The Keystone Integrated Framework: A Fishing Story
by Sandy McKee

At "forty something", I think I am at an ideal age for being a teacher. I have twenty-five years of experience---failures, successes, battle scars and optimism blended with a bit of cynicism. I'm not close enough or rich enough to be planning any retirement parties in the near future. And most importantly, I still love teaching and learning. I still think I can always do a better job than the year before. It's May now, and I am usually exhausted, weary of any kind of "school talk", and anxious to grab my fishing gear, suntan lotion and head for a calm river, lake or stream. This year I'm not quite as tired, in fact I'm excited and renewed and anxious to share our experience with integrated instruction. I've been party to many reform efforts over the years and most have been pretty disappointing, but this one was different. People really came together, collaborated, changed the way things were done and felt good about it. So before I get out the rod and reel, I'd like to share some glimpses into our year. The characters are composites of the participants. I hope that you'll understand and appreciate some of the fishing metaphors.

Act I: Dangling the Worm
Scene I: January 1995, a hallway in the Education Department at Clarion university.

Prof #1--Hi, how was your break? Say did you see the RFP from the state for integrated Language Arts and Social Studies instruction? It sounds like what we're already doing with our methods classes. This could help us obtain some resources plus hook us in with some schools.

Prof #2--That sounds great! Our students have developed some outstanding literature- based thematic units, but they seldom get to use them in the schools. I'll bet Clarion schools would work with us. They have a great principal and some teachers very interested in integration. I'll give them a call.

Prof #1--O.K. Let's meet and see what we can come up with. My only concern is that everything be made voluntary. I don't want to force any university or public school teachers to participate. Top-down reform never seems to work well.

Scene 2: April 1995, a dinner meeting at the Holiday Inn with university and public school faculty.

Prof #1--Welcome! We are here to get better acquainted and launch an exciting project. You've all received copies of the grant proposal--- essentially we are going to try to develop and implement a model integrated language arts, social studies and arts curriculum for grades 3- 8. To do that, we'll have training, materials and various incentives. As far as I know, there are many ways to successfully integrate curriculum. We are pioneers, and it is important that you make choices based upon what is best for you and your students. We've been refining a model at the university and training our preservice teachers to use it. Hopefully units they've already completed and placement of especially strong student teachers in your classrooms will be helpful.

Prof #2--We need to make plans for our summer workshop set for June. What will most help you to be able to develop and implement integrated curriculum? What kind of training, materials and resources seem valuable? On what topics would you like to see university students develop additional units and culture kits and historical trunks? Are there places we should visit? people we should invite?

Teacher #1--Maybe we should collaborate and develop a unit together.

Teacher #2--I'd like to learn more about the use of hypercard and multimedia.

Prof #3--What about multicultural aspects of the curriculum?

Teacher#3--How do we assess these units? How do we communicate the changes to parents?

Dept. Chair--Do we need school board approval?

Teacher#4--How do we find time to do this with everything else we have to do?

Teacher #5--I'd really like to learn more about creative drama and storytelling.
Principal--This is great. I'll support you in everyway that I can.

ACT II Getting Hooked

Scene 1--June 1995-one week workshop at elementary school

Prof #1--This has been one busy but productive week! Along with all your suggestions, we've also learned about multiple intelligence, the writing process, journaling, new reading strategies, teaching with artifacts, and infusing more arts into the curriculum. It's been fun too. Start thinking about tradebooks and materials you'd like to order. Enjoy your summer. See you in the Pocanos. We'll refine our ideas there.

Teacher #3--This has been fun. We've learned so much from each other. Educators seldom get a time like this to share ideas and learn new things in an informal setting. I can't wait to try out some of these strategies come fall.

Prof #3-I think we also gained a lot of insights into the realities of each other's work. We need to do more of this. The teachers we all train will benefit from closer collaboration.

ACT III Tangled Lines

Scene 1--early Oct. 1995--meeting at elementary school

Prof #1--Well how is it going? We're over a month into the school year.

Teacher#1--It is so hectic. I'd like to have you and someone else from the university spend some time in my class and suggest how we can fit these ideas in?

Teacher #2--I've been waiting for the books since July. It's holding things up.

Student Teacher #1--What exactly are we supposed to do? Do we teach the unit we developed in methods or do a new one? Are we to make up the unit or is the teacher to do it?

Teacher #3--I am so far behind already.

Teacher #4--I had a parent question why we weren't using the social studies and spelling texts.

Teacher #5--Am I going to have early field and block students at the same time?

Prof #3--Who's supervising the student teachers?   Shouldn't it be someone who is familiar with the project?

Prof #2--We have a lot of new professors this year.   We met with them in August to explain the project, but some don't seem to get it.

Principal--I think we just have to be patient.   I've heard a lot of positive remarks.   We'll work the bugs out.

Prof #1--Maybe we should meet more often............

Act IV   Nibbles

Scene I--Jan. 1996, meeting at elementary school

Prof #1--The project director wants us to respond to some questions about the project....Pizza is on the way....Let's see how we're doing in terms of our Guiding Principles.   Does your content transcend subject-specific isolated facts?

Teacher #3-In our Ben Franklin unit, we learned to dance the minuet, write a newspaper and be inventors.

Prof #1--Are you encouraging critical thinking and problem solving?

Teacher #4-In our Canada unit, students did character report cards on the characters in HATCHET and had to support their grades with evidence.

Teacher #2-In our explorers unit, students drew comparisons betwen past and present-day explorers.

Prof #3--The units that our students developed this semester really reflect multiple ways of learning.   Do you see that in your student teachers too?

Teacher #1--Oh yes. They've incorporated cross grade tutoring, integration of dance and music, use of CD Roms, E-mail and cooperative learning.

Prof #1--Does anyone encourage a multiple perspective approach? creativity?

Teacher #4--In our Native American unit, we kept a journal recording how events in the Lewis and Clark expedition would be viewed through the eyes of Sacajewea.

Teacher #3--In the Canada unit, we developed billboards and travel brochures on provinces and territories. They also developed personal totem poles.

Prof #1--Are you using a variety of assessment strategies?

Teacher #4--Along with tests, we've developed rubrics for various content and creative projects. My students did alphabet books and songs on different countries.

Prof #4--The units have some excellent performance tasks, thanks to that new educational evaluation professor we hired.

Prof #1-Does the learning connect to life experiences outside the classroom?

Teacher #2--Most units begin with KWLs where student say what they know and want to know about the topic. In our explorers unit, students got to explore something that interests them.

Teacher #3-With Franklin, students shared their experiences with electricity and Philadelphia.

Prof #1--How are you addressing the varied needs and abilities of students?

Teacher #2--They have a choice in projects, different media and cooperative groups are used and many books on the same topic but at different reading levels are shared. We also use paired reading and other inclusive strategies.

Prof#1--Almost finished--Have you allowed for outside participation from the community and so on?

Teacher #2--We've had help from the art, music and technology teachers, professors from the university, Native Americans, and parents.

Prof #1--Great! Keep up the good work.

Act V   Catch and Release

Scene--a state-owned station wagon in April 1996 --team members are crowded in enroute to an exchange visit with their Philadelphia partner school.

Prof #1--This has been quite a year. I am in awe of what you have all accomplished with the project.

Teacher #4--It's been fun and renewing albeit a lot of work.

Teacher #3--The student teachers and early field students were very good and helpful.

Prof #3--I love how the eighth graders shared their Pennsylvania Alphabet books with the fourth graders.

Teacher #2--Yes, the fourth graders saw the eighth graders as authors. That really boosted the self esteem of those junior high students.

Teacher #5--Students really went all out on those books. Really average and struggling kids did magnificent work. I shared it with parents and teachers. I was so proud!

Prof #1--Isn't it fantastic that you've established a link with the third grade at Beiche-Martin? I hear you've exchanged culture kits, videos, letters, photos and now teachers! What a way to learn to distinguish rural from urban.

Teacher #1--The parents love it too. The support has been phenomenal. We had the father who built us a full scale Connestoga Wagon and parents made pioneer costumes. We had over sixty eight bonnets!

Teacher #4--I think the integrated approach is really superior. When I taught Canada, two sections used the more traditional text-approach, while the other used the literature-based approach. Their enthusiasm and depth of understanding as measured by my observations and their projects and exams were much greater.

Teacher #1--Parents liked it too. While they didn't know the term "integrated," one said they liked the way learning was all "mixed" together.

Teacher #5--That's like one of my students who asked me what to put on the heading of his paper. We used to put English, Science , Social Studies and so on. After a minute, he said, "I guess we should just put 'learning',"

Teacher #4--I had a parent come to pick up her son. He didn't want to leave because we were taking a test. When the parent asked what kind of test it was, he looked puzzled. "Well it's kinda of many subjects combined," he responded.

Teacher #2--It's so much better to teach spelling from books we are reading than from a list of spelling words that relate to nothing we're doing.

Teacher#3--I think my students learned that you could read a book about history and really enjoy it.

Teacher #4--My students insisted on reading the sequel to the core book that we read.

Teacher #1--The depth of the student's knowledge was so much greater when they had numerous resources to draw from. They really saw the connections between the disciplines. One of my girls compared it to putting a quilt together.

Prof #1--Do you think this kind of teaching is for everyone?

Teacher #2--Probably not. It takes a lot of time the first time through. We're all anxious to do these units again. They should go much smoother.

Teacher #5--I think you have to be able to deal with uncertainty. You do a lot of "winging it" and use a lot of creativity in teaching this way. You have to be willing to trust the students more. They take on much more responsibility for their own learning.

Teacher #3--I think it's a lot easier to integrate if you have a lot of teaching experience and know what content and skills are taught at a particular grade level.

Prof #2--I think so too. Our students are weak in that area. These units have really screened out some weak and unmotivated students. They take a lot of hard work and commitment. On the other hand, students are so proud of them when they are finished, they take them to job interviews and include them in their portfolios. One young woman actually got two job offers as a result of her integrated unit. I had displayed some on the Holocaust. At the job fair, two school district representatives asked me who developed this one unit. She was thrilled when they sought her out.

Prof#1--Has anyone looked at the map? We're somewhere in Philadelphia, but I think we're lost. Would someone look at the map?

Afterward--We finally found our hotel and had a wonderful time in Philadelphia. We shared our experiences and learned a lot about urban education. The school year is winding down, my fishing gear beckons me to relax and reflect. It has been a good year. Now, we can hopefully share our "fillets" with other interested teachers. Elaine Preston, a poet, says a "a 'fillet' in the dictionary is defined as a strip or a compact piece of meat." She says " it applies to poetry too....it is a strip of experience, a potentially delicious surprise lured from the subconscious where bits of our experiences and fantasies swim freely around. Once caught, the choicest ones can be trimmed and appropriately spiced for the reader's consumption." At this point, I not sure if I'm writing about poetry, the Keystone Project or fishing. Iguess I'll let the reader decide.

" *This is no ordinary train. It is sh.*

" The KIF Express has been critical to the
transformation of the school from a traditional d
based/department-based/subject-centered school
one that is a child-centered/theme-based organiz:

Abington School District and Beaver College

Abington Junior High School is collaborating i
long-range plan to transform the manner in wh
grade seven students are grouped and instructed
The plan has fostered a change from the traditi
subject-centered, seven-period day to one whic
serves students grouped into neighborhood clt
and taught through integrated curriculum units.
The 1995-96 academic year was devoted to plan-
ning. During the 1996-97 academic year, partial
implementation of the plan will occur with
provision being made to field test selected integrated units.

Beaver College has designed a "megacourse" structure for pre-service teachers that
will replace the subject-segregated methods courses which are a traditional mainstay of
a teacher-preparatory course of study. These megacourses will focus upon key educa-
tional and critical thinking processes and will serve to integrate the teaching of meth-
ods, skills, and concepts which heretofore were taught in isolation as separate subjects.

Abington Junior High School will give priority to the placement of Beaver College
student teachers. In addition, provision will be made for student practicums at the
junior high school as part of the megacourse requirements and in advance of the
student teaching experience.

Future plans call for the evolution of the project at the grade seven level with
continuing innovation in curriculum and instruction. Extension of the project to grade
eight is also under consideration, to be pursued after major building renovation and
construction is completed at the junior high school.

"THE KIFP EXPRESS," GET ON BOARD
OUR KEYSTONE STORY
Abington School District/Beaver College Partnership
Keystone Integrated Framework Project

The KIFP Express: The Project Summary

A train arrives at the station. It is not a scheduled stop. It is no ordinary train. The train is shiny and is pulled by a powerful engine. The train is named the KIFP Express. There is no engineer or conductor apparent to those who are waiting at the station. Everyone takes notice but most dismiss the train after their initial curiosity is satisfied because it is not their usual train on the usual schedule. A few folks do get on board and the train. It leaves the station with the new passengers on board. These few brave passengers soon discover from those already on board that their original tickets and preplanned routes do not apply on the KIFP Express. This does not alarm them because they also learn that they are not at the mercy of a schedule and timetable preordained by others. They learn that the passengers are in control of the KIFP Express. They are the engineers and they are the conductors of this consensus driven train.

These initial passengers seize the opportunity presented to them and shape an itinerary that will benefit all of them. They herald the plan to the commuters on the loading platform as the train pulls into the next station. More passengers, intrigued by the power and enthusiasm of the riders, come on board. The club car hums with the lively discussions taking place among the passengers. The excitement of exploration, new ideas, new destinations, and itineraries fills the train. The possibilities are imagined and new directions charted. The train moves under the guidance of the passengers within the train's cars. As new passengers board, the train embarks on the exciting journey. The KIFP Express continues on its exciting journey.

The Train Arrives: Project Antecedents and Setting

The decision to apply for a grant from the Keystone Integrated Framework Project followed attendance at the KIFP orientation workshop held in Harrisburg in January, 1995. The district sought a partnership with Beaver College based upon Beaver's effort to restructure its preservice teaching program, its geographic proximity to the school district, and the significant number of student teacher placements of Beaver students in Abington schools. A history of cooperation in a program designed to bring preservice Beaver students into selected elementary schools for instruction in the teaching of reading preexisted and demonstrated a record of cooperation and collaboration to benefit both Abington and Beaver students. An overture to Beaver College resulted in an agreement to form a partnership in the formulation of a KIFP proposal.

An existing circumstance at the Abington Junior High School also provided incentive for making application for a Keystone grant. Two teachers were interested

in "team teaching" in 1994-1995. They developed and implemented an English/Social Studies (geography) Project based upon the novel, *Treasure Island*. They "piloted" the unit with students enrolled in a seventh grade honors section that they both had been assigned to teach. They had received administrative support for the initiative. The unit was taught in the autumn and met with success which was attested by students, parents, and colleagues. The acclaim and interest in this initiative suggested that there was support for continuing and expanding this approach to education.

Another circumstance that preexisted at the Abington Junior High School was the plan for building expansion and renovation. The architect was guided by administrative direction to design additions and redesign existing space to reduce student traffic in the hallways and transform a school climate that was imposing to the typical early adolescent. Redesigning the school into "neighborhoods" was conceived as a means to remake the state's largest non-urban junior high into a school on a more "human" and personal scale.

The commitment of Marsha Britton, Beaver College Supervisor of Student Teaching, and Sheldon Erwine, Principal of the Abington Junior High School, provided the support necessary for the Abington School District Curriculum Office to develop and submit a KIFP grant application.

Destinations and Station Stops: Project Goals and Objectives:

The project goals and objectives which were included in the original application were based upon these preexisting antecedents. The expansion of the partnership with Beaver College and the development of integrated curriculum units constituted the core goals. The objectives were to be achieved through the development of a "pilot" program with a few teachers and students. The original "destination" or scope of the effort was relatively modest. It was conceived as an incremental approach to integration that built upon the success experienced by one pair of teachers. The goal was to initiate a venture which would involve a few additional teams of teachers. The strategy for change was linked to establishing a KIFP initiative and expanding the effort after the grant supported project "proved" successful. The participants in the development of these original goals and objectives included three individuals: the Abington Junior High School Principal, Beaver's Supervisor of Student Teaching, and Abington's Director of Curriculum.

These goals and objectives were viewed as a means to address the challenges which lay ahead for the Abington Junior High School. The Keystone application was viewed as a vehicle to help pave the way for a multiyear transition in the expansion of the physical plant and the creation of "neighborhoods" of students and teachers.

New Destinations and New Horizons: The Action Plans of August '95:

The Action Plans were the product of the Keystone Summer Institute in August of 1995. The participants on the Abington/Beaver Team were recruited by the building principal. The individuals recruited were willing to board the train and commit to attendance at the week long Summer Institute. They were also willing to participate in a subsequent KIFP "pilot" to explore the prospect of working as teams to develop and teach integrated curriculum with the support of Beaver student

teachers.

The Action Plans were predicated upon an expanded interpretation of the original goals and objectives. The commitment to the core goals was affirmed but the scope of the project was expanded. New horizons were envisioned and a different destination for the train was formulated. The Action Plans developed anticipated a "pilot" concept that would lead to the establishment of a mutidisciplinary team of teachers to "model" the neighborhood approach to grouping approximately 125 seventh grade students and using integrated curriculum projects as part of the course of instruction. The "model" neighborhood would proceed as a "pilot" and coexist with the traditional program that was to remain in place for the remainder of the seventh grade class. The "model" would be staffed by teachers who volunteered to participate and include students whose parents opted to have them included in the "pilot."

The Action Plans were further predicated upon implementation of the "model" in the 1996 - 1997 school year. The Action Plans produced were aimed at establishing a process to develop the "model" and prepare for its implementation. The grant funds were to be used to underwrite the activities associated with the Action Plans. The review of individual Action Plans is provided in the Program Implementation section of this Evaluation Report. The train was now traveling on a new track.

More Passengers Board the Train: Staff Subscribe to the Program

A volunteer/recruitment modality was used exclusively in the assignment of staff to the Keystone Project. This approach was established with the recruitment of the five individuals who attended the Keystone Summer Institute. The process was employed as the project grew and expanded beyond its original scope. The expanded project led to the recruitment of staff for two Keystone/Neighborhood teams. The potential candidates for these teams were identified by the building administration and an invitation to participate was extended. Two full multidisciplinary teams were created with representation from the "core" subjects of English, mathematics, social studies, and science with additional support of representatives from art, music, reading, foreign language, technology education, family and consumer sciences, and physical education.

As the project continued to expand to its present scope, four teams were established through an open application process. A general presentation on the expanded project was made to the entire teaching staff at the junior high school during a general faculty meeting. The meeting was followed by the distribution of application forms to every staff member on the following day. Teachers were given an extended period of time to make application for participation during the month of March. Because the structure of the neighborhoods is "horizontal" the applicants understood that participation in the project would result in an exclusive assignment to grade seven students. The applications were reviewed by the administrative team and four neighborhood teams were established. The building administration made the individual assignments to neighborhood teams to ensure that staff balance and diversity of staff were represented on each team. The number of applications received was slightly more than number of available positions. Some staff were

assigned to more than one team as in the case of the art teachers and guidance staff. It is important to note that the four members of the Beaver College academic staff made a commitment to be assigned to each of the neighborhood teams.

Seating in the Club Car: Project Management:
The management of the Keystone Project has been a collaborative effort that has involved the Director of Curriculum, Principal, Assistant Principal, Department Chair for English, and teachers. The Supervisor for Student Teaching at Beaver College has been a liaison with the school district and has established a parallel "team" at the college of the four professors who are assigned to the teacher preparation program. The teachers of the four "core" subjects coordinated the work for each team and took a lead role in the development of the integrated units. There has been no provision made for designation of team leaders for each Keystone/Neighborhood team. The project is still in a development phase and a broad based participatory approach has been used to plan and structure the Neighborhoods and design the integrated curriculum. Several of the work products in the appendix represent milestones in this process. The expansion and evolution of the project as the process proceeded are a result of the participatory approach to decisions in the enterprise.

Two day-long meetings of interdisciplinary teams were held in November. These meetings provided staff with the opportunity to identify the key issues or concerns which needed to be addressed in the creation of teams and the development of integrated approaches to curriculum. The input at these sessions was transcribed and presented as a written progress report to the entire faculty of the junior high school at a general faculty meeting. The principal established four study teams organized around each of the four major categories of investigation. Sixty staff members volunteered for participation on these teams which met periodically during the months of January and February to study the issues and make recommendations for the project based upon the study. A representative from each study team was chosen and met in a day long writing session coordinated by Jane Emely-Roach. A report was produced that synthesized the major findings and recommendations and was distributed to all staff at the junior high school. The report was addressed at a general faculty meeting in March and invitations to apply for the project proceeded.

More Riders, More Destinations: The Project Expands
The Keystone/Neighborhood teams which have been established have continued to work on a collaborative basis. Within the general formulated guidelines, each team was provided several opportunities with substitute release days to begin the process of planning and mapping their integrated units. Each Keystone/Neighborhood team has taken the responsibility for development of one integrated unit. The individual lesson plans are being developed by teachers as a "summer curriculum project." The integrated units will be published in draft form and each team will "pilot" the unit created during the first marking period. The units will be revised on the basis of the pilot experience and then rotated to another neighborhood for implementation. The goal of each Keystone/Neighborhood team

is to use each of the four integrated units during the course of the 1996-1997 academic year. The entire year is being viewed as a "development" year with final revision and publication of the units scheduled for summer of 1997.

Schedules, Delays, Rerouting: Necessities Drive Variation
The scheduling team responsible for assigning students to the four neighborhoods was chaired by John Worthington, the Assistant Principal assigned to the incoming grade seven class. Attempts to place the students by their foreign language into neighborhoods proved unworkable. Other alternatives were tried until the assignment to the music program proved workable. Student assignment to a neighborhood became based on whether the student was enrolled in orchestra, band, chorus, or did not select music. Difficulties arose with the assignment of some students in selected courses for math and science. As a result, a handful of students were not able to be assigned all of their course work on an exclusive basis in one neighborhood. This reality created a challenge with which the entire seventh grade team wrestled during a meeting in August of 1996. A new track was chosen. Two units would be taught in the second marking period on a team by team basis. Another unit, the "Atomic World" would be taught in all neighborhoods to all grade seven students during the third marking period. Neighborhoods would be free to pursue one of the remaining units in the fourth marking period. The train is picking up steam and rolling onward.

Looking Down the Track: The Days Ahead
The integrated units of instruction will be introduced after October 1996. The work on the units reflect the promise that the year holds for grade seven students. The project will have direct impact upon 550 students in the 1996 - 1997 school year with a staff organized into teams and committed to making the project a success. The current plan is to build upon this year's KIFP project and to extend the program to grade eight. This will result in 1100 Abington students and scores of Beaver students becoming involved on an annual basis with Keystone/Neighborhood for many years.
The Keystone Integrated Framework Project, the KIFP Express, has been critical to key the transformation of the Abington Junior High School from a traditional discipline-based/department-based/subject-centered school toward one that is a child-centered/theme-based organization. The work is on-going and the results are far from secure, but Keystone has put into motion a force that will sustain innovation. There have been many individuals who have gotten on the train at different points of the journey. The journey has been impacted by those who have come on board. The project expanded well beyond its original intent with plans to transform the entire grade seven into a neighborhood organization with integrated units of study in 1996 - 1997 and the entire grade 8 level into the same pattern within two to three years. Renovations and additions to the building will aid and abet this pattern of organization with the philosophy, program and building architecture in synchronization by year four.
An indication that the train is on the "right" track is the significance and the success of the Keystone/Neighborhood project as reflected in recent events which

have occurred in the school district. The Abington Junior High School Principal, Sheldon Erwine, announced his retirement at the end of June. He views the Keystone/Neighborhood project as an important legacy that he is leaving to his successor. The district is intent on ensuring that his successor follows through with the impetus the project has created this year. This intent is reflected in the fact that the "Keystone" question has been the lead question in both the preliminary and final interviews which have been conducted in the search for Mr. Erwine's successor. Dr. Nancy McGinley, an experienced administrator from a middle school that featured "small learning communities" and integrated curriculum has been appointed. The KIFP is well established in Abington. The KIFP Express is moving . . . All Aboard!

"*We thus began to chip away at the mountain of issues and decisions. Progress was coming. Students began vanishing from class—slowly, but coming to dance the minuet. The student teachers weren't the only ones who felt as if the days' schedules were now being written in silly putty.*"

"This stuff is hard work!

This stuff is nerve-wracking!

This stuff is exhilarating!!

When do we begin the next project? "

Robert Morris Elementary School and Marywood College

Robert Morris Elementary School, of the Scranton School District, has implemented its project in the fifth grade, integrating the curriculum in art, civics, dance, English, geography, history, music, reading, and spelling. Set in two traditional fifth grade classrooms and developed by the faculty (including the itinerant music and art personnel), the Robert Morris project is centered around pre-existing themes in the social studies curriculum. Fifty-four students, including six students with special needs, were involved in this program covering two units of six weeks each.

Some of the important features included a student production of a video documentary, "big books" or newspapers, two radio plays, original music lyrics, and varied art works. The project employed cooperative teams and large group and individual activities; it utilized student teachers, college personnel, community resources, and parents. In addition, Robert Morris has become a demonstration site for district staff interested in employing curriculum integration.

One fine spring day in 1995, the

Scranton School District Supervisor of

Curriculum came to Robert Morris

Elementary School. He sat with the principal

and the fifth grade teachers and spoke of a unique

opportunity that had come their way. They had the

chance to be part of an initiative called The Keystone

Integrated Framework. Partnered with Marywood College

faculty, they would create and implement sweeping

curriculum changes! Excitement and promise hummed

through the room! With nervous anticipation, the

Morris staff embraced the challenge.

This is their story, known as...

whoops!

ELLEN, GOOD NEWS. WE GOT THE KIF GRANT! IT STARTS WITH AN ALL EXPENSES PAID WEEK IN THE POCONOS. I CAN'T BELIEVE IT!!!

TIME FOR RELAXING

GREAT RESTAURANTS!

SO MUCH FOR RELAXING!

AGENDA
8:00 A.M. TEAM MEETING
8:30 - 10:00- GROUP MEETING
10:00 - 11:00- ACTION PLANNING
11:00 - 12:00- DEBRIEFING
12:00-1:00-LUNCH
1:00 - 3:00- TEAM MEETING
3:00 - 5:00- WORKSHOP SESSIONS
5:00- 6:00- DINNER
6:00 - 9:00 -ARTIST PRESENTATION

FIVE DAYS LATER

HOW DO WE GET FIFTH GRADERS TO DANCE TOGETHER?

WHO'LL HELP US WITH DRAMA?

WE ONLY HAVE A PART TIME ART AND MUSIC TEACHER.

WHOOPS

WHAT HAVE WE GOTTEN OURSELVES INTO!!?

We returned home from the Pocono Manor workshop with something of a hangover. We had gotten tipsy from the intake of new ideas, giddy with planning the outlines of our project, and dazed with thinking, *"Dance! Music! Art! Improv! Integrate! Internet! Whoops! H e l p !"*

After a few days, rationality returned and the seeds planted that week began to germinate. We started to realize that we had been stimulated with many ideas and given the opportunity to shape them to our own needs. We now had to take the still-fragile sprouts and nurture them carefully.

Real planning began in the second week of school. We had selected the American Revolution as the theme of our first unit, so we had a few months worth of Native Americans, Explorers and Colonists to enable us to get things in motion. The two fifth grade teachers, the music teacher, the principal, the Supervisor of Curriculum, the Marywood College faculty members, and the Marywood student teachers met several times. At this point the issues to be worked out seemed staggering.

Simple things like physical space posed problems. Where would we keep all the *stuff* that would be needed and created? Here, the principal was invaluable - he arranged to free up a closet with steel shelving which we could use to store the plastic sweater boxes which were to be the working "portfolios" for the student teams.

There were more difficult issues that stumped us for longer times and demanded cooperation on everyone's part. One of the biggies was scheduling. Like many of our problems, the solution was astoundingly simple once revealed. We were accustomed to sorting our fifty students into several shifting configurations: two ability-grouped language arts sections, two music-grouped sections which moved through science, social studies, physical education and library, and homerooms which were together for spelling, math and art. Now we were superimposing "teams" for the project. Our minds boggled! *When? How?* We were so intimidated by the thought of this maze that we kept ducking it and addressing every other issue first. However, the time came when we could temporize no longer - we sat, coming up with nothing. Then the fog parted, the light dawned, and a voice whispered, *"Be flexible! Create "team time" within the Language Arts and Social Studies periods. Teams need not be together for the music, dance or art components - just during the times directly devoted to team reading, research and project work."* It was so logical! After we digested this idea a new perspective on scheduling emerged. The idea of class periods became more fluid. Students would move from one room to another as they changed gears from general work to project work. The teachers would need to be in touch constantly, adjusting switch-times and theme-specific activities to meet the needs of the students.

We thus began to chip away at the mountain of issues and decisions. Progress was coming - slowly, but coming.

Chapter Two

LET'S BRAINSTORM WAYS TO INTEGRATE OUR CURRICULUM ON THE AMERICAN REVOLUTION

I'D LIKE THE STUDENTS TO DO TEAM RESEACH PROJECTS ON FAMOUS AMERICANS OF THIS PERIOD

I THINK IT WOULD BE INTERESTING TO INTEGRATE MUSIC AND DANCE FROM THIS PERIOD.

LET'S HAVE THE STUDENTS DO A NEWS SHOW THAT IS BASED ON THEIR RESEARCH

GREAT IDEA!!!!

WHOOPS!

WHERE DO WE GET THE RESOURCES?

I HEARD THESE KIDS DON'T WORK WELL TOGETHER

Ideas were now flowing faster than we could capture them on paper. We were becoming more enthusiastic as time went on, but we knew that it was a vulnerable optimism. We had what we thought were good ideas and had solved many of the structural problems that had appeared, but we had not yet set exactly what each student would be doing, with whom, how, and when. Details!!

One of the most important decisions we made was to invest in common planning time. The two fifth grade teachers and the music teacher have a common lunch three days a week and informal planning would be natural then, but we knew it would be inadequate. With administrative support, we scheduled full-day planning sessions when our classes would be covered by substitutes. These days were invaluable for the opportunity they offered to do sustained work and flesh out exactly how things would be implemented. During lunch we met at Marywood College with our team partners and hashed out the nuts and bolts of the project.

Things began to take definite shape. We set up working teams of two or three students each. An attempt was made to mix in different aptitudes as they were revealed by Learning Style Preference tests we administered.

The knowledge base would be covered in social studies class much the same way as in the past. Language arts classes would begin each day as usual, with the teacher reading to the students, but now we would both be reading "Johnny Tremain". We combed the reader, pulled out stories related to our theme, and scheduled them during the project. We planned selected writing activities that explored related ideas - such as a structured lesson on poetry writing culminating with the creation of poems about Crispus Attucks. Multiple copies of approximately twenty trade books were located so each team could share reading experiences in a reading circle. We decided that each team would draw from the proverbial hat one event and one person. Their task would be to research and create a report on these topics. Their first book would also be selected randomly. Once the first book was done, they could select additional titles as they wished.

The art teacher then joined our planning team and proposed that students could choose to sketch portraits of Revolutionary leaders, create copper toolings of representative scenes or symbols, or build replicas of well-known buildings of the period.

The music teacher worked out a program which would introduce instruments of the period to all students. They would also become acquainted with some of the music and the musicians of the age. She even drafted a dance instructor to come and teach the children the minuet!

The synthesizing activity selected was a video documentary of the American Revolution in which students would share their learning and experiences. Every student in the fifth grade would be part of the documentary: planner, writer, dancer, singer, artist, and/or reporter.

As the project began to take shape, the question on the minds of the college faculty was, *"What is our part in all of this?"* The answer came quickly. According to the grant, Marywood was to provide student teachers and field experience students. As the scope of the project emerged, however, the college teammates felt this support was minimal and looked for other possibilities. During one of the planning sessions, a teacher mentioned that the students had, in the past, demonstrated difficulty working in groups. In order for this project to be successful, students would have to work in different formats such as cooperative learning groups and research teams.

The Marywood team members suggested calling upon a colleague from the Psychology Department to conduct conflict resolution sessions for the group. Three 1.5 hour sessions focused on problem-solving through communication. The college also offered other facilities, materials, and people that could support the venture. Marywood had found its niche!

We now had more plans on more pieces of paper than any of us could find at a given moment. As someone of great wisdom said, "Enough is enough"! It was time for the project to move from the papers to the pupils.

Chapter Three
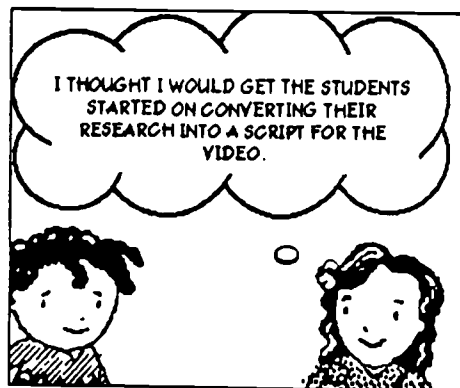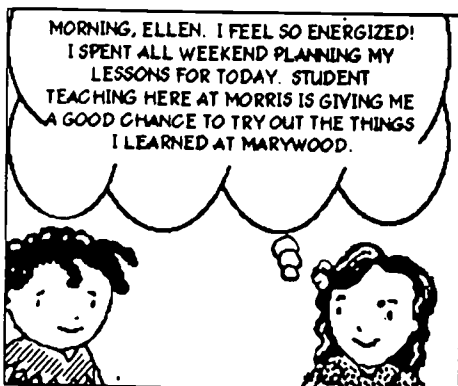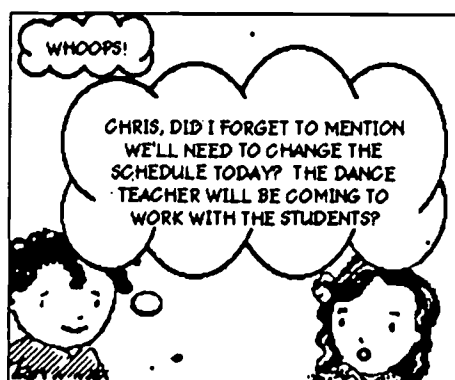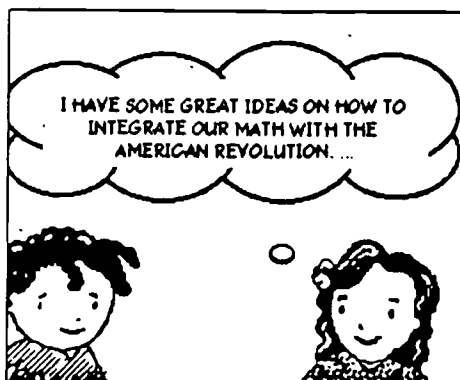
Finally, about a month after we anticipated, we were ready to launch! The student teachers weren't the only ones who felt as if the days' schedules were now being written in silly putty. We all found ourselves running around checking with each other to be sure we were 'on the same page'. Changes came as thick and fast as the snow - many because of the snow!

We listened to one cancellation after another announced on the morning radio, and trudged out day after day with shovels in tow. Our school agenda kept slipping further and further behind 'til it seemed that we would be lucky to finish our study of the Revolution by year's end!

When we actually had school, the days were very interesting. Following the usual opening routines, students changed for their language arts class. The period began with the teachers reading a selection from "*Johnny Tremain* ". Some lively discussion generally followed. Honoring a well-established tradition in our classes, time would next be devoted to a brief teacher-created biography of a notable individual - our "Person of the Week". During the integrated unit, these people would all come from the Revolutionary era - Robert Morris, Lafayette, Mozart, Turner, etc. Generally, a structured lesson would follow - either working with a story set in the period or writing on a related theme. English lessons were taught as usual.

Then project teams would move to their assigned 'work rooms'. Boxes containing team materials (journals, reference books, notes, drawings, group reading book...) would be handed out. Usually fifty minutes of team time was planned. With team members reading the same title, teams sometimes chose to share in-turn oral reading, and at other times read silently up to a given point and then discussed the story. All of the books are part of the *Accelerated Reader* program. As student teams completed a book, the individual members would take the test. Scores counted individually and for the team. If not reading, groups would use this period to research their selected event or person and to begin drafting reports.

Approximately twice a week the art teacher would pull out some student teams to work on their selected art project. This was one of the

problems we had faced, since a variety of circumstances made it impossible for our regular art teacher to work on the project. We had brought in a teacher just for this program and she had to work with the students during non-art periods. We worried about "lost" instructional time in missed subject areas, but, in retrospect, it was worth the trade-offs it brought in terms of student enthusiasm, insight, and prized creations.

At the end of language arts period, the schedule went back to normal. That is not to say that *everything* went back to normal! The Revolution seeped into nooks and crannies of the curriculum. Spelling was affected by the inclusion of five related words each week. Students began vanishing from class to dance the minuet. We found ourselves reshuffling the normal grouping in some science and social studies classes so teams could be kept together to pursue research and writing of reports.

The bond between school and college had strengthened to the point that teachers felt free to request help with a variety of problems. Specifically, as it became apparent that student skills in oral presentation would be greatly taxed by the video, the college came to the rescue. A faculty member from the Communication Arts Department came and worked with the students on presentation skills. Teams then made practice videos and she viewed these with each team privately and gave pointers to enhance effectiveness. "Cue cards" became part of student vocabulary, as did "camera angle" and "performance energy". Another faculty member came to the classroom and helped the teachers master (! ? !) the internet.

Swept along in this blizzard of activity, we arrived breathless at our designated time for the midpoint evaluation. The days had been so full and fleeting that it took us by surprise. This assessment piece had been a concern during the planning of the project. We wanted to maintain many of the traditional measures of things like knowledge base, while setting up a user-friendly tool to measure the more innovative aspects of the unit. What evolved was a checklist with nine major categories. Implemented twice during the project, evaluations were confined to "*Excellent*", "*Satisfactory*," and "*Unsatisfactory*". We would also have evidence from Accelerated Reader scores, student journals, completed art work, dance and music performances, poems, topic reports, spelling bonus scores, Person of the Week quizzes, and the video itself.

As the remaining three weeks flew by this project took on a life of its own. As we neared VIDEO DAY the excitement and enthusiasm became palpable. Cue cards were being written and rewritten at a frantic rate, teams raced to complete one last book, groups hid in corners practicing for their reporting debuts, and dancers fretted over how to tuck sweatpants into socks to make them look like colonial garb. One team reporting on Lafayette debated over whether or not the interviewed hero should develop a French accent. Another group decided to check their sources again to see if Nathan Hale *really* played baseball as a student athlete. Betsy Ross's biographers had her marrying her second husband three years after her

death till another student listening to their rehearsal noticed a problem with that.

Little did we know that KIF had its own plan to spice up that day even more!

Chapter Four
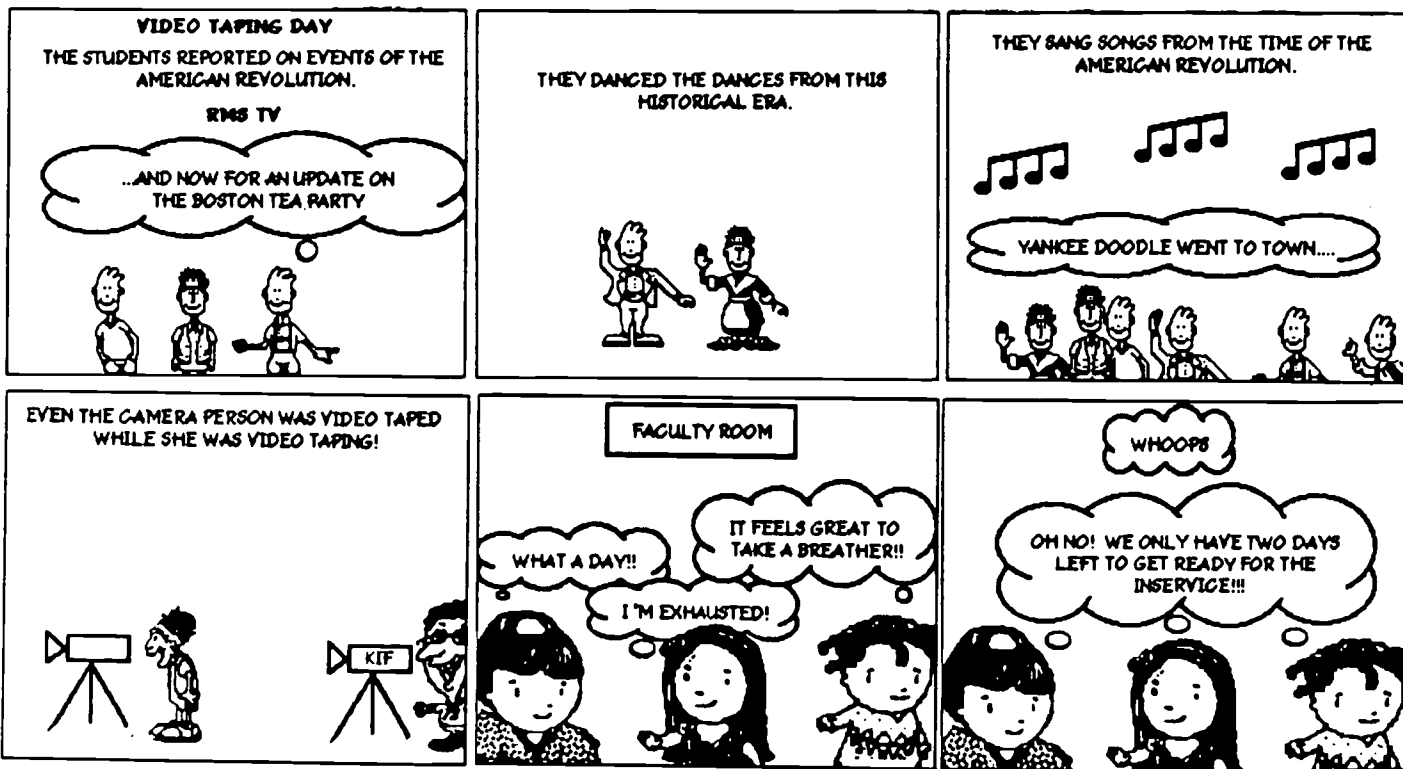
Talk about life on the edge! We danced. We sang. We displayed art work. We presented reports. We rehearsed. We taped. We *got* taped. We interviewed. We *were* interviewed. We started five minutes after the first bell. We finished five minutes before the final bell. This stuff is hard work! This stuff is nerve wracking! This stuff is exhilarating!

We decided it was not all bad that the KIF videographer came that same day. We were so busy filming that we didn't have time to worry about being filmed for the project. The end of the day found us limp with fatigue, yet lightheaded with delight. Some things could have been done better.

Microphones would have made the sound clearer, the background set should have been a little bit bigger. But that is not what this was all about. The children had effectively displayed a multi-colored palette of learning and were thrilled with themselves - that is what this was all about! However, we had little time to celebrate. As we soon realized, the clock was ticking. Now it showed two days before our inservice presentation.

A key element of our project proposal was dissemination. The Scranton School District reserves two days each school year for inservice. At the request of the Inservice Committee, we were to join with the other KIF school in the district to share our projects with interested teachers. The idea of presenting together offered interesting possibilities. The two models of integration are quite different. Our model was based on the efforts of two fifth grade teachers, in self-contained classrooms, without full time art or music teachers. The other model is based on a larger group of teachers in grades K-5, in an open-space setting, with full time art and music teachers. The beauty of the presentation was that participants were able to see that integration can be adapted to varied situations.

One of the benefits of the inservice experience was that it gave us reason to reflect on the positive outcomes of the project. Each of us could speak to the high level of student interest. Examples abounded of how students were more likely than usual to interject comments during class discussions that reflected knowledge of related material not directly taught. Another benefit we realized was the project's effect of "freeing up" some of our traditional scheduling patterns. The new, more flexible and shifting structures made it easier for learning support students to be fully involved in activities while still receiving individual help as needed.

We tried to develop more tangible evidence of success, too. One of our concerns had been to assure that the knowledge base was not compromised. We made a point of administering the same end-of-unit test as had been given the prior year. With no learning support students involved in 1994-95, 17% of the students scored below 70% on the written test part of the assessment. In 1996, with six learning support students involved, 8% of the students fell below 70% on the same test. We also did a check of attendance during the first three quarters of the fourth grade year and the same period this year. In fourth grade, these students missed an average of 7.3 days during that interval. This year, during the same time, they missed an average of 4.8 days. Also telling is the variety and quality of work, which speaks eloquently about the power of the arts.

Team members from Marywood College cited outcomes which they feel will have a lasting impact on the teacher preparation program. Being involved in the entire process of planning and implementing a "real" integration project has given faculty added insight into the issues involved. Faculty believe this deeper knowing has improved their college courses and will help make future teachers more knowledgeable. The student teachers who were a part of the experience since the week in the Poconos had an unprecedented opportunity to develop curriculum and implement it.

Perhaps of greatest importance, the college has discovered new ways to support teachers in their quest to be innovative practitioners.

Many inservice participants expressed interest in learning more about integration·and experimenting in their own classrooms. We ended our day a little less exhausted that we had been at the end of filming - and only slightly less ebullient.

Once again, however, reality intruded. We had to get into wind-up mode. The date was fast approaching for students to debut their work before eager parents.

Chapter Five
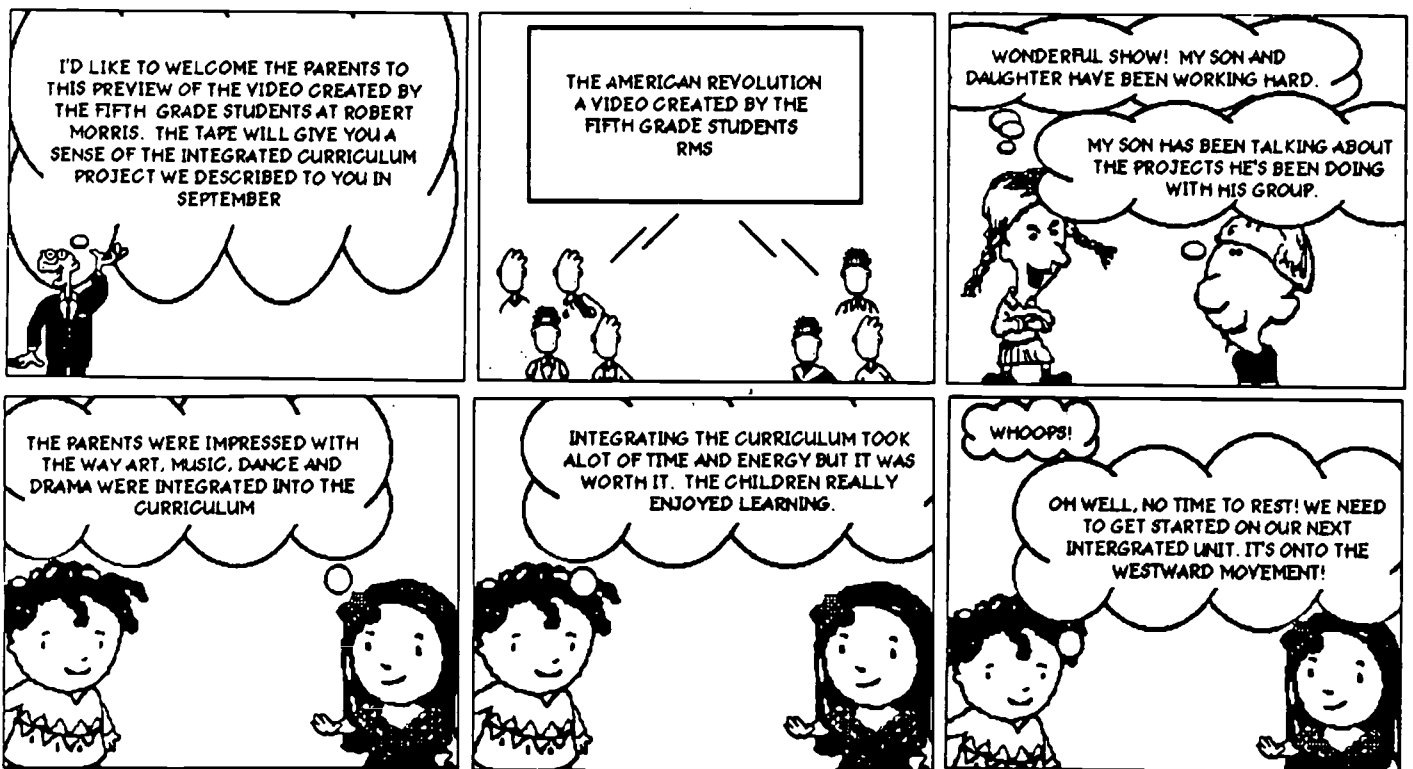
It is our good fortune that the Marywood campus is about seven blocks from our school. Thus, we had the opportunity to have our Revolution Night in a high-tech multi-media theater. Excited by their surroundings, children entered the room proudly with parents and friends in tow. The student art work from the project looked very impressive, the

student documentary delighted the sizeable audience, and the after-show refreshment period buzzed with delight. Parents were thrilled with their children's work and students' smiles beamed brighter than the projector bulbs.

This element of student enthusiasm has been a powerful persuader for us from the start. We have no doubt that students truly enjoyed this experience. They have expressed it many times, in many ways. As every teacher knows, if you manage to convince them that learning is fun - the victory is won!

We basked in our achievement for about five minutes 'til a student came up and asked, "When do we begin that next project?"

Whoops! Roll out the wagons - it's time to head West!

McNichols Plaza Elementary School and the University of Scranton

"Instead of a despairing, depressing shaking of their heads, a look of defeat and anxiety in their eyes — there was a quickness to nod, to smile, to analyze and interpret a new idea or strategy or to share one that already works, to improve upon a process, to celebrate."

"They rediscovered themselves as learners at their jobs, combining many years of experience with new resources."

Nine team members at McNichols Plaza Elementary School (Scranton School District) have committed themselves to curriculum integration with the arts as the central core. The Keystone Project built upon the school's grass roots restructuring efforts already in place. The visual and performing arts were equal partners from the inception of the school's unifying theme, "Seeds, Seasons, and Celebrations," which centers around universal commonality of the basic rhythms and cycles of nature: soil, seeds, plants, day, night, weather, and food.

The vision of McNichols is to develop learners as members of the global community; blur the lines between "teacher" and "learner"; identify interconnections between people, art, and nature; address the needs of diverse learners; and explore and celebrate community cultural diversity.

The overarching questions are developed around the environment, seasons, and the child's relationship to it. It is the child's cognitive, affective, creative, visual, verbal and kinesthetic responses to these questions that formulate the context for learning.

The metaphor of seeds that is found throughout their project is also movingly used as they tell their story—the motif of art and the beauty of language intertwined.
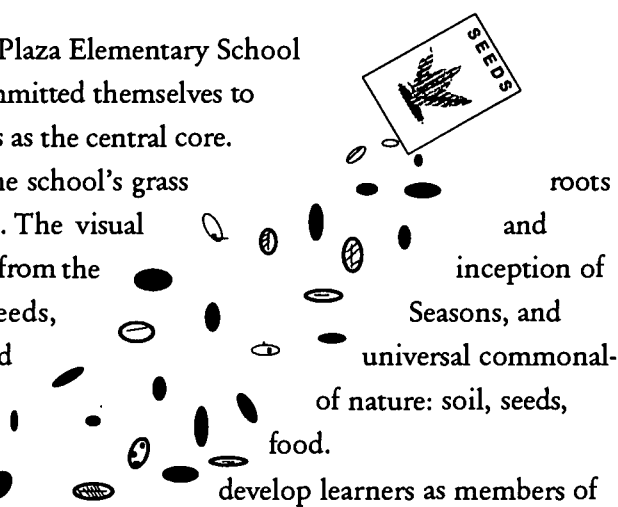
SEEDS OF CHANGE

A Story About Growth And Change
McNichols Plaza Elementary School, Scranton, PA

"The Seeds don't grow the way they used to," said Quadrant Three cultivator. "They just won't grow!" complained the Quadrant Two attendant.
"They aren't going to, either! Not the way its being done. And I'm not sure what's going to happen - it's scary," said the Quadrant Four supervisor with a voice that was shaking with emotion.

The rest of the group of nine sat around a very low potting table on weeding benches at the edge of the seed- sorting and soil blending area, eating their lunches. It was a large hexagonal room, one of six hexagonal "pod" areas surrounding a central resource materials area. It was a neat modular building without windows thus all lighting, heating and cooling were provided artificially- all regulated and timed for the maximum amount of and efficient output of seedlings. They germinated and grew all varieties of seeds and seedlings from grass and wheat to fruit, vegetable and flower - both perennial and annuals. It was a scientifically planned seed factory. It was at these rest period gatherings that the story of Seeds of Change began.

The quadrant supervisors considered themselves to be important contributors to society. They cared for and raised plants for both sustenance and beauty. Their careers were their work and had, until the last five or six years, felt great satisfaction from their work. Recently, however, conversations such as the exchange above were heard on a regular basis.

It seemed to take more work to get viable, sustainable plants and it was difficult to discern precisely why some seeds came to them undernourished, unready to germinate. They constantly asked themselves if they had produced inferior seeds in the past? Was it their fault? Or were there other demographics at work that were out of their control?
They looked at each other. The look deep in their eyes was disappointment, fear,

anxiety, confusion.

"We have been trained, we have been prepared, we have been given all the tools and equipment, we have years of experience - but when we go to plant - so few seeds germinate! It's so frustrating!" Their faces softened now with looks of acknowledgement and empathy at the words of the Pre-germination Quadrant [Quadrant "K"] expert.

"You're not alone in this, I have the same problem in my quadrant - the seeds that do germinate just don't get their first leaves quickly, their stems are weak - and I'm sure it's not the Aquafier's or the Soil Expert's fault. It's something else. I put the lights directly over them - just like the book says. I talk and talk and talk to them - but they just don't respond! " said the Quadrant One Specialist. Quadrant K nodded her head slowly in agreement and took another spoonful of her yogurt.

"That's the crazy part of it," said the Quadrant Five Cultivator, "I'll have these perfectly fine plans and perfectly fine plants. I'll open my book and check all the procedures - giving the proper tests at the proper intervals - everything just right. Then, before I know it, one plant is growing horizontally, one is doing a circular thing, one is leaning on another and several seem to shrink instead of grow! Mine should be on their way to budding and flowering in Quadrant Five and so many seem to be 'dying on the vine' so to speak. Some like to grow over into other plants' areas but I just don't have the time in my strict routine to do that kind of transplanting - even though I sometimes wish I could."

"I Know exactly what you mean," added the supervisor of Quadrant Four. "You must wonder how they will ever thrive when they leave the Complex. "

In walked the Aquifier - the woman who was assigned certain times of the day to spray water on the seeds and seedlings. " Couldn't help overhearing your conversation," as she placed her brown bag lunch and spring water bottle on the table. " These seeds are so precious - handed down from generation to generation. I wish I had more time to spend in each quadrant with my water supply. I wish I could share with you some of the things I've learned about waters of the world and I wish I knew more about exactly what you were doing in your quadrants - but I have too much to do to get their life-

giving sprays on them in the assigned intervals. I hardly have time to breathe!"

The central resources person joined in: "Yes! It's quite interesting how when you sit still and listen and watch the little ones, you can see that, even though we have rules about how much and how long and how many, that very often if you bend or - heaven forbid - break the rule - the little ones seem to make headway with more ease."

"It's the ease! That's it! " said Quadrant One, "Poking their little heads through the soil - my #1 job - the most important moment during their time with me - seems so difficult. I wish - I'm sure - there's another way to make that experience easier and more successful for them."

The Quadrant K Supervisor worried: "It's the preparation that the little seed has to undergo before it comes to us that I'm concerned about: The harvest, the careful packaging, the climate control, the chemicals in the water supply - I'll swear there's something in the water - absorbed during the seed's formation. I wish I knew more - and I used to think I knew everything after so many years of doing this. They're really only with us for such a short time....."

The Aquifier concludes,"Slowly but surely, we've been given charge of seeds that are so very different from the varieties we were used to growing. As I observe from one quadrant to another - because I see all of you - I notice how we just don't seem to be able to respond to these seeds that behave differently - they don't speak the same language."

"And neither do we," said the Second Quadrant Supervisor.

The Soil Expert, who was spreading hummus on pita bread, added, "There are so many seeds from so many places within this seed factory and we need to know how to best prepare the soil, adjust the water, the air and the light for all of them. It's not an easy task. There's research out there and if we really want to solve the problem, we just need the time to plan for it. We can restructure our priorities and develop new processes. "

So all in all, these attendants, though deeply dedicated to their jobs, recognized that the growth and survival of their "charges" - seeds and seedlings - were in great jeopardy. If their seeds would not grow under the conditions they were traditionally accustomed to - they needed to find another way. There needed to be a change.

The change did come from a lightening bolt from above - it had grown from within them. *They* could and would be the agents of change.

In the seceding weeks and months, the Aquifier joined forces with the Materials Person, the Soil Expert and all the Quadrant Supervisors. They realized that they already may have many solutions because they had identified the problems and saw the needs. The Aquifier suggested that they explore some new ways of encouraging growth that correspond to the differences in seeds. So many of them were not "textbook types." So many grew in diverse ways - through visual display or loving music, dance and movement or thrive within compact groups, others alone in silence or amid noise and chaos. Some needed to create uniquely beautiful textures, patterns and shapes in characteristically arranged spaces. Most of these conformations were not usually accommodated within the confines of the standardized system.

In order to have impact throughout the entire growing complex, the Team agreed to locate and invite wise helpers into their workplace. They also resolved to listen to each other, learn from each other and seek out alternatives. They were able to do this with the blessing of their CEO who was also acutely aware that if the need for change was not addressed, he, too, may soon find that a business and charge that he deeply believed in would soon come to a sad and unproductive end.

As a result of their team energies, it soon became clear that there were many wise and creative teachers and many ideas out there. They just needed to make networks and connect to them.

They rediscovered themselves as learners at their jobs, combining many years of experience with new resources. They found themselves with renewed energies, new tools, enthusiasm, and, most importantly, hope. It was these tremendous energies that brought them to a meeting place in the mountains where others who were of the same

mind gathered. It was there that a vision for their seeds was born and crystallized. This vision was a global vision: that all seeds were to be cultivated to perform to their maximum potential. They created a framework plan that delineated goals and outcomes for reaching that vision. Accompanying them home from the mountains was a local partnership with a seed developer. They worked together to oversee the carrying out of their plans.

Upon returning to the Complex, they placed their vision and goals upon a tree which they created, with the help of an artist and gardener, and placed at the entrance to the Complex. It was made of dried plant material and contained replicas of every parent plant of every seed that entered through those doors. They called it the Tree of Life. The tree became their symbol. As a result, each seed had something of its origins to gaze upon as it settled down to do its work. It is a beautiful tree who's strong majestic presence quietly nurtured all who passed under its varied boughs.

Visitors passed among the growers and their seeds and soils, enriching the soils and seeds with their gifts as they came. One visitor bestowed upon them the "Enchanted Lullaby." The Lullaby was sung in every language across loamy, sandy ,rocky and firm soils; across all species and varieties of seedlings, reaching across time and quadrant boundaries at the downing of the sun each day. It created an atmosphere of unity and peace where all the many seeds heard a universal song celebrating commonalities - the Lullaby.

Another wise guest brought "Sunlight." He helped them design a way of opening up the roof of the nursery to allow the Earth's real sunlight in. On sunny days the artificial lights were turned off and plants that ordinarily grew in one direction only were reaching higher up to the light than ever before, tracking the Sun's movements across the sky. The seeds and seedlings responded to day/night, sun/moon cycles and became much more sensitive to the rhythms, gravitational pulling and cycles of Nature.

Another wise visitor was "Wind." Wind designed large openings in the complex for air to flow into, across, around, through and under the leaves, stems and buds. The air allowed them all to move about freely, to breathe deeply but still remain rooted and focused on their work. In fact, the attendants learned to take joy in all this movement of

the seedlings according to 'whichever way the wind was blowing' because they knew they were providing what was needed and the seeds were changing and growing stronger and hardier and more abundantly.

As they worked with these changes, they shared their professional expertise with their partners. They welcomed future seed growers into the Complex and worked with their teachers. In fact, their teachers were very helpful to the Team, providing workspace, research resources and encouragement. In turn, the Team felt they were giving a real "hands-on" experience to the pre-service people.

The final wise gift came to the Team and their seeds in the form of a Fountain. Previous to the Fountain, the source of water was a steady - but short - burst of misty vapor. Everyone knew that precious water was too limited. The Fountain had many heads, many different types of streams and could be regulated to bestow moisture in hundreds of different patterns from light steam to heavy downpours. The Fountain was a constant and varying source for satisfying the multiple thirsts of so many diverse kinds of vegetation. The Aquifier was able to join forces with the Quadrant Attendants and Soil Expert to develop ways for all of them to administer enlivening waters. They observed their seedlings respond: they almost sang when their leaves were moisturized, they danced to rhythms of dampening their soils to varying degrees, they became more intensely colored and variegated when nutrients were added, they strengthened their tap roots with deep watering. The plants became more flexible with the showering of a great variety of rains, from light to medium sprinkles to heavy - with a full-fledged storm from time to time!

Working with the attendants and integrating watering with all the other actions of growing and sprouting seedlings shifted that crucial task of growing seeds from being repetitive and perfunctory to a joyful, shared, life-giving activity.

Throughout this time, the quadrant leaders found time to respond to the changes and became adept at planning new strategies based upon the many lessons and gifts given by their visitors, their local partners and the support network from the mountains. They became more flexible, innovative and less dependent upon outdated texts which did not answer their needs. They began to group seeds according to the special qualities of each - allowing for them to do their work in the ways they do best.

Throughout all of these inputs, each quadrant supervisor obtained skills to adjust the soil mixtures - through which so many nutrients were taken in by the seeds, for the optimum growth of each kind of seed. Therefore, once aware of differences in soils relating to the place of origin of the seed, the attendant's job changed from a sometimes over- active participant in the germination and growth to take on the role of an guide, observer or coach. The seeds knew what to do because they were placed within the proper growing "mix."

Yes, change is what did happen. The Team worked steadily for two seasons, developing themselves, their skills and their seeds. They made many changes that enriched the environment which they tended. Many of the rules they had previously thought should never change - textbook exactness, uniformity, rigidity, strict climate control - were altered. New conversations were overheard at the end of the first two years. They made observations about the seeds: There was increased germination, steadier, stronger growth. Instead of a despairing depressing shaking of their heads, a look of defeat and anxiety in their eyes - there was a quickness to nod, to smile, to analyze and interpret a new idea or strategy or to share one that already works, to improve upon a process, to celebrate.

As they sit around nodding instead of shaking heads, their faces - although at times expressing exhaustion - are a-glow with optimism.

"They are growing again - thick and rich - like they used to.... but how we've changed our ways of nurturing! " says the Quadrant Two attendant.

"Yes," nodded the Quadrant Three attendant, " We use a more relevant process now that goes right back to Nature. We had removed seed-sprouting so far from what seeds naturally do. Now I can see why it was so difficult for such a long time. It feels so much better now. I know we're on the right track."

"The soil, the water, the air and the light have all been renewed through a process that won't remain static, but is sensitive to, and can adjust to the inevitable changes that will always take place here. The bottom line is that our seeds are coming around. They are so much closer to our vision of all seeds thriving to their potential amid great

diversity," the Soil Expert explained.

Waxing philosophical, the Aquifer spoke: "We have had so much success here. We hear so much about society's problems. Take education, for example: 'Why Johnny Can't Read,' discipline problems, etc. Maybe they should take a page [or leaf] out of our book... Suppose children are like our seeds were - before, I mean. We've got a model - we could show teachers how we faced our problems and worked together with each other and the seeds to improve the whole system....."

Intrigued by the idea, the First Quadrant attendant jumps up and adds, "Better still, let's invite some teachers over here to see what we have - maybe they'd like to bring their students . Don't you think children could learn a lot about a lot of things from what we do here......."

B. Burkhauser, July, 1996

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Reflections from the Director

Judith T. Witmer, Ed.D.

What an exciting time the past two years have been for all of us involved in the Keystone Integrated Framework Project! Beginning with the notification that the Pennsylvania Department of Education had been selected as a grant recipient under the U.S. Secretary of Education's Innovation in Education, we have been on a whirlwind adventure.

My personal story covers many miles and many memorable experiences. I have made new friends, both on the staff and in the field. While carrying the title of "Director," I wore the hat of traveler, facilitator, monitor, and, I hope, friend. I am impressed with the professionalism of the educators I have met and with their commitment to doing the best for the students entrusted to their care. This caring attitude is evident in the discussions I observed and in the plans I reviewed. Clearly, "what is good for the students" is the driving force behind the curriculum. I saw dedication to a belief that students do not learn in isolation, but in integrated patterns of thought and action. I participated in classes which challenged the intellect of all of us. I was also privy to the various organizational cultures, different in each site. Yes, good teachers share traits and "kids are kids" the state over.

However, schools themselves differ. The quality of administrative support varies; and, as might be expected, those sites with building principals, curriculum directors, assistant superintendents, and superintendents who are advocates for school reform have made the journey much easier for the educators involved in the Keystone Integrated Framework Project.

One site had great difficulty with their administrators in working through the project's expectations, but the amazing—and very successful—result demonstrated by those teachers should give all of us pause. This team rose above adversity, much as did another site, whose higher education partner almost deserted it; this latter site also triumphed over its disappointment and has expanded its program for the second year.

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Student teacher experiences flourished at several sites, while other sites seemed grateful for the few student teachers placed there. All who were involved in the project will attest, however, to the utmost importance of a willingness to work together as a team to iron out any differences.

The greatest hurdle for every site during the initial year was finding enough time to meet as a team. From the site that operated with a schedule providing its team with a daily common planning period to the site which "met on the run between classes," every one of the participants said the same thing: "We needed more time to meet together for planning." The Keystone Integrated Framework staff continually encouraged all sites to use their grant money to "buy time" for team meetings; those that chose to do this found it easier going than those who chose to spend their funding to purchase "things." Fortunately, most of the sites discovered the necessity of common planning time early on, and were able to refocus their priorities.

Site visits by both the project evaluator and the director were scheduled throughout the year and, despite a record snowfall during the winter of 1995-1996, no visitation dates were canceled. These visits were important not only to provide support to the sites but also to observe and to learn from the observations. The evaluator and director shared their field notes, resulting in an even better understanding of the struggles and victories experienced by those implementing their plans at the sites.

In April 1996 representatives from each partnership met for a two-day retreat. In the words of one of the participants, "I needed this renewal. I am now ready to return and approach what needs to be done next year to make our program even better." Learning from the common experiences, discussing the difficulties and sharing the joys of success in a retreat setting was indeed a renewal for many of the participants who left with a resolve to expand their "KIF" program.

Changes in teacher preparation programs is another important and evident result of the Keystone Integrated Framework Project. As would be expected, the higher education partner of each site was committed to enhancing its teacher education program prior to applying for this grant. What the Project did was to help the university programs frame their program changes from the perspective of curriculum integration and to focus on how best to prepare teachers for (1) classrooms that practice integration of curriculum or (2) schools that would be open to this reform in pedagogy.

While the Project does not presume to take the credit for the positive movement we have observed in the teacher preparation programs in our higher education pilot sites, we would like to think that the universities' involvement in the Keystone Integrated Framework Project spurred their efforts. Most higher education sites, we believe, were successful in making positive changes, even though the level of success occurred in varying degrees. Examples of the kinds of change that occurred include the following:

- A college that redesigned its teacher preparation courses from the framework of curriculum integration; these courses have integrated the content areas so that

the students will work with methodology that stresses integrated curriculum rather than separate content areas.

- A university that prepared literally hundreds of teaching units in integrating the curriculum; these instructional units were designed and are available for use by student teachers.

- A university that placed seventy student teachers—in various capacities from observing to researching, from special tutoring skills to full-time student teaching.

- A university whose student teachers prepared with and worked in full concert with the special thematic unit.

- A university whose student teachers attended camp with the students.

In terms of continuity of the school-university partnerships, eight of the eleven sites are maintaining what can be termed a strong, institutionalized relationship. These eight partnerships have been successful in reflecting the synergy which can occur between educators working in basic education and those working in teacher preparation programs. While all eleven partnership sites worked in harmony at the Summer Institute, three sites have had difficulty in continuing a close working relationship. In all three instances, the higher education partner did not provide the expected personnel support.

What should be noted is that of the three sites that did not receive the support they had expected from their university partners, two were still able to produce results even better than they themselves may realize. In fact, from the viewpoint of the evaluator and director, these two sites are considered "very successful and exceeding expectations."

All told, the Keystone Integrated Framework Project has been a journey in the advancement of school reform, in professional growth, and in statewide networking among educators. Best of all, it has been a journey of learning!

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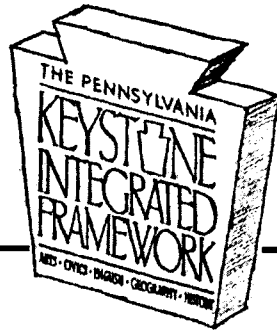
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Site Projects by Grade Organization

Elementary Schools

Boundary Elementary School
Clarion School District

Robert Morris Elementary School
Scranton School District

Indiana Elementary Schools (6th grade)
Indiana School District

McNichols Plaza Elementary School
Scranton School District

Middle and Junior High Schools

Abington Junior High School
Abington Schools District

Conestoga Valley Middle School
Conestoga Valley School District

Bache-Martin School *(The school is K–8; the target population for the project is grade 5)*
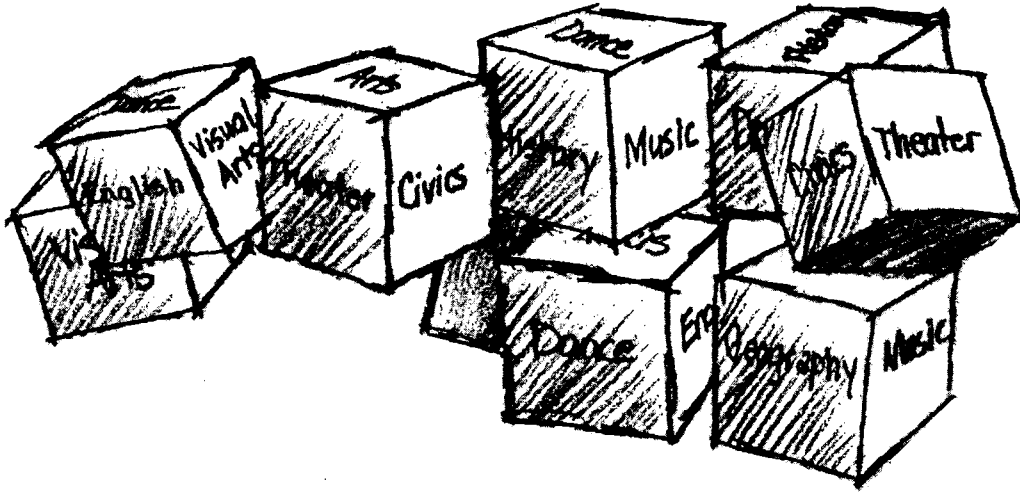Philadelphia School District

Donegal Middle School
Donegal School District

High Schools

Conneaut Valley High School
Conneaut School District

Mountain View High School
Mountain View School District

Louis E. Dieruff High School
Allentown School District

SECTION
FOUR

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STRATEGIES

Strategies

At this point the reader may be thinking, "O.K., I've read this; I've seen how the pilot sites initiated their projects. I see the advantages of curriculum integration, and I think there is enough interest at my school to form a team to explore curriculum integration. I feel comfortable with what I have read about implementation, and I am excited after reading the 'real stories' from the sites. Now, how can we do this at my school? What strategies can I use with a planning team for curriculum integration? How can I demonstrate to all stakeholders that curriculum integration is good for the students? And how can I respond to those who ask, 'How will you grade the students?'"

As has been emphasized throughout this compendium, at the workshops, and in the video, every school is different and every plan needs to be tailored to its individual site. The Keystone Integrated Framework Project has supported this individuality, honoring both the advantages and the limitations all schools have. Any school considering integrating its curriculum must carefully investigate where its own strengths and weaknesses lie and be prepared to address all issues as they arise.

There is no perfect model for all school districts. What this Project has attempted is to support various models of curriculum integration. We urge you to design your own plan, not to follow a specific model. Your design should be built upon what it is you want your curriculum to look like. It is suggested that you begin with this question: What will this curriculum integration look like and how will it be different from what we are presently doing in our school? Once that question is answered, you will be able to plan your strategy.

Instructional Strategies for Developing a Framework for an Integrated Curriculum will help you in assessing your current view on integrating particular subject areas; will identify and describe appropriate instructional approaches; and will help you assess both the strengths and the challenges you will meet in integrating curriculum. Divided into three sections, this document is designed in a workbook format. You are encouraged to read the material and to discuss it as a team.

Assessment Strategies for Curriculum Integration is offered as a beginning to your planning as to how you will assess, evaluate, and "grade" the students. What the Keystone Integrated Framework learned from its work is that methods of assessment are evolving and that, while there are assessment strategies that can be effective, there is still much work to be accomplished in this vital area. We encourage all who implement curriculum integration to plan carefully—and in advance—how they will evaluate students. Our strongest advice is to make sure everyone involved understands this process before you begin your project or new curriculum. Those pilot sites that involved all staff, students, administration, parents, and school board in designing and adopting the assessment process found little resistance to the changes that were made.

The appendices to *Assessment Strategies for Curriculum Integration* were offered by some of the pilot sites just as examples of some assessment processes they found useful. Their inclusion in this compendium is informational only and should be used only as a starting point of discussion. We thank those schools who were kind enough to share their materials for this purpose.

Keystone Integrated Framework

THE PENNSYLVANIA

KEYSTONE INTEGRATED FRAMEWORK

ARTS · CIVICS · ENGLISH · GEOGRAPHY · HISTORY
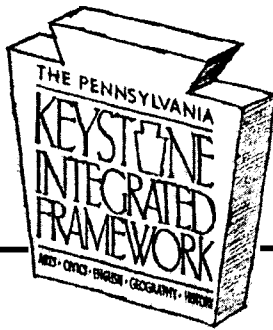
INSTRUCTIONAL STRATEGIES
IN AN INTEGRATED CURRICULUM

Instructional Strategies for Developing a Framework for an Integrated Curriculum

by Manuel Barrera, Education Specialist

Introduction

This instructional strategies booklet has three purposes. First, it is meant to help school curriculum development teams assess their current assumptions related to integrating subject areas such as the arts, civics, English, geography, and history. Second, this document will identify and describe some appropriate instructional approaches for use with integrated curricula. Third, it is meant to help teams assess their strengths and challenges for integrating their curricula.

The perspective taken here is that no one model or instructional approach can fit the unique needs of any individual school. Rather, educators interested in curriculum integration need a way to discuss how to best implement integration goals given unique abilities, materials, and needs within a school and its staff. Through such a discussion, teams can clearly and systematically decide what instructional approaches will work best for them; what structures and abilities they have available; and what additional support and training they will require. It is intended that through this process, teams will plan strategic and instructional approaches to meet the goals of the Keystone Integrated Framework.

Format of the Workbook

In the spirit of modeling the problem-solving process, this booklet is written in "workbook" format. Readers are expected to analyze the different approaches described with a purpose to develop a model that fits local needs for integrating curriculum. This booklet is divided into three sections: "Assessing Your Present Framework," "Instructional Strategies for Integrated Curricula," and "Selected Readings for Integrating the Curriculum." Within each section, at important junctures, a "reflection" sheet is incorporated in the text so readers can write their comments, reflections, or questions as they consider the ideas presented with respect to their current school situation. These writing areas are meant only as a suggested format and, of course, can be modified. The important point of the workbook format is that team members read the material and stop at critical junctures to consider how the ideas encountered can help guide the way for the school to meet its goals.

Keystone Integrated Framework

Assessing Your Present Framework

Models of Curriculum Integration

School teams should recognize two assumptions in assessing their school curriculum. First, it is important to recognize that every learning institution operates under some framework, or model, of organizing their curriculum. This is true regardless of how conscious school personnel may be about it. Often, school districts or administrative teams explicitly state the perspective or model upon which curriculum decisions are based. Sometimes, such perspectives are "tacit." That is, the model is not stated but is evident in the ways that teachers operate, the ways students are expected to learn, parents are related to the school, and administrators view their roles. The second assumption is that no school or institution, teacher, parent, or administrator consciously opposes the idea that students should integrate what they have learned. Rather, it is important to assume that every educator intends for integration to take place. However, while individual educators may strive to integrate student knowledge, not all approaches, deliberate or tacit, provide the best environment for allowing curriculum integration to occur.

Many models for integrating the curriculum exist and schools often modify and tailor such models according to their needs. School teams should discuss changes in their curriculum by considering how the school's present framework facilitates integration and where that framework hinders it.

One perspective for analyzing curriculum frameworks is Susan Drake's description of three models of curriculum integration. Drake proposes that curriculum integration models fit into three general frameworks: *multidisciplinary, interdisciplinary,* and *transdisciplinary* models.

In a **multidisciplinary** model, teachers integrate subject-specific knowledge within each separate discipline. The curriculum remains separated and integration is organized at the department or grade level. Within each subject, individual teachers work together as a department or grade level to ensure that learning within the discipline is integrated.

An **interdisciplinary** model emphasizes teaching the skills and knowledge common to all the disciplines. The curriculum is "filtered" to teach students core skills and knowledge. Educators across disciplines collaborate to identify these core skills and content area knowledge and, within their disciplines, teach to those common attributes of learning.

Finally, the **transdisciplinary** model emphasizes teaching the skills and knowledge of all the disciplines together. The curriculum is "synthesized" for learning in a real world context. Educators across the disciplines learn the essential content and skills of one another's field and collaborate to deliver instruction. Teachers are organized into cross-disciplinary teams to plan and deliver content regardless of the subject matter. Often, one or two teachers will deliver the instruction with the rest of the team serving as resources and support staff. Educators using the transdisciplinary approach identify

real-world problems and use the subject areas as resources for learning to solve those problems. Content and skills are considered important if they are meaningful to the problems encountered in real-life situations.

It is useful to view the three models described here as representing a continuum of approaches to integration rather than as competing models. Through gaining knowledge about one's operating theory of integration, school planning teams can examine their place on this continuum to decide what they need to change in order to achieve their new goals for integrating the curriculum.

These three models are not instructional strategies. Rather, they represent "operating frameworks" underlying how schools approach the presentation and delivery of learning. As such, they describe the active theoretical view of educators regarding how to present and deliver subject matter. An active theoretical view is the operating perspective guiding the curriculum. One can determine a school's operating perspective by analyzing the roles, responsibilities, and outcomes (results) for each of the "stakeholders" within the school. Key stakeholders include students, teachers (including specialists and support staff), parents, and administrators. Multi-, inter-, and transdisciplinary curriculum perspectives generate different roles, responsibilities, and outcomes among stakeholders.

Table 1 illustrates the different roles, responsibilities, and probable results inherent in each of these three integration frameworks. Roles, responsibilities, and results are related to the content, teachers or specialists, students, parents, and administrators. Essentially, this table depicts what one can expect by strictly adhering to one or another model. Multi-disciplinary models may help students integrate their knowledge within a discipline, but responsibility for making connections across disciplines is often the student's solely responsibility. Little structure exists within the curriculum for teachers to facilitate integration except through individual teacher efforts. Interdisciplinary models, by focusing on core ideas and skills, provide a structure for students to learn how to make connections across disciplines. At the same time, interdisciplinary models do not release individual teachers' responsibility for delivering content in each discipline. Transdisciplinary models use integrated teaching structures and focus on knowledge and skills relevant to real-world situations. Teachers in this model do release individual responsibility for content by sharing responsibility for delivery of instruction.

Advantages and Disadvantages of Curriculum Integration Models

Different curricula will usually result in use of particular instructional strategies. At least, many instructional strategies will tend to "work" better in some frameworks than in others. Thus, it is important to consider the strengths and challenges of the above models in order to discuss how to use them effectively.

Strengths and Challenges of Multidisciplinary (MD) Models

Multidisciplinary models may be easier to implement because many schools already have an existing multidisciplinary structure with separate subject areas or grade levels. Given individual responsibility for their own content, teachers can concentrate on

developing individual expertise with integration approaches in their subject fields or grade levels. Additionally, many schools already have grade level and departmental structures where teachers in each discipline or grade can collaborate on integrating subject area curricula.

The obvious challenges, however, are that separate integration efforts and their associated structures are not "collaboration-friendly." Multidisciplinary integration efforts may impede collaboration among colleagues because so much effort is exerted toward individual and single discipline teaching. Moreover, because most of the effort is exerted toward making connections within disciplines, little opportunity is left for making connections across disciplines. Thus, the onus for integrated learning across the curriculum tends to lie with the student. Additionally, it is difficult for parents to give support since they may have little knowledge of the content presented.

Interdisciplinary Strengths and Challenges

Interdisciplinary models usually provide a strong motivation for all teachers to collaborate and learn to work together. Because emphasis is placed on identifying common skills and knowledge across disciplines, students focus on learning to apply core skills and knowledge in different learning situations. Additionally, parents may be more easily involved in the process since they may have knowledge and skills relevant to what is being learned.

A major problem with an interdisciplinary approach is that content may be sacrificed because so much time and effort is placed on common skills and knowledge across subjects. Thus, learners may lose opportunities for in-depth knowledge in subject-specific areas. Too, since teachers do not release their responsibility for delivering "their" part of the curriculum, integration may seem "hollow" to students and parents. Finally, there is a tendency to repeat unnecessarily the same skills in each subject area.

Transdisciplinary Strengths and Challenges

Transdisciplinary models help students focus on applying what they learn in real-world (or close to real-world) situations. It is considered ideal for integrated settings because learning the content can be initiated in any subject. For example, learning communication skills can be initiated through the arts rather than in English class. Through the integration process, teachers in transdisciplinary models learn about one another's disciplines, their similarities as well as specific content knowledge. Collaboration among all the stakeholders (students, parents, teachers, administrators) is equalized through joint decision-making and planning.

On the other hand, a major problem with transdisciplinary models is that stakeholders, especially teachers and administrators may not be ready to "release" responsibility for delivering "their" part of the effort. Additionally, real-world problems often have many "sides" to them. Thus, much of the opportunity for learning is based primarily on "ill-structured" situations. Not all students may readily take to such ill-structured problems and may require teacher guidance. Teachers may require additional training in promoting such guidance.

Table 1

Roles, Responsibilities, and Results Using Different Models of Curriculum Integration

	Multidisciplinary Model	Interdisciplinary Model	Transdisciplinary Model
Roles—what part each individual and the content plays in the curriculum.			
Content	Subject matter is taught as a separate domain.	Common skills and concepts are identified across subject area.	Identifies within "real-life" contexts. Relevant content is taught in context.
Teachers/Specialists (TS)	Bring individual expertise about subjects or grade levels.	Share expertise to develop common skills and concepts.	Share and release each other's expertise into a team-oriented instructional effort.
Students	Receive individual subject or skill areas.	Become "recognizer" and "user" of common skills and concepts.	Become "builder" and "connector," unifying content in context.
Parents	Help their child to meet instructional goals.	Collaborate in developing learning goals.	Are equal partners sharing content area expertise in context.
Administrator	Coordinates program and administrative issues.	Oversees efforts to collaborate and facilitate integration efforts.	Shares expertise and leadership in building a team effort.
Responsibilities - what each individual and the content is charged with in the curriculum.			
Content	Domain-specific content in each subject is presented.	Is used to identify and develop common concepts and skills.	Is analyzed to identify subject matter concepts and skills in real-life contexts.
TS	Teach own area using integration methods.	Consult and share but remain responsible for subject area.	Are equal partners. Responsibilities are delegated according to learner needs.
Students	Are required to synthesize and integrate content and skills.	Are exposed to curriculum in an integrated fashion.	Assume added responsibility for developing integrated concepts and skills.
Parents	Provide home support for the student and the school.	Play a partnership role in promoting integrated learning.	Are "co-educators" with TS developing skills along with teachers and students.
Administrator	Emphasizes management of the school program.	Emphasizes collaboration among the stakeholders: a facilitator.	Is a "co-educator" responsible for instructional and collaborative leadership.
Outcomes - the expected results from each curriculum model.			
Content	Subject remains conceptually intact.	Is filtered and refined into common skills and concepts.	Becomes connected with skills in specific real-life contexts.
TS	Remain concentrated in their own field of expertise.	Collaborate and consult but all do their own instruction.	Become adept in relating individual expertise to other subject areas.
Students	Learn content of a discipline to make their own integration of content areas.	Learn key skills and concepts common to all subjects.	Learn how to connect and apply content and skills in specific real-life contexts.
Parents	Support the school's efforts to educate their child.	Participate and provide expertise where needed.	Develop their combined roles as parents and educators, synthesized as part of real-life contexts.
Administrator	Focuses on management of teacher and student efforts.	Focuses on collaborating with teachers and parents.	Synthesizes leadership by combining management with consulting and teaching.

Decision-Making Choices For Using or Combining Curriculum Integration Models

Once a school team has arrived at some consensus about its present operating framework, it is time to decide whether to change or modify that framework and how to do it. Each school team will make different decisions based on particular needs. Regardless of the specifics, there are several important issues to consider in deliberating over choices. First and foremost, **make a decision based on a commitment to the goal: an integrated curriculum with students demonstrating integrated knowledge and skills.** There are many modifications one can make, but it is important not to initiate changes that cannot be carried out or which will be counterproductive to the goal.

Second, there should be a plan to build **informed consent** among all the stakeholders including teachers, parents, administrators, and students. It is important that everyone involved knows what model has been developed and how it may be different from what has been occurring in the past.

Third, **decide on a model based on existing and available material and personnel.** Identify the local strengths and challenges in using the model, including the degree of knowledge and expertise of personnel; amount of time and new training (if any) needed to ensure adequate implementation; and the degree of school and community support for implementing new changes.

Fourth, **make a commitment** to give the model a chance. It is important to recognize that change is a process and there will be "peaks" and "valleys" as new efforts are attempted. Encountering difficulties usually means that the new effort is at the beginning stages of success.

Finally, **trust the process.** Involving many people in new efforts is often "messy." However, if all are involved and allowed to voice their concerns, chances are no one will undermine the effort.

Instructional Strategies for Implementing Integrated Curriculum Models

A common concern among teachers is how different instructional strategies can facilitate student learning. Three factors important to integrated learning which are under the teacher's control include (1) teacher-related skills, techniques and perspectives in working with students; (2) the different ways the curriculum can be manipulated to teach subject matter; and (3) the different ways to manipulate the classroom environment. Consequently, a major concern for integrating the curriculum is how teachers (1) can effectively develop individual expertise in teaching their students; (2) learn and use appropriate curricular strategies; and (3) create optimal classroom environments conducive to integrated learning.

Instructional strategies can have different starting points, or orientations. Three such orientations include teacher-oriented, curriculum-oriented, and technology-oriented strategies. Teacher-oriented strategies are marked by how the teacher

approaches working with students including creating different classroom environments. Curriculum-oriented strategies are marked by how the teacher manipulates the content. Technology-oriented strategies are strategies based on new and emerging computer technologies and other electronic media.

The remainder of this section is devoted to providing examples of these three types of teaching strategies. The strategies described here are not exhaustive. Rather, they are examples meant to provide a starting point for considering and deciding upon strategies that will work best for educators in their efforts to promote integrated learning. In this vein, each strategy will be briefly described and then supplemented by research citations documenting the strategy's effectiveness including the kinds of student populations with which it has been tested. Highlights and cautionary notes will follow regarding the strategy's potential within an integrated curriculum.

Teacher-Oriented Strategies

Overview

Teacher-oriented instructional strategies are defined here as strategies that teachers use to manipulate the classroom environment or to develop students' learning skills. Of course, such strategies are a product of one's pre-service training; on-going in-service training; and, not the least, one's accumulated teaching experience. However, when endeavoring educational changes, such as adopting new approaches to curriculum, previous training and experience may undergo serious challenge. On the one hand, it is important not to "throw the baby out with the bath water" by purging what has been found to work well. On the other hand, the instructional strategies that have worked well in the past may not match what is needed in a new curriculum. Teachers, as well as the specialists and administrators with whom they work, must know and be able to employ some core *foundational* teaching skills, especially given the challenges inherent to integrated curricula. Three such foundational strategies are described below: (1) cooperative learning, (2) learning-strategies instruction, and (3) direct instruction. These three strategies neither exhaust the possible list of core teaching skills nor do the following explanations of them fully cover the range of possible adaptations. They are meant to spur team thinking about what teachers must do to ensure that an integrated curriculum truly results in meeting educational goals for students. As such, these three strategies represent important "tools" in, what it is hoped, is a teacher's larger "tool box" of teaching strategies.

Cooperative Learning

Cooperative learning is an instructional approach in which learning is organized through student-led teams. These student teams form the core of the classroom environment through which various learning tasks are presented. Each student in the team is expected to contribute to the task with the idea that learning will be accomplished through "putting heads together" (hence, "cooperative" learning).

Cooperative learning has three foci: (1) promoting student responsibility for learning; (2) building social learning skills; and (3) using curriculum strategies requiring problem-solving. Student responsibility is promoted by emphasizing "team" concepts rather than "group" concepts. In a **team,** individuals' roles and responsibilities are clearly defined. For example, in many cooperative learning teams a student is assigned to be a facilitator, organizer, timekeeper, verifier (checker) of work, presenter, or recorder. A **group** effort, on the other hand, often does not exhibit clearly defined roles. Rather, such efforts are marked by individual posturing and work being done by a few individuals within the group. When students share and contribute different strengths and work together to meet challenges, they are engaging in team efforts. Whereas, when students work together but the individuals work to promote individual achievement they are engaging in group efforts.

Cooperative learning is marked by teacher efforts to promote social learning skills. Two important teacher strategies essential to building such skills are "multiple ability" and "status" treatment (Cohen, 1995). Multiple ability treatment refers to students building skills in all the possible roles encountered in a cooperative situation. Every team exhibits different kinds of roles for its members. However, as in many social situations, students often learn to stratify individual roles. Some roles are considered more important than others, or have higher status, and are often taken by one or two of the "better" students. Usually such roles are reserved for the higher achieving students. To overcome this problem, teachers using cooperative learning emphasize varying these roles among students so that each student spends time learning different roles. As a result, students build their individual skills across different roles and every student learns the value of different contributions made in team efforts.

Status treatment refers to ensuring that no student is relegated to "low status" within the team because of perceived ability, social status, or other prejudices. Thus, status treatment is a way to overcome social stratification and ensure that all students are valued for their contributions to the team. Through cooperative learning, teachers promote positive status treatment by modeling equity in their interactions with all the students, observing team interactions, and intervening to promote status equity when necessary.

Finally, cooperative learning employs curriculum strategies that require team processing to achieve learning goals. Curriculum strategies based on problem solving, that require multiple abilities or involve multiple sources of information are particularly ideal for cooperative team efforts.

Cooperative learning has been investigated in numerous settings, under various conditions, and with many different student populations. Some relevant research findings include its optimal use with different kinds of integrated curricula (Winget, 1987; Brophy, 1990; Gallengo, 1992; Marcincin, 1992; Garcia, 1993; Wood, 1994), positive learning gains with disadvantaged and special needs students (Nemko, 1990; Jenkins, Jewell, Leicester, O'Connor, Jenkins, and Turner, 1994) and as a school-wide program of instruction (Stevens & Slavin, 1995).

A common misunderstanding about cooperative learning is that just the act of placing students in learning groups will produce learning gains. As has been described above, cooperative learning is not simply teaching with small groups. The success of cooperative learning, as with most instructional processes, is largely dependent on the teacher's role in creating a positive learning environment. Cooperation is a learned behavior and requires good modeling with appropriate instruction.

Learning Strategies Instruction

Teaching students to exhibit and apply effective learning strategies has become an increasingly important component within many curricula. The growing requirements of knowledge in this technology-driven society demand that citizens demonstrate skills to acquire content as much as to demonstrate knowledge of the content itself.

Research has demonstrated that learning strategies can be taught. Strategy instruction focuses on teaching students core skills for acquiring new knowledge. Such strategies can include basic study skills and other forms of "curriculum negotiation" (e.g., test-taking and note-taking); subject matter skills such as problem-solving in mathematics and reading comprehension skills; or "self-regulatory" skills in which students learn to monitor and adjust their learning or behavior.

It is important for all students to receive strategy instruction because, as information requirements grow, new strategies will be called for. Students with a few successful strategies today will need to add new ones tomorrow. Students who do not exhibit effective strategies presently will need those strategies to participate within curricula that emphasize such skills.

Research on strategy instruction and integrated curricula include literacy strategies for use across subject areas (Ellis, 1994; Gray, 1987; Miller, et al. 1988; Taylor, 1987); study, test-taking, and note-taking skills across the curriculum (Guedry-Hymel, 1984); science and mathematics strategies across the curriculum (Peters, 1988; Siegel, 1992); literacy strategies in dance (Yoder, 1992); and technology-oriented strategies within the curriculum (Komoski, 1987; Sanders, 1994). The effects of strategy instruction have also been well documented among "at-risk" students (Deshler & Lenz, 1989; Deshler & Schumaker, 1993; Ellis & Lenz, 1990) and among students with mild learning disabilities (Billingsley & Wildman, 1990; Deshler & Lenz, 1989; Ellis, Lenz, & Sabornie, 1987; Mastropieri, Scruggs, & Levin, 1986; Schumaker & Deshler, 1992).

Two concerns about strategy instruction are (1) teachers may overemphasize teaching of strategies and under-emphasize teaching of content and (2) educators may over-emphasize "immediate" functional skills to the detriment of more general "cognitive" learning strategies. In the first case, because teachers have to operate within a finite time schedule, they may feel compelled to shorten either the time for teaching strategies or the time for teaching general content. As a result, neither aspect of instruction can be well-covered. In the second case, teachers, specialists, and administrators may focus solely on immediate skills (e.g., test-taking and note-taking); whereas, the broader skills such as accessing new information, information retention, and self-regulatory skills

(e.g., self-monitoring, and self-assessment) may actually be more pertinent to students' needs. Teachers and other instructional planners, therefore, must ensure they have thoroughly assessed their students to determine which skills require priority.

Direct Instruction

Essentially, direct instruction is an organized teaching sequence. In such a sequence the teacher informs the students about what is to be taught, provides examples and demonstrations of the new material, gives many opportunities for students to practice, and checks to see that learning has taken place (Rosenshine, 1979; Rosenshine & Stevens, 1986).

Although there are many adaptations that can be made, three basic components form the core of direct instruction: (1) demonstration, (2) guided practice, and (3) independent practice. In the demonstration phase, teachers state the goal, provide examples of new materials (or skills), involve the students in the examples, and check for comprehension. In guided practice, students work with the teacher to exercise their new learning under conditions where they can receive immediate positive feedback from the teacher to ensure student proficiency. Finally, through independent practice students internalize the new learning. The teacher provides guidance and feedback at ever more distant intervals as the students demonstrate "fluency" with the new learning.

Direct instruction has been found effective in conjunction with the other foundational skills previously discussed. In conjunction with cooperative learning, direct instruction has been incorporated into integrated learning models such as Cooperative Integrated Reading and Composition [CIRC] (Slavin, 1990) and with specific literacy development approaches such as reading comprehension strategies (Dowhower, 1989). Direct instruction has also been associated with learning strategies instruction (Ellis, Lenz, & Sabornie, 1987; Deshler & Lenz, 1989).

Controversy continues to exist characterizing direct instruction as overly teacher-centered and incongruent with other "holistic" student-centered instructional approaches (see Kameenui and Shannon, 1988, for a good "point/counterpoint" on this issue). However, it is hard to argue with the idea that teachers should let their students know what it is they are going to learn, provide practice in what they have learned, and determine if learning took place. In any case, direct instruction has seldom been advocated in a vacuum and its components are found in many empirically documented student-centered teaching strategies. Such strategies include reciprocal teaching (Palinscar & Brown, 1984); collaborative problem solving (Palinscar and Klenk, 1993); and mnemonic strategy instruction (Mastropieri, Scruggs, and Levin, 1986).

On the other hand, direct instruction can, like other strategies, result in producing obstacles to integrated learning, especially if presented in isolation. Direct instruction emerged as a description of effective teacher behaviors in traditional classroom settings (cf. Rosenshine, 1979) that was then organized into a model (Rosenshine & Stevens, 1983, 1986). Additionally, direct instruction seems particularly well-suited for students

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exhibiting less-developed skills within "well-structured" settings and with well-structured content (Rosenshine & Stevens, 1986). Thus, the exact procedures of direct instruction may not be as relevant to integrated settings as the more fundamental notions upon which direct instruction is based. That is, the notions that students should be apprised about their learning goals, involved in developing them, encouraged to practice their learning, and held accountable for their learning are all essential to ensuring that students do, in fact, learn within an integrated curriculum. Moreover, in line with the principles of the Keystone Integrated Framework, because direct instruction has demonstrated wide success with at-risk and low-achieving students, it represents an important instructional approach to ensure that such students do not fall further behind because of reform efforts.

Curriculum-Oriented Strategies

Overview

Distinct from teacher-oriented strategies, curriculum-oriented strategies are approaches to instruction that focus on teacher manipulation of the content. Such teaching strategies represent innovative ways to present subject matter in a manner that promotes integration of concepts and skills.

The curriculum-oriented strategies described below represent different forms of a general "thematic" approach which had its genesis in the early decades of this century (cf. Kilpatrick, 1919; Dewey, 1933; Thorndike, 1931; Whitehead, 1931). All such strategies were developed out of early concern about "compartmentalized" education which was observed to result in what Alfred North Whitehead (1931) called "inert knowledge." That is, whether educational goals were aimed at social responsibility, citizenship, knowledgeable employees, or social leadership, young people would need to learn how to integrate multiple skills and information. The necessity to recognize, understand, and practice separate disciplines should not result in unconnected learning. Instruction, therefore, should focus on making learning applicable to real-world situations and intrinsically motivating to the student.

Four "thematic" strategies relevant to curriculum integration will be described: (1) theme-based instruction, (2) problem-based instruction, (3) service-based instruction, and (4) project-based instruction. In some cases, these strategies have been associated with particular grade levels (e.g., theme-based learning is usually associated with middle schools). However, each of these strategies embodies key attributes that practitioners should consider in their plans for integrating the curriculum.

Theme-based instruction

Thematic instruction organizes the various subject areas of the curriculum into meaningful connections by placing content-area learning within a topic of interest. A general procedure is the choosing of a theme for use over a long duration (six months to a year), developing shorter length (monthly, six weeks) components of the theme, and shorter weekly topics within components that would then be developed into lessons.

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Two general guidelines for choosing themes are to make sure that the theme chosen is general but not vague and to choose themes that are clear and relevant to the students. First, themes should be general enough to capture the various subject areas meaningfully. That is, each subject area targeted within the theme should not be so tangential to it that students (or teachers) consider some content areas superfluous and, thus, dismiss them as irrelevant. Second, themes should be of abstract or concrete interest to students. Abstract themes can be interesting even if they do not directly relate to students' present lives. An example is the "space" theme where students explore everything from the earth as a planet to the space shuttle. Concrete themes are intrinsically interesting because students can see examples of the theme directly in their daily lives. An example of a concrete theme is a "river" theme for students who live on the Susquehanna River. Finally, because these guidelines are essential to planning theme-based instruction, well-planned needs assessment must be conducted to ensure "goodness of fit" of theme with students, teachers, and the school's capabilities.

Literature on theme-based instruction consists mainly of anecdotal descriptions of successful programs (e.g., Gamberg et al., 1988; Hall, 1985; Wells, 1990; Drake, 1991) and theoretical model-building (e.g., Ross, 1993; Kovalik, 1994; Pappas, et al., 1990). However, some empirical research has validated the use of themes to generate information beyond the content of instruction (Alvarez, 1990) and demonstrated student use of multiple literacy skills and student recognition of interconnections among different subject areas (Rosaen, 1991). Additionally, support for the thinking processes inherent in theme-based approaches can be drawn from such psychological research as "generative learning" (Wittrock, 1989; 1992). Generative learning is described as a process in which learners make connections between new information and prior learning and among concepts within a learning activity. In essence, the generative view of learning considers thinking as a process of developing themes and patterns often associated with "brain-compatible" learning (cf. Hart, 1985).

Two concerns with theme-based instruction are that the appeal themes may be limited to younger students from upper elementary to middle school and, more theoretically, that themes may be content-integrated but not necessarily **experience**-integrated. First, much of the literature on theme-based instruction seems to be based on middle school curricula and in earlier grades. Students in upper secondary grades may not see the appeal of themes as readily as younger students. Second, one reason why themes based solely on content may not appeal to high school students is that those students may require a connection with themes through experience. That is, older students are making a transition to adulthood and may require curriculum aimed at providing relevance to what they are learning. Some of these concerns are addressed through the curriculum strategies described below.

Problem-based Instruction

Problem-based instruction is one way to incorporate experience into thematic teaching. In this approach, teachers pose a real-life problem connected both to students' experience and to relevant subject matter in the curriculum. Students discuss and formulate questions to investigate the problem, derive possible solutions to the problem, and

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decide the best way to solve the problem. As a result, students learn the necessary skills and content required to investigate an issue, make decisions, and produce solutions.

Problems that are posed usually have multiple solutions; thus, students have opportunities to integrate learning from a variety of perspectives and to produce different kinds of products to demonstrate what they have learned. Teachers act as coaches and tutors providing support where it is needed and facilitating discussions on student progress.

Problem-based instruction is based on an earlier model called "case-based" instruction, long a component of education in the medical, legal, and scientific fields (Aspy, 1993; Albanese, 1993; Buzzelli, 1994; Engel, et al., 1990; Ferrier, 1990). Like other thematic approaches, research on problem-based instruction in public education is largely based on anecdotal descriptions and theoretical model-building (cf. Stepien & Gallagher, 1993; Cordeiro, 1990). Empirical evidence on the efficacy of problem-based instruction rests primarily on case studies and program evaluations (cf. Stepien, Gallagher, and Workman, 1993; Savoie & Hughes, 1994).

Three major concerns are apparent about problem-based instruction. First, it is important to ensure the problems developed are, in fact, clearly relevant to all subject areas and not trivially so to some. For example, the research cited earlier (e.g., Savoie & Hughes, 1994; Stepien, et al, 1993) describes problem-based instruction as it is applied within one or two subject areas. Although this approach shows promise for integrating larger sets of subject areas, developing effective problems to encompass meaningfully all subjects will require some thought and effort.

Second, not all possible solutions to problems will produce opportunities for in-depth learning and integrated knowledge. Thus, the teacher may need to play a more direct role in guiding students toward solutions appropriate to desired educational objectives.

Finally, the problem of the teacher's role is even clearer when considering the third concern: students with various sorts of learning difficulties may end up excluded from the process. There is a large assumption in problem-based instruction that students will already possess some basic literacy and problem-solving skills, characteristics not always true of handicapped, limited English-proficient, or low-achieving students. To ensure that all students benefit from problem-based instruction the teacher may need to engage in more direct forms of teaching in addition to peer-assisted strategies such as cooperative learning.

Service-based Instruction

Service-based instruction is a teaching strategy in which students learn through engaging in community or individual service to others. Service-based activities are organized so they are linked to educational objectives (Olzewski, 1993). In service-based instruction, students are placed in service organizations, businesses, or with individuals to participate as volunteers. Educational objectives are met by students writing, discussing, or performing academic tasks related to their service experience. Teachers work with students as mentors and as managers of students' academically-related development.

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The rationale behind service learning is based on a concern for providing direct ways for students to develop citizenship, social responsibility, and effective decision-making skills (Pomata, 1994; Siegel, 1993). This concern is considered especially relevant for individuals whose post-secondary education and career paths may appear limited (Gajar, Goodman, & McAffee, 1993) or because a service orientation is congruent with a community's cultural traditions (Hall, 1992, 1991).

Service learning research has demonstrated positive effects among students engaged in service with older adults (McGowan, 1994; Bringle, 1993) and with efforts to integrate community-service projects into the school curriculum (Kinsley, 1993). Additionally, service learning has received high social validity (participant satisfaction) in its implementation (Gonzales, 1993; Malvin, et al., 1982; Fertman, et al., 1993; 1994).

Important concerns related to implementing service-based instruction within integrated settings relate primarily to ensuring a strong school-wide commitment, clearly detailing educational objectives, and monitoring student progress in both academic objectives as well as direct service objectives. In ensuring school-wide commitment it has been found important for students to receive adequate support from school faculty as well as meaningful amounts of time at service sites (Fertman, et al., 1993). Students should have clearly defined service and learning goals (Kendall, 1991). Otherwise, students will be unsure how their service relates to their education, and their experiences may not adequately meet the goals of the program (Malvin, et al. 1981; Fertman, et al., 1993).

Project-based Instruction

Project-based instruction is a way of developing curriculum through student-chosen units of investigation. The subject matter inherent in the project determines what subject matter is covered. In this way, subject matter is integrated because the nature of the learning tasks within the project require knowledge and skill in several areas. The specific ways that the content is integrated is determined by the specific nature of the project.

Although projects can be developed with more or less teacher intervention, an essential aspect is the role of student choice in determining what project to undertake. Student choice is considered important because learning in this context requires high intrinsic motivation to learn the necessary skills and content to produce a high quality product.

Project-based learning, like its other thematic counterparts discussed previously, has a long history (cf. Kilpatrick, 1919; Wolk, 1994). Research on this method includes content-specific qualitative and anecdotal research in the areas of literacy (Adkins, 1990; Jorgensen-Esmaili, 1990; Shelley, 1987), social studies (Hindle, 1993; Pereira, 1988; Siegel, 1991), history (Hickey; 1991; Idemoto, 1993; Pace, et al., 1990), and the arts (McCarty, 1994).

One approach to project-based learning is the "Foxfire" program (Peterson, 1973; Wigginton, 1978). This program has been especially relevant to educating poor and disadvantaged youth. The Foxfire approach emphasizes investigation of students' family and community folklore, folk arts, and folk life to produce publications and conduct projects on history, science, and mathematics related to social-scientific issues in their immediate lives. Foxfire is based on 11 core teaching practices: student choice and responsibility for their work; teacher guidance and modeling; peer teaching; teamwork; reflection; academic integrity of student work; interconnectivity of the classroom with the community and the world; honest evaluation; and aesthetic experience. Like other research on project-based instruction, Foxfire enjoys wide anecdotal support (Eddy, 1991; Flores, 1989; Gertzman, 1988; Paterno, 1994; Puckett, 1989; Sitton, 1980).

Major concerns about project-based learning include earlier concerns expressed about problem-based and theme-based approaches. That is, it is not always an easy task to ensure projects meaningfully encompass all the targeted subject areas and, at the same time, ensure students can independently use basic skills in the process. Students working on a project, individually or in cooperative teams, may often need more direct teacher support. This kind of support is especially relevant to students identified with learning disabilities or who encounter other learning difficulties (see Gertzman, 1988; Phillips, 1991; Palmateer, 1983; Ensminger, 1992).

Technology–Oriented Strategies

Technology-oriented teaching strategies are defined here as instruction based on the use of computers and other electronic media. These strategies tend to require training in computer-based teaching and are largely dependent on available technology. Thus, not all schools or teachers may have access to the equipment necessary for these strategies. However, the instructional strategies discussed here may be used to adapt present curricula despite the availability of necessary technology. Additionally, schools or teachers planning to adopt computer use in their new curricula may wish to explore these strategies and their materials.

This section addresses two emerging technology-oriented strategies: anchored instruction and "random access instruction." Although a rich base of research literature exists on the uses of computer-assisted instruction, discussion will be limited here to these two instructional approaches since they represent coherent instructional methodologies based on well-formed theories about curriculum integration.

Anchored Instruction

A relatively new line of research that has entered the field of education is the notion of "anchored instruction" developed by the Cognition and Technology Group at Vanderbilt University [CTGV]. The CTGV describes anchored instruction as "situating instruction in videodisk-based, problem-solving environments . . ." (CTGV, 1990). Teachers using anchored instruction take advantage of recent video-disk technology to create classroom experiences involving naturalistic, real-life problem-solving situations.

Students are first engaged in problem scenarios (instructional anchors) such as the "Jasper Woodbury" video-disk series (developed by the CTGV, 1992). These scenarios then serve as the basis for activities integrating instruction in several subject areas such as literacy, mathematics, science, and social studies. Critical attributes of anchored instruction include an emphasis on problem-solving skills and cooperative learning within shared learning experiences.

Research on anchored instruction centers on two research projects: an anchored instructional sequence based on the movie *The Young Sherlock Holmes* (CTGV, 1990) and the "Jasper Woodbury" series (CTGV, 1992). Both stories were produced on video-disks and used with students to develop writing projects, solve problems, and develop research investigations. The initial findings have demonstrated promise in that students receiving anchored instruction have exhibited superior levels of complex problem formulation and increased student and teacher interest (CTGV, 1990, 1992).

Other recent work has demonstrated high results with learning-disabled students. Bottge and Hasselbring (1993) compared problem-solving using "contextualized" problem situations developed from the Jasper series with traditional guided instruction using standard word problems. The researchers found that learning-disabled students in contextualized problem situations did as well as or better on tested word problems than their handicapped and non-handicapped peers. Second, identified learning-disabled students in contextualized problem situations exhibited superior ability compared to their handicapped peers on generalization measures in transferring skills to different problem situations.

Concerns about anchored instruction center on whether the technology will be accessible and whether it will foster motivation to learn. To date the major focus for research in anchored instruction has been on the development of effective instructional media and related teaching methods. On the one hand, researchers have pointed to the efficacy of the model for disabled and disadvantaged students (CTGV, 1990, 1992, 1993; Bottge and Hasselbring, 1993; Moore, Reith and Ebeling, 1993). On the other hand, the accessibility of advanced media such as video-technology in the "real" world for such students is highly problematic (cf. Kozol, 1992; Woodward and Noell, 1993; Hanley, 1993).

A second problem relates to the effectiveness of anchored instruction in promoting long-term motivation. Research on student motivation indicates that in promoting interest in school-related tasks, factors that "catch" interest such as computers, computer games, and even cooperative group work may not necessarily "hold" student interest (Mitchell, 1993). Factors that seem to hold student interest include activities that are meaningful and actively involve the student. One question that needs to be answered is whether anchored instruction will hold student interest or simply be another initially interesting activity that fails to maintain long-term motivation to learn.

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Random-access Instruction

Random access instruction (RAI) uses the "hypertext" capabilities of Compact Digital Disk-Read Only Memory (CD-ROM) computer technology to create learning modules for ill-structured learning tasks such as literary interpretation, bio-medical research, and military strategy (Nix and Spiro, 1990; Spiro, Feltovich, Jacobson, and Coulson, 1991a, 1991b). The most predominant example of this approach to date is the development of the CD-ROM program KANE (Knowledge Acquisition by Non-linear Exploration) based on the Orson Welles film *Citizen Kane*.

The KANE program helps students explore the various ways a piece of literature can be interpreted. The essence of the program is based on "random access" use of CD-ROMs. Rather than a uni-dimensional treatment of the material used in more conventional approaches, the KANE program allows students to "crisscross" through the material to recognize the different thematic patterns that can be found within this single film. For example, students learn to identify ten possible themes that can explain the nature of the character Citizen Kane. This kind of activity helps to build critical-thinking skills that can facilitate learning-transfer to other situations (for example, identifying the various points of view taken in newspaper editorials about a news event). Students develop their research and information-gathering skills as well as learn to recognize multiple representations of human action. Random-access instruction, thus, helps student build flexible schemas that, in turn, facilitate appropriate schema assembly in new situations (Spiro et al., 1991a, 1991b).

The challenges to random access instruction lie in the possibilities for its misinterpretation and misuse. Chief among these challenges is the problem of over-simplification of the main tenet of RAI—the emphasis on developing multiple representations of a particular situation. Spiro et al. have noted that the notion of multiple representations and the crisscrossing of the same event from different vantage points does not mean that any interpretation of reality is "O.K." On the one hand, students can easily be led to believe any solution is good. On the other hand, teachers can, if not careful, unconsciously (or even consciously) "steer" students toward the "proper" points of view. The multiple representations of reality inherent in activities like KANE need to be carefully used in order to avoid either pitfall.

A second challenge is the possible elitist use of random access instruction. Spiro et al. caution that random access instruction is best used in advanced learning of complex content and is not suited for simple, well-structured learning domains. The obvious danger is that educators can be led to believe that such a theory is only for "advanced" students. To the contrary, students of different abilities and experiences can benefit from random access instruction both in cooperative and individual situations.

Final Comments

This document is intended to provide school planning teams an overview of instructional strategies for use with integrated curricula and models upon which such curricula are built. Making decisions about curriculum integration requires thoughtful consideration about a school's present operating framework in relation to changes about to be undertaken. The discussion about curriculum models is intended to encourage educators to reflect on this relationship in order to determine what kinds of changes need to be implemented. This stage of planning is important because curriculum frameworks can determine specific results—how and what students learn, how teachers and administrators relate between and among one another, and how parents and communities relate to the school.

Once decisions are made to undertake a new framework, deciding how teachers will function and what instructional strategies best fit their needs, given that framework, becomes paramount. The instructional strategies presented here provide a survey of current teaching practices and their relevance to integrated curriculum efforts. In this light, some suggested criteria are offered to aid in deciding what strategies to use and how to use them.

First, the decision-making suggestions offered previously for deciding on curriculum models are also relevant in deciding on instructional strategies. That is, strategies of instruction should adequately match the model adopted. Considerations in adopting new instructional strategies include personnel and materials; strengths and challenges of the staff, the school, and the student body; strengths and challenges of a school and its community; and participation of parents. Second, because adopting changes invariably means additional training, it is important to make decisions based on available time and potential for support.

Building in decisions about training bears on a final, but crucial, suggestion—adequate implementation of proposed strategies. The road to educational reform is strewn with efforts demonstrating poor results because such efforts were poorly implemented and too quickly abandoned at the first sign of trouble. It is neither fair to the program nor to the students to implement a strategy incorrectly or half-heartedly. A commitment should be made to provide adequate preparation and time for changes to bear fruit. It is important to remember that change is "messy," and that **the first sign of true change comes with the first difficulties encountered.** It is at such times that educators seeking to implement desirable change must be willing to give support to each other and, especially, to their students. Change does not have to be slow. But it does require deliberation and commitment. It is hoped that this document can help in the deliberation of appropriate educational change. Commitment, however, must come from the reader who, in turn, becomes the change agent.

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Instructional Strategies: Selected Articles

Teacher-Oriented (Foundational) Strategies

Cooperative Learning

Slavin, Robert (1992). Putting research to work: Cooperative learning. *Instructor*, 102 (2) 46-47.

Direct Instruction

Rosenshine, Barak (1987). Explicit teaching and teacher training. *Journal of Teacher Education*, 38 (7) 34-36.

Learning Strategies Instruction

Deshler, D.D. & Lenz, B.K. (1989). The strategies instructional approach. *International Journal of Disability, Development and Education*, 36 (3), 203-224.

Curriculum-Oriented Strategies

Theme-Based Instruction

Drake, Susan M. (1991). How our team dissolved the boundaries. *Educational Leadership*, 49 (2) 20-22.

Problem-Based Instruction

Stepien, William (1993). Problem-based learning: As authentic as it gets. *Educational Leadership*, 50 (7) 25-28

Project-Based Instruction

Wolk, Steven (1994). Project-based learning: Pursuits with a purpose. *Educational Leadership*, 52 (3) 42-45

Service-Based Instruction

Briscoe, John (1991). Citizenship, service, and school reform in Pennsylvania. *Phi Delta Kappan*, 72 (10),758-760

Technology Instruction

Komoski, P. Kenneth(1987). Beyond innovation: The systemic integration of technology into the curriculum. *Educational Technology*, 27 (9) 21-25

Anchored Instruction

Cognition and Technology Group at Vanderbilt (1992). The jasper series as an example of anchored instruction: Theory, program description and assessment data. *Educational Psychologist*, 27 (3), 291-315.

Random Access Instruction

Spiro, Rand J. & Jacobson, Michael J. (1994). A framework for the contextual analysis of technology-based learning environments. *Journal of Computing in Higher Education*, 5 (2), 3-32.
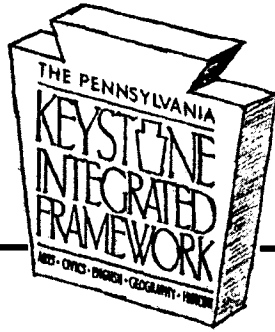
ASSESSMENT
IN AN INTEGRATED CURRICULUM

Assessment Strategies for Curricululm Integration

by Dr. Kathleen Dolgos, Kutztown University

As the Keystone Integrated Framework (KIF) goes into its third year the team members realize that the idea of an integrated approach to learning is going against the culture of most schools. Traditionally, courses are taught in isolation where teachers are not in contact with others teaching the same course or similar topics. Within the KIF project, however, communication is essential as teachers reflect on the interaction of their students and the theme of the project.

Teachers in the KIF project have found that change is a slow process and changing the mind set of schools is not something to be done overnight. KIF participants realize that the projects started at the different sites are works in progress and each site has different approaches to achieve what is considered success.

What all sites have come to realize is that the projects are not following a predetermined structure but are evolving with time. Through a continuous reflection by all participants, the projects are evolving in all aspects of existence. A continuous cycle of experience, action, and reflection is moving the project and changes are occurring.

Experiences within the project have led participants to respond with varying forms of action which, after reflection on these actions, have resulted in new experiences. This cycle has been repeated many times in the life of the project—sometimes on a large scale, other times on a lesser scale.

All sites agree that the reflective process is the key. They realize that there are no guarantees that if one uses a certain strategy the results can be predicted. In reflecting on these projects, two major areas of interest have arisen:

1. What have we found out?

2. What issues have been raised?

In addressing the first question "What have we found out?" the following points have been commonalties at most sites:

1. **Integration takes time.**

   Participants have been in agreement that time is a valued commodity when dealing with integration. Scheduling common meeting time for team members at all levels is a major feat. Planning for integrated lessons involves research time and team planning to avoid overlaps, to insure accuracy and to double-check teaching calendars.

2. **Integration is a process.**

   Many skeptics feel that the integrated approach waters down the course content. What these skeptics must be shown is that integration is a process

and not an addition to the curriculum. Classroom teachers who believe in the process internalize it for success in their classrooms.

3. **Integration occurs more smoothly in an environment of trust.**

   The integration of lessons works more smoothly when all teachers involved are willing to share their knowledge and expertise to make the program successful. A major hurdle of trust was overcome in the KIF project with respect to the bond created by the basic education and higher education members of a team. A trust needed to be established as a basis for open communication about classroom concerns at all levels. The team members in KIF are all on the same level playing field with the same goal—success for students at all levels.

4. **Effective communication is the key.**

   In the Keystone Project effective communication began with applying for the grant. Sites also found that administration support is essential when a program of this type is developed in a district. In a traditional community, a possibly hostile public needs to be kept informed of what is going on in the classroom and supportive administration can help smooth the transition time. The expectations of the project also need to be clarified to all participants. Teachers in the project found that communication with other team members is crucial. Avenues of communication must be kept open for planning, assessment, and reflection.

5. **Teachers are the experts.**

   KIF members were pleasantly surprised to find in their own faculties the hidden talents needed for integration. As trust developed, teachers were not afraid to show their creative side. Teachers felt empowered. Teachers shared their subject knowledge and expertise. All agreed that a hidden treasure had been found in the arts.

6. **Assessment strategies need to be integrated.**

   As the project progressed, teams created many new strategies for formative and summative assessment. (Samples of tools of assessment can be found in the appendices of this article.) Most of the assessment tools have broken from traditional assessment modes, even though most address assessment in one particular discipline or can be used in any discipline. Since the project is evolving, a focus should be on making the assessment tools available for integrated lessons.

Reflection

Experience

Action
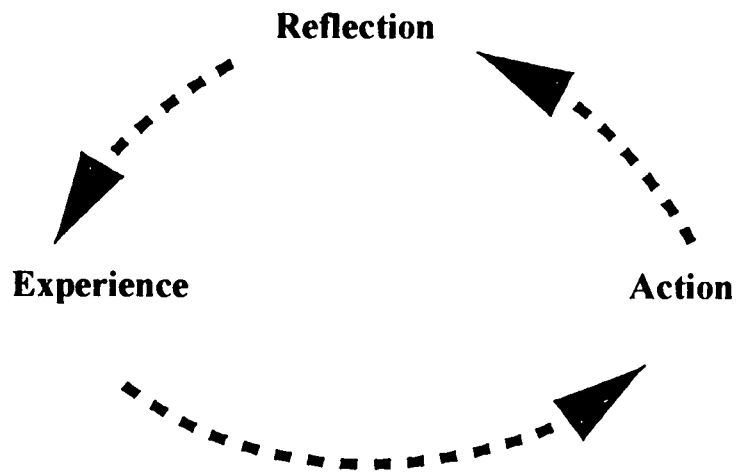
In addressing the second question " What issues have been raised?" the following commonalties appear:

1. **Roadblocks need to be removed.**

   Some teams have found roadblocks in their districts. In some districts this unique program was seen as a threat to the status quo. It was agreed that a supportive administration was the key to building bridges between traditional and new approaches.

   Some parents felt that content was being diluted by all the different additional activities the students were engaged in. Teachers felt that parent information nights greatly improved the level of understanding and acceptance. District presentations about the project might also allay taxpayers' concerns.

2. **Integration should be at all levels.**

   Many unique programs of this type are usually focused on the gifted student. Among the KIF participants it was agreed that students at all levels should be given the opportunity to learn in an integrated approach. Many students not successful in a traditional classroom seem to open up and flourish in this type of setting.

3. **Validation of success is difficult to monitor.**

   In an approach to learning of this type, it is difficult to validate when success has occurred or if success has ended. Success is relative to the expectations of the participants. Therefore, its achievement can occur at many places along a continuum. Success can be defined as that first time a lesson is taught within an integrated approach, or it can be acclaimed when the students finish the project at hand. Success can be one student's active participation or the total involvement of a class.

   All participants agreed to the fact that all sites were successful because attempts to integrate were initiated. On reflection, teaching approaches might change but all participants were willing to try another year of integration.

4. **The inclusion of higher education is important.**

   All participants agreed that one of the most important places to begin change is at the college level. Many sites felt that great inroads were made in communication and that the future holds strong possibilities for professional development through school relationships with the basic education - college teams.

   College participants felt that student teachers placed in the school environment would learn first hand about integration and also be in a school modeling a similar teaching philosophy to that of the college.

5. **The arts are important.**

   All participants agreed that integration using the arts is imperative. Connective ties through art, dance, music, and theater brought out the creative aspects of all involved. All felt that the humanities component was a strong one that should not be under-emphasized.

Summary

Looking back on the first two years of the KIF project, many good things have resulted. Strong relationships have occurred between team members at both levels of education. Barriers to a new idea have been lowered, and teachers will be going out to spread the news about their successes to other educational communities.

The good news to report is that integration is alive and evolving with the Keystone Integrated Framework Project. Participants are looking forward to this year and the challenges of the next steps in integration. Transitions that were rough will become smoother and areas not explored will be visited. The Keystone Integrated Framework Project is a work in progress.

Assessment Within the Keystone Integrated Project

Working within the Keystone Integrated Framework Project gives teachers an excellent opportunity to address the issue of alternative assessment strategies. The Framework implementation has changed scheduling configurations, the use of the physical building, the overall interaction between students and teachers, and the assessment strategies used.

Working with various scheduling configurations is a necessity when working within an interdisciplinary team. Block scheduling which is being attempted in many districts lends itself to the team approach found in the Framework. Large blocks of time enable students to delve deeper into projects. Writing assignments can be tried knowing that within block scheduling time is available for self-reflection, peer evaluation and alternative assessment.

Teachers involved in the Framework have created teams of teachers and groups of students who need a central location to meet, to work, to learn, and to assess. Many of the sites have created areas in their schools that are for the Framework only. Rooms set aside for the Framework can be decorated to reflect the theme of the program.

The combination of having large blocks of time and rooms that can be used for students involved in the Framework creates the perfect environment for the use of alternative assessment. Role playing, drama presentations, and other types of theatre activity work well within a longer block of time in a room conducive to a hands-on approach.

Within this climate, students and teachers have the opportunity for interaction. Conferencing about portfolio content becomes easier when time is made available within a block-scheduling situation. Portfolio conferencing can be handled more realistically when teachers are in an interdisciplinary team approach as encouraged by

the Framework. "Flex time" can be incorporated within the block scheduling to allow for portfolio conferencing.

Many different types of assessment strategies can be found within the Keystone Framework Project. The eleven sites have worked to encourage teachers to try new activities and assessment strategies. Surveying the sites revealed the following assessment strategies or activities:

Checklists

Conferencing

Cooperative Learning Evaluation

Computer Presentations

Debates

Exhibitions and Performances

Group Projects

Journals

Lyrics and Melody of a Musical Composition Analysis

Presentation by Students (Supported by the Portfolio) to a Teacher Panel

Oral Presentations

Oral/Visual/Music Movement Analysis

Pantomime

Performance

Project Peer Evaluation

Persuasive Essays

Reflective Analysis Paper

Reflection Through Multiple Arts Analysis

Research Paper

Rubrics

Self-Assessment

Tests and Quizzes

Video Presentations

Visual Arts Presentation Analysis of Posters and Scenery

Many of the participants within the Framework also created accompanying assessment checklists and guidelines for monitoring student involvement in activities and projects. Samples of these tools can be found in the appendices at the end of this section. The contents include examples of different types of assessment instruments typical of the materials generated from the work involved during the Keystone Integrated Framework Project.

Appendix A: Scoring Rubric—Writing to Persuade

Writing About My Work

Rubric for Assessment of Writing in Journals

Complete Student Activity on Writing—Creating a Brochure

Summary

Many exciting and creative assessment tools have been developed during the process of implementing the KIF Project. Also, teachers have come to realize the importance of varying the assessment to address the different types of students and their learning styles in the classroom. A challenge continues, however. The challenge focuses on the fact that many of the assessment guidelines do not emphasize the integration of the academic subjects but treat them in isolation.

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Appendix A

Scoring Rubric for Activity 1
Writing to Persuade

3 points

<u>Development:</u> The writer identifies a clear position and fully supports or refutes that position with relevant personal and/or factual information.

<u>Organization:</u> The writer presents an organizational plan that is logical and consistently maintained.

<u>Attention to Audience:</u> The writer effectively addresses the needs and characteristics of the identified audience.

<u>Language:</u> The writer consistently uses language choices to enhance the text.

2 Points

<u>Development:</u> The writer identifies a clear position and partially supports or refutes that position with relevant personal and/or factual information.

<u>Organization:</u> The writer presents an organizational plan that is logical and maintained, but with minor flaws.

<u>Attention to Audience:</u> The writer adequately addresses the needs and characteristics of the identified audience.

<u>Language:</u> The writer frequently uses language choices to enhance the text.

1 Point

<u>Development:</u> The writer identifies a position, yet that position lacks clarity. The writer tries to support or refute that position with relevant personal and/or factual information.

<u>Organization:</u> The writer presents an organizational plan that is only generally maintained.

<u>Attention to Audience:</u> The writer minimally addresses the needs and characteristics of the identified audience.

<u>Language:</u> The writer sometimes uses language choices to enhance the text.

Source: Clarion Area School District and Clarion University

WRITING ABOUT MY WORK

1. What is the process I went through while writing in my journal?

2. Who or what first influenced me to write in my journal?

3. What steps did I take writing in my journal?

4. What knowledge did I gain?

5. Why did I choose my design for the vessels?

6. Do I have any questions about my journal?

7. If I were going to redo my journal, what would I do differently?

8. Do I feel I did a good job in writing my journal?

9. My favorite part about this project was the following:

Rubric for Assessment of Writing in Journals

Surface Features	Notation	Observation
conventional spelling		
correct capitalization		
conventional punctuation		
correct syntax		
paragraphing (prose only)		

Inner Layers

ideas in logical order (prose)
correct capitalization shape
  showing thoughtful choice (poetry)
self-editing
accurate information/description
mistakes do/do not show an attempt
  at a new difficulty level (note
  observations; do not score)

Creativity

specific, well-chosen verbs
avoidance of "empty" words
sensory information
vivid/unusual images, metaphors
exploration of rhythm/sound (poetry)
personal detail
avoidance of clichés
writer's "voice"

Source: McNichols Plaza Elementary and the University of Scranton
Teacher: Rose Corcoran

Student Activity # 1

You have been asked to create a brochure following the Lewis and Clark Expedition through the Northwest. The brochure should contain information learned during the study of the Lewis and Clark Expedition.

Before you begin to write, think about the interesting places they saw and people they met. Think about what would be interesting to other people.

You may want to organize your information using a list, web, diagram, or graphic organizer of your choice.

Now, use your graphic organizer to write a draft of the brochure. Write on every other line. Consider these questions as you write:

- Did I begin the brochure with a title and overview?
- Did I use interesting words when I described the points of interest?
- Are my illustrations appropriate?
- Are my locations accurate?

Read your brochure to your group. Use the Peer Response Sheet to revise your brochure with your group.

Source: Clarion Area School District and Clarion University
Teacher: Diane Meyer

Peer Response Sheet

What did you like best about my brochure?

Was my information correct?

What additional information and/or changes would you suggest?

Source: Clarion Area School District and Clarion University
Teacher: Diane Meyer

Next, using the suggestions from your Peer Response Sheet, revise your draft.

Now, proofread your brochure using this checklist.
- Is the brochure organized?
- Did I use correct spelling?
- Did I use correct punctuation and grammar?

Finally, write a final copy of your script. Use your best, clearest handwriting.

FINAL DRAFT

Appendix B

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Student Name:

TO BE USED FOR EVALUATING INTERVIEW ASSESSMENT

1. **Interview**
   a. shows fluency of idea (Always)
   b. teacher must probe (Sometimes)
   c. limited, unclear information (Never)

2. **Showed Enthusiasm**
   a. very enthusiastic (Always)
   b. average enthusiasm (Sometimes)
   c. uninterested (Never)

3. **Confidence**
   a. very confident (Always)
   b. showed a bit of confidence (Sometimes)
   c. unsure (Never)

4. **Gained Factual Knowledge**
   a. very obvious (Always)
   b. showed some factual knowledge (Sometimes)
   c. showed no signs of factual knowledge (Never)

5. **Conveyed The Message Clearly**
   a. fully conveyed the message (Always)
   b. partially conveyed the message (Sometimes)
   c. did not convey the message (Never)

Source: McNichols Plaza Elementary School and The University of Scranton Student Work

Student Name:

GRADING SHEET TO BE USED DURING LESSON OBSERVATIONS

1. **Co-operation**
   a. appropriate purposeful behavior (Always)
   b. usually makes effort (Sometimes)
   c. inappropriate behavior, uncooperative (Never)

2. **Oral Participation**
   a. infers, elaborates (Always)
   b. recalls facts, ideas (Sometimes)
   c. skimpy responses, does not actively participate (Never)

3. **Time on Task**
   a. independently focused (Always)
   b. sporadic control (Sometimes)
   c. lacks direction (Never)

4. **Demonstration**
   a. shares insights and is consistent (Always)
   b. passive involvement (Sometimes)
   c. haphazard, disjointed (Never)

5. **Activities**
   a. shows knowledge of each activity and participates in demonstrated activities well (Always)
   b. shows some knowledge of the activity, demonstrates average activity (Sometimes)
   c. shows no knowledge in the activities, does not demonstrate well (Never)

Source: McNichols Plaza Elementary School and The University of Scranton Student Work

Name: Date:

SELF-EVALUATION

1. Today I discovered

2. It is important to know

3. I am glad I learned about

4. I still want to know more about

5. I need to do more work on

6. Tomorrow I would like to

Source: McNichols Plaza Elementary School and The University of Scranton
Teacher: Rose Corcoran

Checklist for Social Studies
Grade 1

Name: Date:

Project / Topic:

Skill	**Observed** Poor to Excellent 1 2 3 4

Circle one of the numbers for each skill listed below.

Skill 1.
Use maps and maps legends to gain
     information of this time.
(Maps of a country, state, city)

           1   2   3   4

Skill 2.
Compare school life of this time to
     the present.
(School type, school materials, subjects)

           1   2   3   4

Skill 3.
Describe the life of a child in this time.
(Toys, jobs at home, clothing)

           1   2   3   4

Skill 4.
Give examples of customs and symbols brought from
     a different country to the United States.

           1   2   3   4

Points allowed   1 - 1 point   2 - 3 points   3 - 5 points   4 - 7 points

Projects, Teacher Observation, Assessment Tests, Interview

Total Points_____

Source: McNichols Plaza Elementary School and The University of Scranton
Teacher: Kathy Waltz, Grade 1

1

Criteria for Assessment

Skill 1

4 -   → Successfully uses a map legend to gain information

→ Can use the terms *north, south, east, west* correctly in finding locations

3 -   → Usually can use a map legend to gain information

→ Usually can use the terms *north, south, east, west* in finding locations

1 -   → Cannot use a map legend to gain information

→ Cannot use the terms *north, south, east, west* in finding locations

Skill 2

4 -   → Successfully can recognize and name the appropriate school information pertaining to the era

3 -   → Usually can recognize and name the appropriate school information pertaining to the era

2 -   → Sometimes can recognize and name the appropriate school information pertaining to the era

1 -   → Cannot recognize and name the appropriate school information pertaining to the era

Skill 3

4 -   → Successfully can describe a child's life during this era

3 -   → Usually can describe a child's life during this era

2 -   → Sometimes can describe a child's life during this era

1 -   → Cannot describe a child's life during this era

Skill 4

4 -   → Successfully can give examples

3 -   → Usually can give examples

2 -   → Sometimes can give examples

1 -   → Cannot give examples

Source: McNichols Plaza Elementary School and The University of Scranton
Teacher: Kathy Waltz, Grade 1

2

Task Specific Guide - New Year's Day
"Around the World" Graphing Activity

Student Name:

This Assessment Guide can be used to monitor both student behavior and student skills.

Behavior - Circle one word or phrase (**Outstanding, Satisfactory, Needs Improvement**) for each behavior described and assign points as follows:

Outstanding – 3 points
Satisfactory – 2 points
Needs Improvement – 1 point

Student's points

Attention

_____ 1. Fails to listen; does not attempt to listen
Needs Improvement

2. Listens somewhat to teacher's instructions
Satisfactory

3. Actively listens to teacher's instructions
Outstanding

Involvement in Task

_____ 1. Totally unfocused on task
Needs Improvement

2. Looks to others for direction
Satisfactory

3. Independently focuses on task
Outstanding

Skills - Circle one word or phrase (**Not understanding, Developing, Understanding/Applying**) for each skill described and assign points as follows:

Understanding – 3 points
Developing – 2 points
Not understanding – 1 point

Independence

_____ 1. Cannot complete task even with suggestions and reminders from the teacher
Not Understanding

2. Needs assistance in transfer of data, construction of graph, or in interpretation
Developing

3. Is able to work independently on all aspects of the task
Understanding

Construction of Graph

_____ 1. Creates inaccurate or incomplete graph
Not Understanding

2. Creates graph with minor errors or omissions
Developing

3. Creates correct graph
Understanding

Construction of Graph (continued)

_____ 1. Cannot correct errors when pointed out	2. Can correct errors when pointed out	3. Creates correct graph – can spot potential errors by her/himself
Not Understanding	**Developing**	**Understanding**

Describing the Graph

_____1. Does not offer statements about the graph	2. Can make some descriptive statements	3. Readily offers different types of descriptive statements
Not Understanding	**Developing**	**Understanding**

Interpretation

_____1. Cannot interpret data even with prompts	2. Needs assistance in interpreting data and communicating results	3. Is able to interpret and clearly communicate results
Not Understanding	**Developing**	**Understanding**

_____1 Cannot answer even simple questions about data	2. Can answer some questions about data; may need some prompts	3. Can answer questions about data, even without prompts
Not Understanding	**Developing**	**Understanding**

Drawing Comparisons

_____ 1. Unable to see similarities and differences between countries, even with prompts	2. Can see some similarities and differences between countries, with prompts	3. Can readily distinguish similarities and and differences between countries
Not Understanding	**Developing**	**Understanding**

TOTAL SCORE _____

Source: McNichols Plaza Elementary School and The University of Scranton
Grade 1

Appendix C

Visiting with the Student and the Portfolio
(Some questions to ask your students about their journals)

1. What have you chosen to place in your folder?

2. Why did you choose this particular piece?

3. Why is this piece important to you?

4. What does it make you think about?

5. What did you learn from this activity?

6. Do you want to do anything differently next time?

7. What will you change?

8. I noticed that you changed this. What was your reason for this change?

9. Where did you get your idea?

10. What did you learn from this activity?

Source: McNichols Plaza Elementary School and The University of Scranton

Teacher: Rose Corcoran

KEEPING A JOURNAL

NAME:

Please answer the following questions as they apply to your journal.

Circle the number that best describes you and your journal. At the bottom of the page, total your numbers for your assessment score.

- Does your cover have an appropriate picture of the Seeds and Seasons?
- 1 = yes   2 = somewhat   3 = no

- Does each page have a date of the activity or lesson?
- 1 = yes   2 = somewhat   3 = no

- On each page, have you used correct grammar? Do your sentences start with capitals and end with punctuation?
- 1 = yes   2 = somewhat   3 = no

- Do you think you journaled each lesson or activity so that it gives enough information to someone reading about that lesson?
- 1 = yes   2 = somewhat   3 = no

- Is your journal neat and orderly?
- 1 = yes   2 = somewhat   3 = no

- Did you do your best throughout each page of the journal?
- 1 = yes   2 = somewhat   3 = no

Total Score_____

Write a brief summary of what you liked or didn't like about your journal.

What would you do differently in your next journal?

Source: McNichols Plaza Elementary School and The University of Scranton
Teacher: Marge Conroy, Grade 3

Rubric: Journal Entries

**4. Fully Achieves and Demonstrates Knowledge Beyond the
Purpose of the Task**
- Demonstrates superior understanding of the concept and content.
- Fully developed and detailed ideas are demonstrated.
- Communicates effectively and productively the idea of the entry using
    distinct and compelling means.
- Language used is superior (nouns, sentence structure).
- Writing is detailed, organized and supports content.
- Task has few or no spelling or mechanical errors.
- Handwriting, labeling, and coloring is accurate and orderly.

3. Achieves the Purpose of the Task
- Demonstrates explicit understanding of the concept and content.
- Communicates effectively and productively the idea of the entry.
- Language used is effective, not superior (nouns, sentence structure).
- Writing is adequate, but lacking specific details.
- Task is free from major spelling and mechanical errors.
- Handwriting, labeling, and coloring is neat.

2. Purpose of the Task not fully Achieved
- Does not fully demonstrate understanding of concepts and content.
- Communication is not effectively presented.
- Language is basic and uncreative.
- Writing lacks details and supportive ideas.
- Task has major spelling and mechanical errors.
- Handwriting, labeling, and coloring is messy.

1. Purpose of Task is not Achieved
- Incomplete

Source: McNichols Plaza Elementary School and The
University of Scranton
Teacher: Rose Corcoran

Evaluation Checklist
(E / S/ U)

COOPERATIVE WORK SKILLS   (overall --)

→ listens to teammates
→ offers ideas and suggestions
→ performs assigned roles
→ cooperates appropriately in decision-making
→ respects other team members

RESEARCH SKILLS   (overall --)
→ consults appropriate resources
→ selects relevant information
→ orders information in logical manner
→ interprets maps accurately
→ interprets charts and graphs accurately

WRITING SKILLS   (overall --)
           Biography Event
→ uses correct sentence structure
→ punctuates accurately
→ spells accurately
→ uses maps accurately
→ uses charts and maps effectively
→ uses poetic form

READING SKILLS   (overall --)
→ completes subject-related selection
→ participates appropriately in book discussions
→ comprehends selection(s) as per Accelerated Reader

PERFORMING ARTS SKILLS   (overall --)
→ listens to selections
→ identifies instrument or its picture
→ identifies distinctive sounds of selected instruments
→ displays knowledge of background information
→ participates in related singing and dancing

VISUAL ARTS   (overall --)
→ identifies selected artists of the period
→ identifies various materials used by period artists
→ employs techniques of artist of the period
→ creates a finished product reflective of an era

ORAL COMMUNICATION SKILLS (overall --)

→ enunciates clearly

→ uses appropriate volume

→ employs meaningful expression

→ keeps suitable pace

→ makes eye contact

→ establishes appropriate performance level

TECHNOLOGY   (overall --)

→ operates still and video cameras

→ uses computer for research, communication and/or graphics creation

KNOWLEDGE BASE   (overall --)

→ identifies selected events and people

→ names causes of events

→ recognizes locations of major events

→ explains broader impact of event

→ identifies approximate time frame of events

Source: Robert Morris Elementary School and Marywood College

Appendix D

ECODRAMA PRESENTATION ASSESSMENT

CRITERIA	EXCELLENT 4	VERY GOOD 3	SATISFACTORY 2	BEGINNER 1
Presentation is organized and focused on the topic	Well-organized, easy to follow	Adequately organized	Some organization	No clear organizational patterns
Dialogue is appropriate to both the topic and the audience	Uses colorful, vivid, descriptive words (similes, metaphors, and analogies	Used effective and descriptive words. Topic adequately covered	Plain words accurately used. Topic briefly addressed	Ineffective words. Topic not addressed
Presentation reflects the student ability to work cooperatively	Tight, cohesive ensemble	Worked well together as a team	Showed some collaborative effort	Students did not work together as a team
Student demonstrates the ability to work in a given time frame	Finished way ahead of time	Finished all aspects of the project on time	Met some time deadlines	Missed all time deadlines
Props and materials used in the presentation add to the interest and message of the presentation	Creative use of props and materials	Props and materials used appropriately	Some props and materials inappropriately used	No props or materials used
Information, both spoken and non-verbal in the presentation is accurate and appropriate to the topic	Information given is above and beyond that required	All information correct	Some information correct	All information correct

Scoring Rubric for Oral Presentation

Name: Date:

4 Points

→ Student consistently faces the audience
→ Student stands straight and maintains eye contact
→ Voice projects well and clearly
→ Pacing and tone variation are appropriate
→ Well-organized, points logically and completely presented

3 Points

→ Student usually faces the audience
→ Student usually stands straight and maintains eye contact
→ Voice projection good, but clarity and pace vary during talk
→ Well-organized, but repetitive
→ Occasional poor choice of words

2 Points

→ Student is fidgety
→ Some eye contact and facial expression change
→ Uneven voice projection, not heard by all in the room, some words mumbled
or slurred
→ Loosely organized, repetitive, contains many incomplete thoughts

1 Point

→ Student's body movements are distracting
→ Little eye contact or voice change
→ Words slurred or mumbled, speaks in monotone, does not project voice
beyond first few rows, no consistent or logical pacing
→ Rambling presentation, with little organization, and no differentiation
between major and minor points

Source: Clarion Area School and Clarion University

GRADE THREE THEATRE REFLECTION SHEET

1. Your name: Character you play:

2. Date of performance or rehearsal:

3. What did I do very well?

4. Audience reaction:

5. What mistakes did I make?

6. What can I improve upon to make the play better?

7. Things to remember for next time:

8. How do I think it will go next time?

Source: McNichols Plaza Elementary and University of Scranton

Appendix E

Integration Checklist

Theme:

Disciplines

Focus Areas   Arts   Civics   English   Social Studies   History

INTERACTION ACTIVITIES

1. Topics are introduced
   within the construct
   content.

2. Higher order thinking
   skills are employed that
   encourage integration of
   the disciplines.

3. Technology is used to
   integrate the focus topics.

4. Students are assessed
   on projects reflective of an
   integrated approach to
   learning.

5. A variety of instructional
   strategies are used within
   the integrated unit.

6. Activities are presented
   to mirror real life experiences
   beyond the classroom.

7. Activities address the diversity
   of the students involved.

Remarks:

Source: Kutztown University and Louis E. Dieruff High School

THE PENNSYLVANIA

THE PENNSYLVANIA

THE PENNSYLVANIA

THE PENNSYLVANIA
KEYST NE
INTEGRATED
FRAMEWORK
ARTS · CIVICS · ENGLISH · GEOGRAPHY · HISTORY

SECTION
FIVE

NEXT STEPS

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THE PENNSYLVANIA
KEYSTONE INTEGRATED FRAMEWORK
ARTS · CIVICS · ENGLISH · GEOGRAPHY · HISTORY
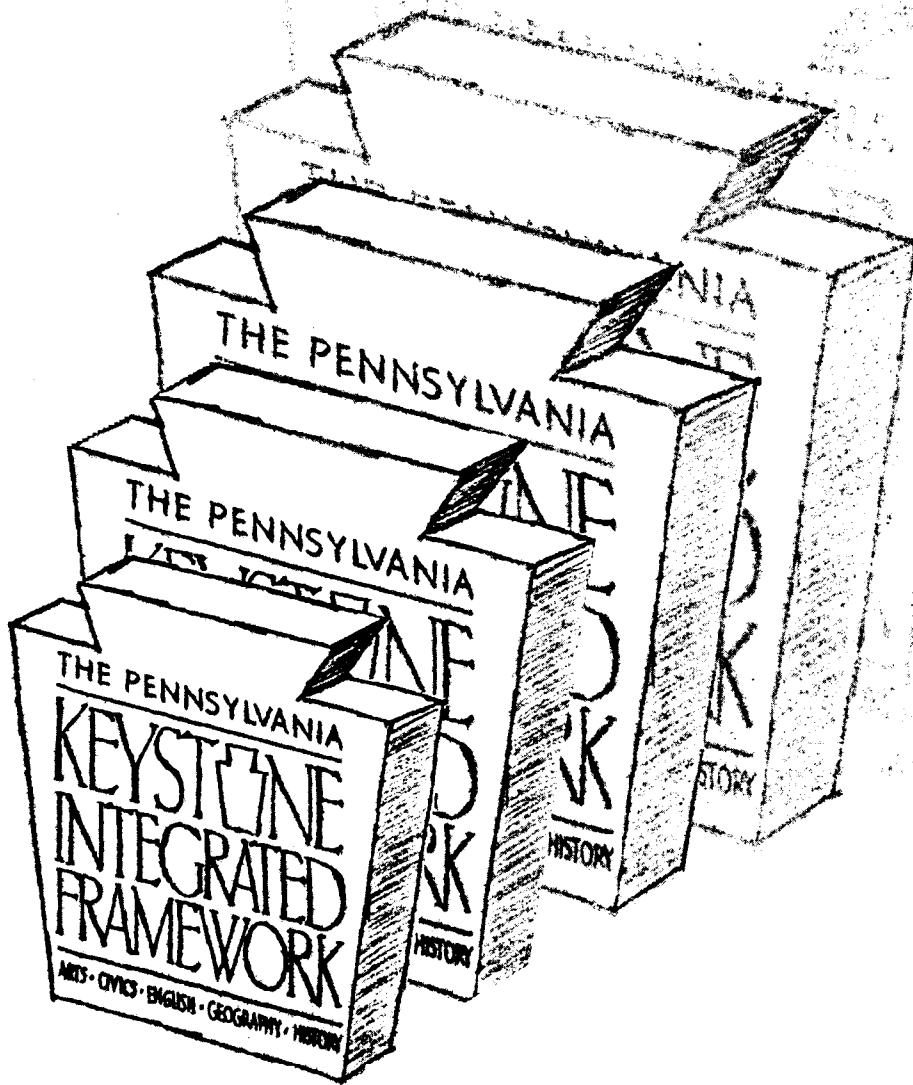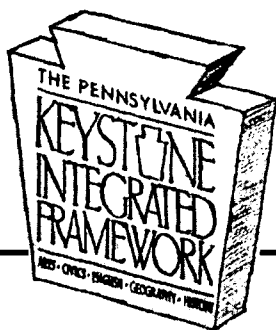
WHAT WE HAVE LEARNED

What We Have Learned: *Let's Just Call It Learning!*

From Clarion Elementary School: "That's like one of my students who asked me what to put in the heading of his paper. We had always placed the name of the subject directly under the student's name—English, Science, Social Studies, and so on. I said to him, 'Well, what do you think should be placed there?' The child paused, thinking; after a minute, he said, 'I guess we should just put *learning*.'"

—That, in essence, is what we have learned in our journey through the process of curriculum integration. We have come to the conclusion that what we do in every classroom is all about *learning*. Through the Keystone Integrated Framework Project, we had opportunities to reaffirm long-held beliefs and to try some things we knew would work but hadn't had the means by which to implement them.

- We learned, first and foremost, to trust the process. It is the process by which we can make changes. We learned there is no rushing into things. Rather, there is an evolving process of which everyone must be a part.

- We learned that time is the single most important element. Without time to plan, there will be no successful, sustained process or product.

- We learned the absolute necessity and beauty of teamwork – and what that really means.

- We learned that administrative support is basic to the success of any grass-roots effort.

- We learned the we needed to understand the creative process and to learn from those who use and practice this creative process. We also learned to acknowledge and to learn from the creativity within ourselves.

- We learned the difficulty of including all of the arts. Yet, in that difficulty, we found we could rise to the challenge because the arts are the pillars of learning.

- We learned that we had to trust one another. We had been expecting students to work in teams, yet many of us did not feel comfortable working with colleagues in a joint endeavor.

Keystone Integrated Framework

- We learned to trust the learner, both the learner in ourselves and the learner in our students.

- We learned that assessment is still one of the most difficult and elusive pieces of this process known as curriculum integration.

- We learned that we had to communicate better to the students, administration, parents, the board, the general public, our colleagues, and, most of all, our teammates.

- We learned to respect that not everyone in our building, in our district, or in our university held the same beliefs as we did.

- We learned that individuals will rise to the expectations set for them.

- We learned that learning is synergistic, and that often we learn more than we teach.

- We learned that it was "O.K." to fail in some of the things we tried.

- We learned the necessity of reflection. And we learned that most of us had rarely taken the time to reflect, believing it to be a luxury we could not afford.

- We learned the importance of documentation, not only for our own record-keeping but also for reports to the board and for verification to parents and others who wished to know "how the students are doing."

- We learned to laugh and not to take ourselves too seriously.

- We learned that the public was, indeed, interested in what we were doing, and we provided thoughtful examples of our work, inviting all to visit and see for themselves.

- We learned humility; we did not have all the answers.

- We learned the power of empowerment, both of teachers and of students.

- We learned that money, while necessary, was important mostly in that it could buy time.

- We learned the significance of small celebrations – that they, too, were not luxuries, but a very special way of reflecting, commemorating, and planning.

- Most of all, we learned about ourselves – that we can do anything we set out to do, that we can serve as good role models, and that we are, indeed, a community of learners.
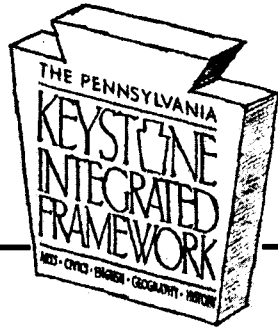
NEXT STEPS

N E X T   S T E P S

Next Steps: *Do You Think It's Because of the Project?*

From McNichols Plaza Elementary School: "One of the teachers who has not been involved in the Keystone Project was asking me why I thought the students did so well in my classes. We discussed some of the techniques and teaching strategies we had used in our 'seeds, seasons, and celebrations,' and I explained how much more engaged the children were. Suddenly her face lit up and she exclaimed, 'Do you think it's because of the Project?'"

This is a question that can be answered with a resounding "Yes, it is because of the project! And, yes, it is because teachers committed to curriculum integration change in what they do and how they do it." Those who have been with the Keystone Project have been changed forever. They may make adjustments in their plans, but they will never again approach teaching in the same way. And they never again will teach in isolation. Our own adventure is not yet complete, and we have come to terms with the fact that it may not ever be finished. Yet we remain true to the original concept of the program—teacher-driven, teacher-directed, and teacher-sustained—convinced that the work will continue to grow and improve.

The journey of curriculum integration is not by any means complete. We who have traveled together see this as only a beginning, and we look forward to what still needs to be addressed:

- Design rubrics for assessment of curriculum integration in both qualitative and quantitative measurements of achievement.

- Continue to encourage and assist universities in their endeavors to redesign teacher preparation programs.

- Support workshops for sustaining professional development.

- Continue to promote the inclusion of learning support students.

- Design more effective ways of documentation.

In conclusion,
it was never the intent of this project to make learning "fun." Rather, it was our desire to make learning challenging, engaging, and worthwhile. The fact that both students and teachers enjoyed the learning process is a premium. The project, while not citing Alfred North Whitehead, adheres to many of his ideas. Whitehead's belief, that the purpose of education is to stimulate and guide the self-development of students through the elimination of minutiae and to promote culture as the activity of thought and the receptiveness to beauty and humane feeling, has been the unspoken voice of this project. We have further promoted the belief that learning is an art, while acknowledging that the inculcating of the arts into the project has been the most unusual, the most promising, and the most challenging of goals. Where learning is an art, the arts help us to arrive at all learning.
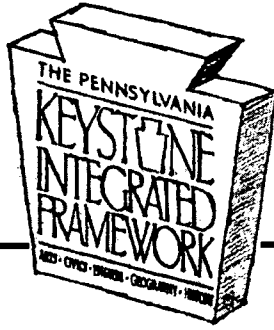
LAST WORDS

⊡ ⊡ ⊡ ⊡ ⊡ ⊡ ⊡ ⊡ ⊡

L A S T   W O R D S

Last Words:

Send us your own story:

Are you thinking of starting curriculum integration?

Have you started?

Are you "up and running?"

Did you run into some of the same roadblocks ?

Different ones?

How did you address the issues you faced?

What suggestions do you have for others?

Do you have information that you would be willing to share?

Tell us what you think of this Compendium:

Was it helpful to you? In what way?

Would you recommend it to others?

What changes would you make? Additions? Deletions?

In what ways could this collection of documents be more helpful?

Do you think it can stand alone or is it better used in conjunction with attendance at the workshops?

How will you use it with your own team or colleagues?

Would you like to order additional copies? If so, please contact Beth Cornell, Bureau of Curriculum and Academic Services, Pennsylvania Department of Education, 333 Market Street, Harrisburg, PA 17126-0333. Telephone: 717-787-5713. Fax: 717-787-7066.

THE PENNSYLVANIA

KEYSTONE
INTEGRATED
FRAMEWORK

ARTS · CIVICS · ENGLISH · GEOGRAPHY · HISTORY
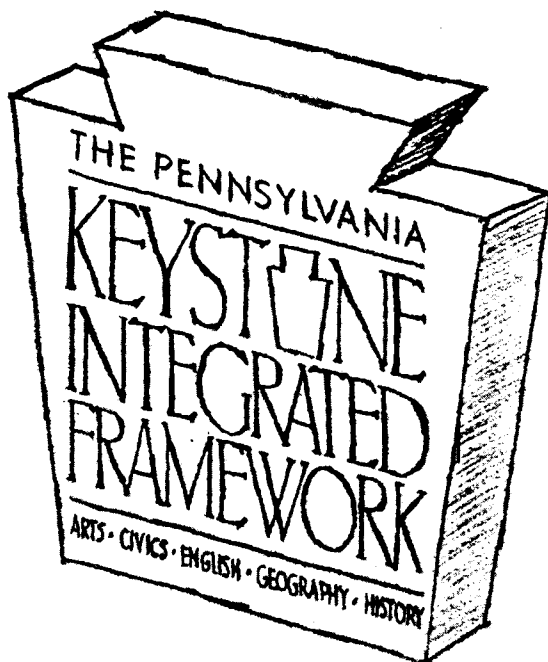
SECTION SIX

APPENDICES

COMPENDIUM APPENDIX

A

THE KEYSTONE INTEGRATED FRAMEWORKS BLUES
composed by Dan Bonura, Conneaut Valley High School
following the 1995 Summer Institute
Pocono Manor, Pennsylvania

CHORUS: Keystone, Integrated, Frameworks
            Keystone, Integrated, Frameworks
Judith Witmer, she's quite the gal, went down to Washington, D. C.
And said, "Hey boys, no need to look any further, we've got the plan you need."
So we all went to the Poconos for a week of intensity, and we met, and we talked,
and we listened, and we learned, and I think you'll all agree,
that Keystone Integrated Frameworks is becoming reality.

CHORUS

We're here for Keystone Integrated Frameworks and you know that's not so bad,
Except when you meet and you're locked in a room, then you know that you've been had!
Start at eight, go till eleven, come back at 11:02
If we work for only a couple more hours we'll have lunch sent into you.
Monday, Tuesday, Wednesday, Thursday - thank the Lord just one more day.
It really isn't so bad, except I've only had one break - just once in 3 long days!
But plans, oh plans, education is making strides!
If I see one more pad and magic marker I'll just sit right down and cry.

CHORUS

But frankly speaking you know it's true, we're doing a radical thing,
Trying to get these kids to think in a way that's never been.
Rubrics, journals, and action plans, we know the vocabulary cold.
But when it comes down to making it work, that's a story yet to be told.
Yet excitement's running rampant and our hearts begin to beat,
As we get closer to a plan that will make our classes sweet.

CHORUS

So look us up in a year or so and I know that you will find,
Teachers helping teachers, and stretching students' minds
Looking for the best and reaching for the gold,
Knowing that the way they teach will bring riches yet untold.

CHORUS

COMPENDIUM APPENDIX

B

Keystone Integrated Framework Project
Action Plan

_____
(Partnership Name)

1. Goal:

2. Objective/Outcome:

3. Activities	4. Persons Responsible	5. Time Schedule	6. Financial Resources	7. Human Resources	8. Evidence of Activity Accomplishment

Summary Evaluation:

_____ Achieved Beyond Expectations _____ Achieved _____ Partially Achieved _____ Not Achieved

NOTE: Please complete one Action Plan page for each specific objective/outcome.

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COMPENDIUM APPENDIX

C

Keystone Integrated Framework Project
Action Plan

Clarion Area/Clarion University

1. __Goal__: University students will be able to develop and implement original thematic units that focus upon social studies themes or subthemes.

2. __Objective/Outcome__: Faculty will be competent in developing and implementing an integrated framework.

3. Activities:	4. Persons Responsible:	5. Time Schedule	6. Financial Resources	7. Human Resources	8. Evidence of Activity Accomplishment
a. meetings	a. A. Creany	a. monthly	as detailed in budget categories	team members	a. minutes
b. orientation to Literacy Center	b. B. Grugel	b. Sept.			b. attendance sheets
c. methods courses	c. CUP instructors	c. ongoing			c. syllabi
d. modeling	d. team members	d. ongoing			d. video, contracts, photographs, previous units
e. consultation with visual and performing artists	e. B. Grugel	e. ongoing		e. consultants	e. contracts, schedules, videos, photos

Summary Evaluation:

___ Achieved Beyond Expectations ___ Achieved ___ Partially Achieved ___ Not Achieved

NOTE: Please complete one Action Plan page for each specific objective/outcome.

Keystone Integrated Framework Project
Action Plan

Clarion Area/Clarion University

1. <u>Goal</u>: Students in grades 3 - 7 will demonstrate subject (content, skill, participation and attitudinal) mastery (as identified in state and national standards) in meaningful ways (real life problems to solve or tasks to complete that move beyond factual recall).

2. <u>Objectives/Outcomes</u>: Teachers will be competent in developing and implementing an integrated framework.

3. <u>Activities</u>:	4. <u>Persons</u>	5. <u>Time Schedule</u>	6. <u>Financial Resources</u>	7. <u>Human Resource</u>	8. <u>Evidence of Activity Accomplishment</u>
a. meeting	a. McKee Gourley	a. monthly	as detailed in budget categories	team members	a. minutes
b. exchange site visits between district/ university/partner schools	b. McKee, Gourley	b. to be scheduled			b. correspondence, journals, photos, videos
c. secure materials and resources to support integrated instruction	c. McKee, Gourley	c. as needed		consultants	c. invoices, purchase orders, receipts
d. inform school/ community	d. team members	d. Sept. and ongoing		student teachers preservice	d. newspaper articles, district newsletter, grade level orientations, PTO, parent conferences, school board presentations

Summary Evaluation:
_____ Achieved Beyond Expectations   _____ Achieved   _____ Partially Achieved   _____ Not Achieved

NOTE: Please complete one Action Plan page for each specific objective/outcome.

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Keystone Integrate Framework Project
Action Plan
Abington Junior/ Beaver College
(Partnership Name)

1. **Goal:** Develop and implement theme-based, project-centered curricula based upon the integrated framework with full provision for program activities and assessment.

2. **Objective/Outcome** Form neighborhood teams and curriculum-writing teams.

3. Activities	4. Persons Responsible	5. Time Schedule	6. Financial Resources	7. Human Resources	8. Evidence of Activity Accomplishment
1. recruit/invite faculty members to participate in unit/curricula writing	Erwine, KIFP Alladonna Dept. Chairs	mid-September	$21/hour for participants for 2 hour in-service		1. completion of in-service training 2. formation of unit-writing teams
2. form "neighborhood" teams of teachers for the 96-97 school year	Erwine, Dept Chairs teacher volunteers Worthington Alladonna	end of Sept.	$21/hour for participants for 1 hour in-service	substitutes or coverage from staff, Beaver College students	complete organizational meeting
3. Teams meet to delineate responsibilities, plot course, and brainstorm themes	KIFP members volunteers	mid-October	money for substitute coverage		submission of responsibility list, work schedule, and possible themes
4. Teams continue to meet in conjunction with parents in order to develop units, goals, assessment tools, activities , etc.	teacher teams parents	mid-November	copying, office support		each team submits two thematic units by mid-Jan
5. Seek preliminary school board approval for curricular changes and/or additional resources related to the KIFP (BOARD ORIENTATION)	McCaffrey, Erwine, Alladonna, KIFP, parents	February	same as above		Board grants preliminary approval
6. Board approves integrated curricular changes.		June	none		Board accepts integration

Summary Evaluation

_____ Achieved Beyond Expectation   _____ Achieved   _____ Partially Achieved   _____ Not Achieved

NOTE: Please complete one Action Plan Form for each specific Objective/ Outcome

Keystone Integrate Framework Project
Action Plan
Abington/Beaver

1. Goal: Create an integrated framework for a seventh grade pilot which integrates the Chapter 5 and Goals 2000 content standards which are applicable to English, civics, geography, history, and the arts.

2. Objective/Outcome: Develop and adopt a framework applicable to the development of integrated units of study.

3. Activities	4. Persons Responsible	5. Time Schedule	6. Financial Resources	7. Human Resources	8. Evidence of Activity Accomplishment
Develop Keystone grant proposal	Altadonna /Britton	Feb. '95	None	Beaver/Abington Staff	Completed Application
Literature Search	Altadonna	May '95	District	RISE	Articles and research
Research Current practices at AJHS	Altadonna/Erwine	May/June '95	None	AJHS Staff	Identified Programs/Projects
Preliminary Consideration of Research and Practice	Altadonna	July '95	None	Keystone Team	Directions to the Abington/Beaver Institute Team
Summer Institute	Altadonna/Britton	August '95		Abington/Beaver Institute Team	Framework Report
Framework Meeting	Altadonna/Britton	September '95	Hourly Reimbursement	Keystone Team	Adopt/Adapt Framework

Summary Evaluation

_____ Achieved Beyond Expectation _____ Achieved _____ Partially Achieved _____ Not Achieved

NOTE: Please complete one Action Plan Form for each specific Objective/ Outcome

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Keystone Integrate Framework Project
Action Plan
Abington/Beaver

1. Goal: To provide the basis for the development of a pilot 7th grade curriculum that will integrate English, Art, Civics, Geography, and Reading.

2. Objective/Outcome: To provide a laboratory setting for preservice and student teachers

3. Activities	4. Persons Responsible	5. Time Schedule	6. Financial Resources	7. Human Resources	8. Evidence of Activity Accomplishment
Assignment of preservice and student teachers	Britton/Altadonna	Twice per school yea		Beaver student and preservice teachers	Portfolios, journals, anecdotal records and checklists (cooperating teachers)
Mega courses I, II, III	Schmidt	Spring '96 anticipated		Beaver Mega course faculty and students	Evaluations of courses and instructors (students and faculty)
Informal assessment of placement/partner-ship	Britton/Altadonna	Ongoing		Director Student Teaching (Beaver) Director of Curriculum (Abington)	
Team meetings	Britton/Altadonna	To be determined	Payment to graduate assistants	Integrative Framework Team Members Beaver & Abington	
Teacher exchange	Britton/Altadonna			Beaver/Abington faculty	Student feedback (discussion, writing)

Summary Evaluation

_____ Achieved Beyond Expectation _____ Achieved _____ Partially Achieved _____ Not Achieved

NOTE: Please complete one Action Plan Form for each specific Objective/Outcome

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Keystone Integrate Framework Project
Action Plan
Abington/Beaver

1. Goal: To provide the basis for the development of a pilot 7th grade curriculum that will integrate English, Art, Civics, Geography, and Reading.

2. Objective/Outcome: To provide a laboratory setting for preservice and student teachers

3. Activities	4. Persons Responsible	5. Time Schedule	6. Financial Resources	7. Human Resources	8. Evidence of Activity Accomplishment
Follow-up of graduates of teacher education program and student teaching	Britton	1997 - implemented one year following end of placement		Graduate assistant Director of Student Teaching	Student responses

Summary Evaluation

_____ Achieved Beyond Expectation _____ Achieved _____ Partially Achieved _____ Not Achieved

NOTE: Please complete one Action Plan Form for each specific Objective/Outcome

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Keystone Integrate Framework Project
Action Plan

Robert Morris (Scranton School District) and Marywood College

_____ (Partnership Name)

1. Goal: To develop to design and function in an integrated framework

2. Objective/Outcome: Teachers will continue to develop curriculum based on this model

3. Activities	4. Persons Responsible	5. Time Schedule	6. Financial Resources	7. Human Resources	8. Evidence of Activity Accomplishment
Keep journals of activities and reflections	teachers	Sept.- June	NA	NA	journals
maintain informal team portfolio for project	team	fall'95 spring '96	grant	Marywood Ed. Dept.	portfolios
team planning time	administration	bi-weekly as needed	grant/didtrict	substitutes, Marywood Ed. Dept.	minutes
attendance at related workshops/ conferences	team	as available	grant/district	substitutes	conference materials receipts
host site for district in-service	team	spring - fall '96	district	teachers and substitutes	teacher response form

Summary Evaluation

_____ Achieved Beyond Expectation _____ Achieved _____ Partially Achieved _____ Not Achieved

NOTE: Please complete an Action Plan Form for each specific Objective/ Outcome

Keystone Integrate Framework Project
Action Plan

Robert Morris (Scranton School District) and Marywood College

(Partnership Name)

1. Goal: Participants will be able to design and function within an integrated framework.

2. Objective/Outcome Student teachers will apply the model in new settings.

3. Activities	4. Persons Responsible	5. Time Schedule	6. Financial Resources	7. Human Resources	8. Evidence of Activity Accomplishment
A dialogue between the college personnel and the student teachers will take place one and two years after the completion of the student teaching experience to ascertain the extent to which they have applied the model in new settings.	Lois Draina Kathleen Ruthkosky	December, 1996 June, 1997 December, 1997 June, 1998	Departmental budgets	Minimal secretarial support	Formalized documentation of conversations

Summary Evaluation

_____ Achieved Beyond Expectation _____ Achieved _____ Partially Achieved _____ Not Achieved

NOTE: Please complete one Action Plan Form for each specific Objective/Outcome

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Keystone Integrate Framework Project
Action Plan

Robert Morris (Scranton School District) and Marywood College

1. Goal:	Participants will be able to design and function within an integrated format

2. Objective/Outcome Students will develop portfolios that reflect an integrated understanding of concepts of geography, history, English, civics, and the arts.

3. Activities	4. Persons Responsible	5. Time Schedule	6. Financial Resource	7. Human Resources	8. Evidence of Accomplishment
Activities will cut across traditional subject areas to integrate the arts, civics, English, geography, and history.	Team and students	September, 1995 - June, 1996	Grant	Marywood College Education Department and community	Portfolio
Learning experiences will incorporate whole group, small group and individual instruction that will address various learning styles	Team and students	September, 1995 - June, 1996	Grant	Team and students	Journals Individual and group projects Lesson plan books

Summary Evaluation

____ Achieved Beyond Expectation ____ Achieved ____ Partially Achieved ____ Not Achieved

NOTE: Please complete one Action Plan Form for each specific Objective/ Outcome

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Keystone Integrate Framework Project
Action Plan
Abington / Beaver

1. Goal:	Prepare parents and community members for future transition to a completely intergrated curriculum and team organization.

2. Objective/Outcome
   To solicit parent input in curriculum and "volunteer families" to aid in implementing goals.

3. Activities	4. Persons Responsible	5. Time Schedule	6. Financial Resources	7. Human Resources	8. Evidence of Activity Accomplishment
1. attend PTO/PTA meetings to explain to explain plans for intergration	KIFP members PTO/PTA leaders elementary princ.	mid-Oct	copying office supt.	teacher presenter	Parents volunteer to participate
2. parents participate in "neighborhood" team meetings	parent volunteers Altadonna Erwine Worthington	early November			Parents attend neighborhood team meetings
3. parents provide input into production of thematic units	teacher participant	mid-Nov			
4. parents support the effort to gain school board approval		February			Parents attend and present at board meeting

Summary Evaluation

___ Achieved Beyond Expectation ___ Achieved ___ Partially Achieved ___ Not Achieved

NOTE: Please complete one Action Plan Form for each specific Objective/ Outcome

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COMPENDIUM APPENDIX

D

Budget

It is essential to project your costs before you begin your project. Even if you think you do not know how much your project will cost, you must carefully address this item. Boards, administrators, faculty, parents – all want and deserve to know costs.

Careful planners will give first consideration to buying **time**; this means planning time for the staff who will be designing and implementing your program. Nothing will be successful unless the people involved have time to work together.

Below is a simple outline of the general items you will need to consider. The "in-kind support might come from business partners or services your district would support whether or not there was an integrated curriculum. For example, support staff might be drawn from existing personnel, just as supplies and/or equipment might already be a part of the district's budget. Consultants are another category which might be supplied by business or the university without cost to the curriculum integration budget. By careful planning, you can outline your program for a clear and well-thought-out presentation to all of the potential stakeholders!

Budget Category	Amount Projected	In-Kind Support

Staff Planning Time
(recommended 50% minimum)
-
-
-

Activities
-
-
-

Supplies
-
-

Equipment
-
-

Transportation
-

Printing, postage, etc.
-

Contracted Services
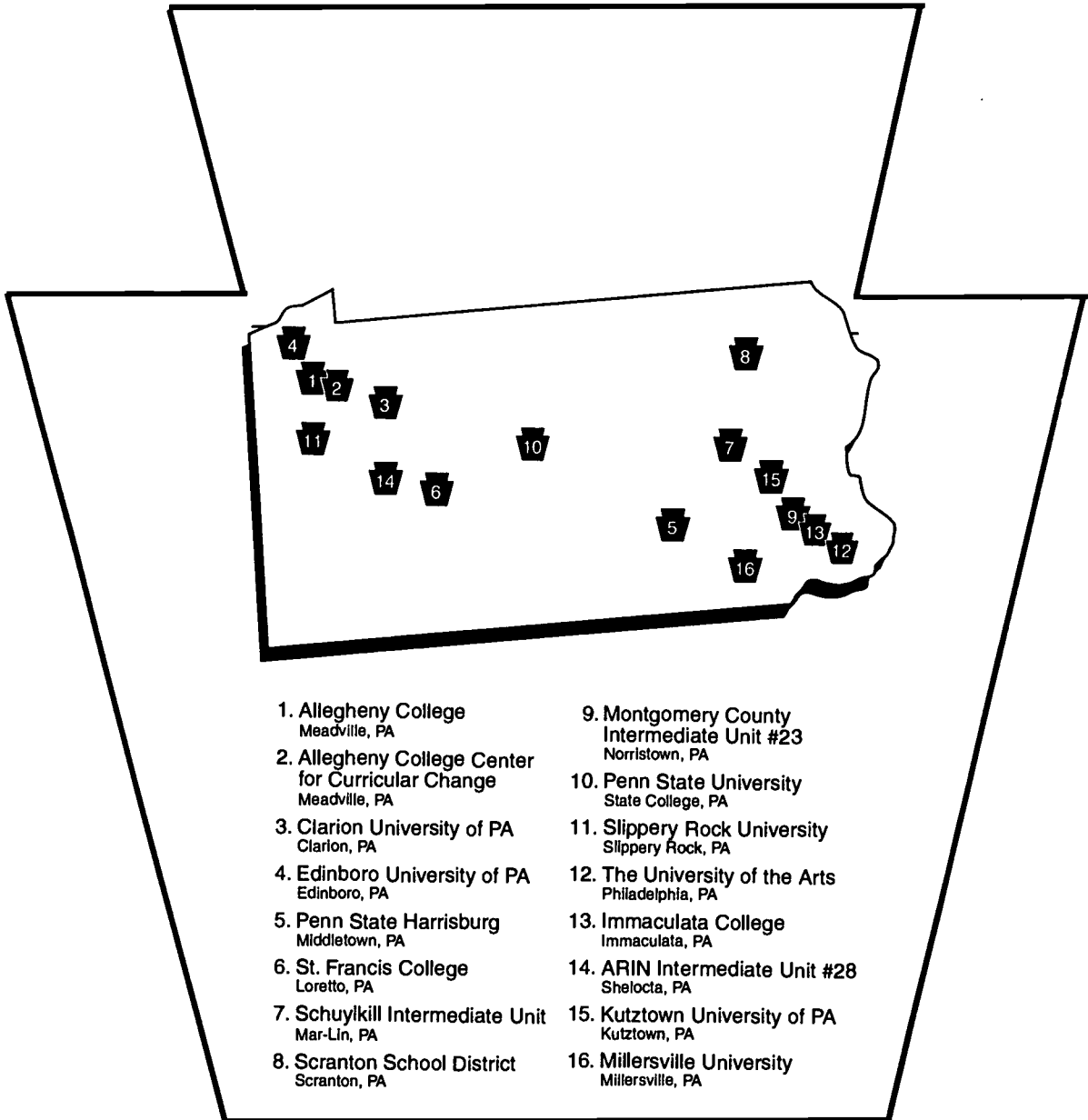-
-

Support Personnel
-
-

COMPENDIUM APPENDIX

E

DISSEMINATION SITES
Scheduled Dates

Immaculata College   January 30,1997
with Chester County I.U.

Center for Curricular Change   February 8, 1997
Allegheny College

Montgomery County I.U. 23   February 13, 1997
with Abington S.D.

University of the Arts/PAAE   February 17, 1997

Millersville U./Conestoga V.   February 28, 1997

ARIN Intermediate Unit #28   March 6, 1997
with Indiana S.D. and Indiana U.

St. Francis College   March 26, 1997

Scranton S.D.   March 14, 1997
with Marywood College and U. of Scranton

Clarion University   April 4, 1997
with Clarion Elementary School

Kutztown University   April 10, 1997

State College/PAAE   April 11, 1997

Slippery Rock/PAAE   April 12, 1997

Penn State Harrisburg/I.U. 15   April 16, 1997

Allegheny College - for   April 18, 1997
professors of small colleges

Schuylkill I.U. # 29   April 21, 1997

Edinboro University   April 22, 1997
with Northwest Tri-County I.U.

Allegheny College - for   April 23, 1997
classroom teachers & admins.
with Northwest Tri-County I.U.

COMPENDIUM APPENDIX

F

1. Allegheny College
   Meadville, PA

2. Allegheny College Center
   for Curricular Change
   Meadville, PA

3. Clarion University of PA
   Clarion, PA

4. Edinboro University of PA
   Edinboro, PA

5. Penn State Harrisburg
   Middletown, PA

6. St. Francis College
   Loretto, PA

7. Schuylkill Intermediate Unit
   Mar-Lin, PA

8. Scranton School District
   Scranton, PA

9. Montgomery County
   Intermediate Unit #23
   Norristown, PA

10. Penn State University
    State College, PA

11. Slippery Rock University
    Slippery Rock, PA

12. The University of the Arts
    Philadelphia, PA

13. Immaculata College
    Immaculata, PA

14. ARIN Intermediate Unit #28
    Shelocta, PA

15. Kutztown University of PA
    Kutztown, PA

16. Millersville University
    Millersville, PA

COMPENDIUM APPENDIX

G

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Dissemination Sites

<table>
<tr><td>Primary Contact</td><td>Secondary Contact</td></tr>
</table>

Primary Contact | Secondary Contact

Allegheny College
Dr. Karen Skuldt, Associate Professor
    and Chair, Education Department
540 N. Main Street
Meadville, PA 16335

Northwest Tri-County I. U. # 5
Linda S. Cook
Director, Educational Programs
252 Waterford Street
Edinboro, PA 16412

Allegheny College Schools Parnership Center of Curricular Change
Jan Hyatt, Dance Program Coordinator
Box 182
Meadville, PA 16335

Clarion University of PA
Dr. Saundra McKee
Associate Professor
Stevens Hall
Clarion, PA 16214

Clarion Elementary School
Sue Ellen Gourley
Principal
Boundary Street
Clarion, PA 16214

Edinboro University of PA
Dr. Richard E. Arnold
Assistant Dean of Education
325 Butterfield Hall
Edinboro University
Edinboro, PA 16444

Northwest Tri-County Intermediate Unit
Linda S. Cook
Director, Educational Programs
252 Waterford Street
Edinboro, PA 16412

Immaculata College
Sister Anne Marie Burton, Ed.D.
Chair, Educational Leadership
1145 King Road
Immaculata, PA 19345-0684

Chester County Intermediate Unit
Eileen Weaver
Director, Non-public Services
150 James Hance Court
Exton, PA 19341

ARIN Intermediate Unit #28
Deborah Gressley
Program Coordinator
Route 422 East, P.O. Box 175
Shelocta, PA 15774

Indiana Area School District
Ms. Barbara J. Pominek
Coordinator of Curriculum and Instruction
501 East Pike
Indiana, PA 15701

Indiana University of PA
Dr. Monte Tidwell
107 Stouffer Hall
Indiana, PA 15705

Primary Contact	Secondary Contact

Kutztown University of PA
Dr. Kathleen A. Dolgos
Chair, Dept of Secondary Education
Kutztown University
Kutztown University, PA 19530

Millersville University
Dr. Cheryl Desmond
Assistant Professor, Education Foundations

P.O. Box 1002
Millersville, PA 17551-0302

Conestoga Valley School District
Wayne Heim (Also Robert Houghton,
Principal, and Suzanne Fisher, Teacher)
Conestoga Valley Middle School
11 School Drive
Leola, PA 17540

Montgomery County I.U. #23
Mr. Richard Brickley

1605 B West Main Street
Norristown, PA 19403

Abington School District
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Director of Curriculum
Administration Building
970 Highland Ave.
Abington, PA 19001

Pennsylvania Alliance for Arts Education
John S. Broomall
Executive Director
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Immaculata College
Immaculata, PA 19345

Penn State University
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State College H.S.
650 Westerly Parkway
State College, PA 16801

Pennsylvania Alliance for Arts Education
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Immaculata, PA 19345

Slippery Rock University
Dr. Julianne Agar
Chair, Assistant Professor, Art Department
Slippery Rock, PA 16057

Pennsylvania Alliance for Arts Education
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Box 678
Immaculata College
Immaculata, PA 19345

The University of the Arts
Dr. Janis Norman
Chair, Art and Museum Education
320 South Broad Street
Philadelphia, PA 19102

Primary Contact

Penn State Harrisburg
Dr. William R. Freed
Coordinator of Special Projects
777 W. Harrisburg Pike, W-315
Middletown, PA 17057-4898

Saint Francis College
Dr. Elizabeth M. Gensante
Chair, Education Department
Box 600
Loretto, PA 15940

Schuylkill Intermediate Unit
Attn.: Susan R. Cantwell
Program Specialist
I.U. # 29
Box 130
Mar-Lin, PA 17951-0130

Scranton School District
Linda DeMuth
Supervisor of Curriculum
425 N. Washington Ave.
Scranton, PA 18503

Secondary Contact

Capital Area Intermediate Unit # 15
James P. Warnock
Director of Educational Services
55 Miller Street
Summerdale, PA 17093

Appalachia Intermediate Unit # 8
Dr. Kay Meyers
Director of Curriculum Training and
    Development Services
119 Park Street
Ebensburg, PA 15931-1898

Marywood College
Dr. Kathleen Ruthkosky, Chair
Undergraduate Education Dept.
2300 Adams Avenue
Scranton, PA 18509

University of Scranton
Dr. David Wiley, Chair
Graduate Education Dept.
800 Linden Street
Scranton, PA 18510

COMPENDIUM APPENDIX

H

Dissemination Sites

Primary Contact	Chairman for Dissemination Team
Allegheny College	Barbara Grugel
Allegheny College - higher ed only	Anne Creany
Allegheny College - Schools Partnership Center of Curricular Change - Deb Mehaffey	
ARIN I.U.	Leigh Altadonna
Clarion University of PA	Kathy Waltz
Edinboro University of PA	
Immaculata College	Marsha Britton
Kutztown University of PA	Cheryl Desmond
Millersville University	Monte Tidwell
Montgomery County Intermediate Unit #23	Kathleen Dolgos
Pennsylvania Alliance for Arts Education (Penn State - University Park)	Ellen Burkhouse
Pennsylvania Alliance for Arts Education (Slippery Rock)	Debra Sasala
Pennsylvania Alliance for Arts Education (University of the Arts - Philadelphia)	Beth Burkhauser
Penn State Harrisburg	David Poore
Saint Francis College	Barbara Pominek
Schuylkill Intermediate Unit #29	Kathleen Ruthkowsky
Scranton School District	Dan Daneker

COMPENDIUM APPENDIX

I

Disseminators

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970 Highland Ave.
Abington PA 19001

Ms. Beth Burkhauser
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1111 S. Irving Ave.
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Ms. Kathleen C. Buzad
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Capouse Avenue
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Mrs. Suzanne H. Fisher
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Leola PA 17540

Mr. Christopher Lake
Mt. View School District - R.D. #1
Kingsley, PA 18825

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Dr. David E. Poore
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Indiana PA 15701

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Ms. Donna Burkholder
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Leola PA 17540

Dr. Anne Creany
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Clarion PA 16214

Dr. Cheryl Desmond
Millersville University
159 Stayer Ed. Center
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Ms. Linda Lare-Lansberry
Eisenhower Elementary
1460 School Street
Indiana PA 15701

Ms. Deborah S. Mahaffey
Eisenhauer Elementary School
1460 School Street
Indiana PA 15701

Mr. Mark S. Olcott
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Leola PA 17540

Mr. Peter Regeski
Mountain View School District
RR #1, Box 339
Kingsley PA 18826-9778

Ms. Elizabeth Sauber
Donegal School District
Mount Joy PA 17552

Ms. Marsha K. Britton
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Ms. Ellen Burkhouse
Robert Morris School
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Mr. Daniel Daneker
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Dr. Kathleen A. Dolgos
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Beekey Education Center
Kutztown PA 19530

Ms. Barbara B. Kubala
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Dr. David Laubach
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Meadville PA 16335

Dr. Monte Tidwell
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Indiana PA 15705

Ms. Kathy Waltz
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Scranton PA 18505

Ms. Carol Tanweer
Indiana Area School District
1460 School Street
Indiana PA 15701

Ms. Sandra Tenney
1724 W. Congress Street
Allentown PA 18104

Ms. Cathy VanNort
Robert Morris School
1824 Boulevard Avenue
Scranton PA 18509

COMPENDIUM APPENDIX

J

Meet the Disseminators:

Dr. Leigh J. Altadonna, Director of Curriculum, Abington School District, Abington, PA
Leigh has led his team from the beginning, as Abington Junior High School initiated its move to a neighborhood concept of curriculum content delivery.

Donna M. Baker, Teacher of English, Conneaut Valley High School, Conneautville, PA
Donna has been the driving force in bringing curriculum changes to her high school and recruited her team almost single-handedly.

Marsha K. Britton, Director/Coordinator of Student Teaching, Beaver College, Glenside, PA
Marsha's unbridled enthusiasm for the revitalization of the "mega courses" designed at Beaver College led to her commitment to curriculum integration for teacher education programs.

Beth Burkhauser, Art Teacher, McNichols Plaza Elementary School Scranton, PA
Beth has led this extraordinary "open classroom" elementary school with her unbounded creativity, energy, and sense of true collaboration, forming a dedicated community of learners.

Donna Burkholder, Music Teacher, Conestoga Valley Middle School, Leola, PA
Donna offers a variety of experiences in coordinating music with other academic subjects and is looking forward to sharing successful techniques with others.

Ellen Burkhouse, Fifth Grade Teacher, Robert Morris Elementary School, Scranton, PA
Ellen shares a background of sound teaching methodology enhanced with her belief that this Keystone Framework approach to curriculum "<u>can</u> be done and is worth doing."

Kathleen Buzad, Site Coordinator and Induction Program Director, Scranton School District, Scranton, PA
Kathleen, a teacher of English as a Second Language, calls the Keystone approach "a powerful tool ... the integrative force shaping our team in becoming a learning community."

Dr. Anne Creany, Associate Professor, Clarion University, Clarion, PA
Anne, who specializes in children's literature, language arts and reading, is an advocate for the theory and practice in integrated instruction; she believes strongly in the power of encouragement and support for teachers who will be implementing these reforms.

Dan Daneker, Science Teacher, Conestoga Valley Middle School, Leola, PA
As an energetic advocate of interdisciplinary education, Dan has broad experience and insight into the "how" and "why" integration of curriculum can work.

Dr. Cheryl Desmond, Associate Professor, Millersville University, Millersville, PA
Cheryl, whose background includes programs in school restructuring, has a strong commitment to interdisciplinary instruction and collaboration of university and public school.

Dr. Kathleen Dolgos, Chair, Department of Secondary Education, Kutztown University, Kutztown, PA

Kathleen's experience in working with teachers in new ways of assessment and school reform demonstrates her belief and enthusiasm for curriculum integration.

Suzanne Fisher, Teacher of English, Conestoga Valley Middle School, Leola, PA

Sue's demonstrated expertise in motivating students in learning in simulation projects establishes her commitment to curriculum integration.

Dr. Barbara J. Grugel, Assistant Professor, Clarion University, Clarion, PA

Barbara, whose specialty is reading, is an experienced presenter and one of the motivating forces behind the successful partnership between Clarion University and Clarion Elementary School.

Susan Kovalcik, 6th Grade Teacher, Eisenhower Elementary School, Indiana, PA

Susan has been a part of Indiana's very exciting cross-buildings project. Ask her about their American history simulations; this program has captured the essence of curriculum integration.

Barbara Kubala, Art Teacher, Eisenhower Elementary School, Indiana, PA

Barbara's whole-hearted dedication to the infusion of the arts and to school inclusion makes her a valuable spokesperson for total curriculum integration.

Christopher Lake, Teacher of English and Drama, Mountain View High School, Kingsley, PA

Chris speaks to overcoming difficulties to create an exciting, integrated project of studying local culture with students in a program 9 - 12..

Linda Lare-Lansberry, 6th Grade Teacher, Eisenhower Elementary School, Indiana, PA

Linda's involvement in Indiana's program exudes total commitment as she relates her own discovery that she, too, had untapped skills in areas unexplored until the Keystone project.

Dr. David Laubach, English Department, Kutztown University, Kutztown, PA

David finds his background as a teacher of Shakespeare through performance as a natural bridge to curriculum integration and brings a practical approach in working with school sites.

Deborah S. Mahaffey, Principal, Eisenhower Elementary School, Indiana, PA

Deborah demonstrates the importance of administrative support at the building level and has been a leader in developing a collaborative among staff, administration, students, and parents.

Phyllis Morrow, Teacher, Clarion Elementary School, Clarion, PA

A social studies specialist, Phyllis has been the "cheerleader" for the Keystone Project, encouraging her colleagues and inviting them to join in the effort toward curriculum integration.

Dr. Nancy M. Nagy, Reading Specialist, Marywood College, Scranton, PA

Nancy, in working closely with a Keystone school site, is convinced the "development of critical thinking skills surpasses all other objectives as these abilities carry-over into other pursuits."

Mark S. Olcott, Teacher of History and Social Studies, Conestoga Valley Middle School, Leola, PA

Mark has presented at various middle school and social studies conferences, at the local, state, and national level. While grounded in academics, his humor adds much to his presentations.

Barbara J. Pominek, Coordinator of Curriculum and Instruction, Indiana Area School District, Indiana, PA

Barbara has had a vision for curriculum integration which this Project has assisted in advancing. A supportive, "hands-on" administrator, she believes in teacher ownership.

Dr. David E. Poore, Jr., Supervisor of Curriculum and Instruction, Donegal School District, Mt. Joy, PA

David's specialty in staff development has provided committed leadership to the school site's project which is an unassuming but very powerful example of student problem-solving.

Peter Regeski, Social Studies Teacher, Mountain View High School, Kingsley, PA

Peter and his colleagues overcame odds to produce an outstanding project and lets others know that "it is worthwhile and survivable."

Dr. Kathleen Ruthkosky, Assistant Professor, Marywood College, Scranton, PA

Kathleen has been involved in teacher preparation programs as part of Marywood's larger dedication to "best practices." The school site partnership has enhanced and enriched all involved.

Deborah Sasala, Music Teacher, East Pike Elementary School, Indiana, PA

Deborah's music specialty brings a lively and enthusiastic addition to the curriculum integration; her dramatic demonstration example of integrated living really drives the point home.

Elizabeth G. Sauber, Social Studies Teacher, Donegal Middle School, Marietta, PA

Liz believes in and practices the "power" of curriculum integration as she and her teaching colleague convinced the school district to remove the wall between their classrooms.

Dr. E. Elliott Seda, Assistant Professor, Millersville University, Millersville, PA

Elliott has worked with and served as a video-documenter of Millersville's school site partner. He is a strong supporter of the concept and practice of curriculum integration as a partnership.

Dr. Karen Skuldt, Chair, Education Department, Allegheny College, Meadville, PA

Karen's involvement in teacher education programs and her mathematics specialty are a natural match in demonstrating that "even math" can be an important part of curriculum integration.

Carol Tanweer, Math Teacher, Eisenhower Elementary School, Indiana, PA

Carol shares her zeal as she states, "I have seen the excitement and enthusiasm generated by this project. ...integration results in enhanced interest and learning for students and teachers."

Sandra Tenney, Consultant to Allentown School District, Allentown, PA

Sandra brings a special perspective to the project as a performing artist; she believes in the use of art in the classroom as a way of assessing what children have learned.

Dr. Monte Tidwell, Assistant Professor, Indiana University of PA, Indiana, PA

Monte, the university impetus university in collaborating with the school site, speaks to the "rationale for incorporating integrated curricular approaches as being based upon sound principles."

Cathy VanNort, Music Teacher, Robert Morris Elementary School, Scranton, PA

Cathy has worked closely as part of the team and has conducted an in-service workshop for the school district. As an arts advocate, she encourages others to become involved!

Kathryn Waltz, McNichols Plaza Elementary School, Scranton, PA

Kathy demonstrates how curriculum integration can permeate every grade and every aspect of instruction. Experiences as a first grade teacher reflect her strength of dedication and teamwork.

COMPENDIUM APPENDIX

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Announcing
Curriculum Integration and
Pennsylvania's Academic Standards:
A Networking Colloquium

To: All School Districts and Colleges/Universities with Teacher Preparation Programs

You are cordially invited to attend a special Colloquium to network, learn and share information on Curriculum Integration and Pennsylvania's Academic Standards.

This Colloquium is being designed for discussions concerning the <u>learning and sharing</u> program sponsored by the Keystone Integrated Framework Project and the Pennsylvania Department of Education. Come talk with those who have been PILOTING curriculum integration programs and those who have been working on the State Academic Standards.

Dates: The first week of August 1997
Place: TBA

To be placed on our mailing list for information regarding this meeting, please complete the following form and mail to **Keystone Integrated Framework Project, Bureau of Curriculum and Academic Services, PDE, 333 Market Street, Harrisburg, PA 17126.**

Name:

Affiliation:

Address:

Phone Number:

Fax Number:

E-mail:

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