The world of work: an intermediate level curriculum model integrating school-to-work and service learning

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The world of work: an intermediate level curriculum model integrating school-to-work and service learning

Abstract
Workers will need new and different skills for the changing economy in the 21st century. Current legislation includes school improvement and school-to-work. This project was designed to incorporate the educational reform movements of school-to-work and service learning within the school year calendar to provide educational work-related experiences for a full range of intermediate level learners in an inclusive classroom. Within this model students practice developing and applying basic skills, thinking skills, and personal qualities (SCANS) through work-based experiences which bring together school-to-work and service learning.

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THE WORLD OF WORK:
AN INTERMEDIATE LEVEL CURRICULUM MODEL
INTEGRATING SCHOOL-TO-WORK AND SERVICE LEARNING

A Graduate Project

Submitted to the
Division of Education of the Gifted
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by
Virginia LaVelle

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Abstract

Workers will need new and different skills for the changing economy in the 21st century. Current legislation includes school improvement and school-to-work. This project was designed to incorporate the educational reform movements of school-to-work and service learning within the school year calendar to provide educational work-related experiences for a full range of intermediate level learners in an inclusive classroom. Within this model students practice developing and applying basic skills, thinking skills, and personal qualities (SCANS) through work-based experiences which bring together school-to-work and service learning.
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One of the greatest analogies of all is that school is work. Just as parents go off to their job each day, so students go to their work at school. The world of work and play is closely related in a child's world (Chung & Hegland, 1994). By making these two come together in simulation games, children can achieve added skills through heightened interest and challenge.

Memories of my own childhood include games I played by myself with my cash register and carboned receipt book. At times my room became a grocery store or Marshall Field's, with various departments on its many floors. When friends came, I enjoyed playing dolls or school. After my second grade teacher had us play post office in class to deliver valentines on Valentine's Day, I was hooked on imaginary games. Using scrap paper and envelopes from the wastebasket at home, I became a secretary and even dared to become an architect, using my father's engineering books and drafting tools. By fourth grade I had sampled many careers.

Children at all grade levels need and should have work-based learning experiences (Schwoch, 1997; Starr, 1996) both at home and in school. The connections between classroom and career are at the
heart of School-to-Work, one of the school reform issues that is becoming a goal in Iowa school districts (Iowa Department of Education, 1996). Children need to become aware that problem solving techniques, communication skills, thinking skills, personality and leadership traits, to name a few, are the same skills that will help them to succeed in the adult world of work.

It is out of a perceived need to provide work-based learning experiences in the general classroom that this project was created. It is a curriculum model which will introduce intermediate (3rd, 4th, and 5th grade) students to the world of work in a way that will integrate learning to learn with learning to work. The emphasis of the design is on awareness and exploration of careers/jobs in business and industry. Such awareness and exploration is accomplished through the development of integrated activities providing a foundation of basic skills, thinking skills, and personal qualities. The model adapts to any situation, is flexible in the amount of time and emphasis spent on each part, and provides a low-cost method of accomplishing the goal of involving elementary schools in a school-to-work program.
The learning activities are designed for use in any inclusive and/or multi-age classroom. The interdisciplinary curriculum and teaching strategies are designed to meet the needs of each individual child. Most learning experiences are open-ended and encourage higher order thinking skills. Therefore, the needs of a gifted and talented child will be served within this curriculum model through content and teaching strategies, with the addition of shadowing, differentiation, mentoring, or self-directed service learning.

Rationale

The rationale for this project arises from a concern related to the foundation needed by students for acceptable levels of proficiency in the SCANS competencies (Charner, Fraser, Hubbard, & Horne, 1995). The changing workplace, with more changes expected in the 21st century (Levin, 1994), requires a new kind of worker. Business and industry have identified essential learnings and competencies which need to be a part of curriculum and instruction (Iowa ABI, 1996). In addition, educators have been in conversation and partnership with business and industrial communities in an
effort to provide quality educational programs to meet the needs of our changing society. School systems need to provide more options for all students through curricula which are linked to real-world connections and career awareness beginning in the elementary schools (Benz, Yovanoff, & Doren, 1997; Schwoch, 1997; Starr, 1996).

The 1991 report of the Secretary's Commission on Achieving Necessary Skills for America 2000 (SCANS) stated that if students were taught within the context of relevant problems, they would be more attentive and would find coursework to be challenging. The recommendation stated that workplace know-how should be taught along the entire continuum of education, from kindergarten through college. It also identified basic skills, thinking skills, and personal qualities as the foundation upon which this project is based.

The key feature of The School-to-Work Opportunities Act (1994) connected school-based learning with work-based learning. School-based learning includes career awareness and career exploration beginning at the earliest possible age. In our changing world the keys to the future are a well-developed mind, a passion to learn, and the ability to put knowledge to work
(Levin, 1994). The community is now understanding it has a responsibility to work with the schools for the economic well-being of our nation and our citizens. It is in this light that a need arises for revised curriculum models.

As schools in the nation focus on the future through School-to-Work, it is important that such a focus is reflected in the curriculum at the elementary level. Until this past year there have been few commercial publications of School-to-Work curricula. The 1996 Scholastic Reading program has chosen a "Career Connection" in their new elementary level reading series; however, their Life and Job Skills Series begin this topic at the middle school level.

It is apparent from the literature that the incorporation of a school-to-work learning system is an effective way to ensure that all students are prepared for the future (Benz, et al., 1997). It also should become a practical way for elementary schools to join in this reform. It is important that we provide opportunities for all learners to begin to gain skills, knowledge, and attitudes necessary for success in their chosen future careers. Consequently, there is a need for this project.
Statement of Purpose

As a teacher of fourth grade children, I have observed that intermediate students are at an impressionable age. They are playful enough to get involved in simulation games. At the same time many are able to identify with the relevance of knowledge as they examine multiple careers in the world of work. Students tend to become self-motivated as they see new possibilities for themselves and their interests. On the basis of these observations and because of a life-long interest in career education and work-based experiences, I decided to incorporate school-to-work related experiences into my general curriculum.

The purpose of this project, then, was to create and implement a curricular model and calendar at the intermediate grade level which focuses teaching and learning on building those skills and attitudes necessary to meet the changing world of the workplace. This is done through the incorporation of service learning and school-to-work activities.
Definitions

For purposes of this study, the following operational definitions are used within the context of this project:

Differentiation:

Teachers make modifications in the curriculum either in content or pace to accommodate the abilities of academically diverse learners. (Des Moines Public Schools, 1996)

Inclusion:

Students attend their neighborhood school with age and grade peers. Any students labeled for special services are taught within the least restrictive environment, and not isolated into special classes or wings within the school. (Des Moines Public Schools, 1996)

Service Learning:

Students learning by thoughtfully sharing their talents through service projects to others and their environment. (Lewis, 1996)

School-to-Work:

System of beliefs and practices that focuses teaching and learning on the skills necessary for students to be successful in the changing workplace. (Des Moines Public Schools, 1997)
Methodology

In retrospect, this curricular model developed over a long period of time. Personal interest in real-life experiences emerged in my own childhood and schooling. As I began teaching, I incorporated simulations. What began as a mathematical/language emphasis within a postoffice experience, grew into the full community of "LaVelleville" in my K-4th grade classrooms. This part of the curriculum has been refined and used over a number of years.

During the 1990-1991 school year a fifth grade colleague and I had many potentially talented students with frighteningly few ambitions. Their view and experience of the world was limited and narrow. We felt all our students could benefit from an exposure to the business world. We designed a curriculum which focused on an immersion of the two rooms in a downtown classroom for a one year period. In cooperation with parents and the Business Alliance Committee, we found donated space on the Des Moines Skywalk. A decision of the Board of Education and public opinion did not enable us to implement this venture.

Since then, site-based decision making and a broader
understanding of issues relating to the real world of work has grown in prominence (Grubb, 1996). Meanwhile, we accepted the challenge of determining which of our ideas would still be possible within the four walls or our classrooms, without money for field trips. Through collaboration we began "Sailing on a Sea of C's", "C of C's Rotation", and HAVELLE & CO.--an integrated simulation game of a business corporation. By integrating mathematical skills, writing and thinking skills, technology, and creativity the year was rewarding for teachers and students. We had brought the business world to our 4th and 5th grade classrooms.

Growing awareness of academics and its relevancy to today's changing world resulted in differing levels of supportive attitudes and enthusiasm with the Des Moines Board of Education supporting a downtown school several years after the downtown classroom proposal. A day's visit to observe that school confirmed my belief that this was an ideal approach to relevant learning. While this school on the skywalk began as an ungraded school of 5-8 year olds, it has now grown to include 5-11 year olds. There is a waiting list for enrollment, with some parents signing their child up at birth.
Jan Drees, the principal of the Downtown School, says their primary job is "to make kids successful. In turn that will make businesses successful. We want everyone to be successful in the workplace" (interview, March, 1997). Drees supports the multi-age concept which recognizes a community of learners, rather than grade levels. The school is committed to self-directed learning, simulations, problem-solving, questioning, and performance based assessment. Most of the learning is community based. Students observe, sketch, interview, and learn through direct contact with businesses or invite business people into their classroom. I have spent a full school day observing in the Downtown Classroom and have taken my own students there during a day of education on the skywalk.

To fully understand the scope of the School-to-Work trend, I spent the last two years as a self-directed learner. During that time I reviewed pamphlets, articles, books, and commercial elementary curriculum focused on the school-to-work issue. I also initiated an Eric search on several issues, heard reports in graduate classes, and attended inservice sessions giving business and/or school viewpoints on the issue of school-to-work.
An unexpected bonus to my studies and the highlight of the inservice sessions I attended this year was my being inspired by Barbara Lewis, 1996 CONTAG presenter. As she presented the topic of service learning, I felt this concept of connecting learning to service in the real world fell in line with the personal character development I was hoping to see in my students. According to Lewis, they could move from being a receiver of action to being the giver of action. Discussions of attitudes towards people and the world around could lead my students to choose small projects which could make a difference in the lives of others. The inclusion of service learning activities in this curriculum model naturally adds to the foundation of personal qualities as well as interdisciplinary skills.

In the fall of 1996 I became an elementary representative on a feeder school committee for Lincoln High School in the Des Moines Public Schools. The committee worked on the development of a School-to-Work grant. The $10,000 planning grant has been awarded. Now we are moving toward involvement of the elementary buildings in awareness, planning and design of a program. As a member of the steering committee, I shall be involved as we write
the implementation grant this coming year. A School-to-Work Committee is currently being set up in my elementary building.

In addition, three days this spring were spent reading School-to-Work planning grants for the state distribution of funds. This was a comprehensive look at how many schools in Iowa are planning for this latest school reform. I surveyed the 16 planning grants I read in depth. I also interviewed a reader of 16 implementation grants.

My in-depth look at School-to-Work plans reinforces my belief that the intermediate level curriculum of "The World of Work" follows School-to-Work guidelines. The attached World of Work model is presented in a calendar format for ease in using and understanding the sequential development of the components.

My personal challenge has been to bring a degree of what is possible on a "skywalk" to a self-contained classroom. As a result, each year I have included more hands-on, problem-solving activities, interdisciplinary simulations, and career/job connections. During the last seven years my classrooms have usually been combinations of either 3rd/4th grades or 4th/5th grades due to enrollment and class size. The activities I planned worked well regardless of the
age or grade of the student.

My current teaching assignment is a 4th grade class. This year I combined service learning with a few school-to-work activities I have developed over the years to field test the feasibility of such a comprehensive School-to-Work calendar. New features included the addition of the LAVELLE MANUFACTURING unit, two service learning activities, and three levels of Junior Achievement to my fourth grade curriculum. Business and industry representatives also shared their occupations and introduced the class to Toastmasters Club. Regular conversation in the classroom featured references to and an awareness of the world of work throughout the year. Assessment has consisted of qualitative judgments through teacher conferencing, tests of the regular curriculum, and individual authentic assessments collected and recorded in the student business "briefcase" portfolios.

Thus, the methodology which resulted in this project has included literature review, professional development, and the field testing of the project related learning experiences in an actual classroom setting. The result of various studies, research, field testing, grant readings, and committee work is that I am more
convinced of the importance of work-related experiences. My students show me that each day in the classroom through their work and attitudes.

Review of Literature

The connection of business and industry to schools and the educational process has increased over the last decade. The 1983 U.S. Government report, A Nation at Risk, served as a wakeup call to the future of our nation, its people, and the economy. It postulated that the ability of the United States to succeed would be affected by rising educational needs in the work force. Marvin Cetron responded by writing Schools of the Future. He indicated that businesses and schools "will be critical to the survival of each other" (Cetron, 1985, p. 85). Conversations and studies ensued. By 1989, school-business partnerships were offering child care, corporate interest was growing around work-and-family issues, and concern was expressed through business efforts to improve schools (Rodgers, 1989).

The 1990s brought publications with further responses. The National Governors' Association adopted six National Education Goals
in February. By June of 1990, the Commission on the Skills of the American Workforce reported that 80% of employers said a primary concern was "finding workers with good work ethic and appropriate social behavior--'reliable,' 'a good attitude,' 'a pleasant appearance,' 'a good personality'" (America's Choice, 1990, p. 3).

Corporations also responded. The Conference Board, a leading global business membership organization, surveyed 176 U.S. companies. Their 1991 report showed its support of the national goals, the need for educational reform, and the resulting corporate role in these improvement initiatives. There was widespread agreement that reasons for educational reform included: (1) global economic competitiveness; (2) company work force needs; and (3) quality of life within the community (Corporate Support of National Education Goals, 1991).

Motorola printed its own brochure, The Crises in American Education in 1991. The report emphasized that most of the K-12 system was not developing knowledgeable responsible citizens or employable workers to meet the needs of the workplace. Motorola felt the mission of the American K-12 school system was to develop
every student to his or her maximum potential in the following three areas: social responsibility, employability in the workplace, and lifelong learning (Motorola, 1991). They committed themselves to being a global leader in establishing alliances. The 1997 information from Motorola cites existing programs in the pre-K-16 systems in Austin and Phoenix, with more programs being initiated elsewhere.

The national educational goals also were reflected in What Work Requires of Schools: A SCANS Report for America 2000. This report was concerned with how schools prepare young people for work. It presented a foundation for solid job performance: Basic skills, thinking skills, and personal qualities. The report also identified competencies needed by effective workers in the areas of resources, interpersonal skills, information, systems, and technology (SCANS, 1991).

The SCANS documents identified a three-part foundation of basic skills, thinking skills, and personal qualities which are required in work settings. The first proficiency required is a solid foundation in the basic skills of reading, writing, performing arithmetic and mathematical operations, listening and speaking. The second
foundation is acquiring thinking skills necessary to put the basic knowledge to work. These higher order thinking skills include thinking creatively, making decisions, solving problems, visualizing, knowing how to learn, and reasoning. The third part of the foundation necessary for effective performance in the workplace is personal qualities of responsibility, self-esteem, self-management, integrity, and honesty.

The same report lists five competencies that are required in workplaces: the ability to manage resources, to work well with others, to acquire and use information, to understand complex systems, and to work with a variety of technologies. It is clear that there is a definite contrast between a conventional classroom and a SCANS classroom. Since 1991 this has been a blueprint for educators looking at reform to keep pace with workforce demands.

Changes in the organization of the workplace towards high performance requires worker decision-making at both individual levels and in teams. A recent trend in the U. S. economy has been a tendency to hire part-time or multi-skilled workers. H. M. Levin, Stanford Professor of Higher Education and Economics, studied the
impact of skill requirements of the work force and concluded that the broader based skills and competencies in SCANS will probably contribute more to democratic and participative workplaces of the future than the traditional focus of education (Levin, 1994).

In October, 1993, the U.S. Department of Education produced National Excellence: A Case for Developing America's Talent. This report supported the need for building better schools in order to create a better society, because "all children deserve an education that helps them develop their special qualities" (p. 30). The report recommended the establishment of high-level learning opportunities both inside and outside the regular classroom or school building. It also suggested that schools should provide opportunities for students to learn from real-life experiences in flexible situations according to their needs and interests, as well as to draw on their community's resources.

One real-life learning experience is service learning. This recent educational reform movement stresses teaching thinking and learning through meaningful service contributions to the community. Problem-solving in the community allows children to learn not only
basic skills, but helps their development of personal qualities. As students share their gifts through service to others, an increase in self-esteem, leadership and responsibility results (Lewis, 1996). This service learning concept benefits students of all academic abilities.

One of the National Education Goals states: "By the year 2000, all students will...learn to use their minds well so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy" (America 2000, p 19). In 1994, the GOALS 2000: EDUCATE AMERICA ACT provided for specified funds to go directly to school sites for school improvement. An improvement goal of many schools now is to integrate school-to-work curricula to better prepare all students for the world in which they live (School-to Work Resource Bulletin, 1996).

One source of school funding is the School-to-Work grant. The School-To-Work Opportunities Act of 1994 calls for a system of school, business, and community partnerships to build educational reform around three core components: school-based learning, work-based learning, and connecting activities. It is designed
to provide integrated opportunities for young people to learn and to move successfully between the worlds of education and the changing workplace. Grants are awarded for the planning process as well as for implementation of the plan.

The State of Iowa has implemented a combined grant process which integrates school improvement with School-to-Work initiatives. The large number of schools initiating such grants indicates an increasing interest in the education of their students for tomorrow's workplace. The reading of a number of these grants confirmed my belief that most school systems were comfortable providing work-based learning experiences for high schools. There were occasional innovations for the middle schools, but few grants showed concrete or creative ideas for the elementary level. Students at all grade levels need and could have work-based learning experiences. The connections between classroom and career are at the heart of School-to-Work.

The most recent Des Moines School Inservice had no fewer than eighteen sessions relating directly to the School-to-Work initiative. Other indirectly related sessions included strategies,
technology, curriculum, and assessment. An interesting panel of business and industry representatives discussed issues regarding School-to-Work. The Des Moines Business/Education Alliance sponsors the Teachers in Business program, a summer work program designed to promote new attitudes within teachers to better prepare their students for their future. My conversation with participants supported the value of this teacher-to-work connection. A conference attendee remarked that she was more effective in the classroom and her students were benefiting from the hands-on experiences she had in the program.

The Iowa Association of Business and Industry sponsors an Excellence in Teaching Institute, a one week learning laboratory dedicated to the advancement of teaching School-to-Work transition skills. Participants learn techniques for involving students and build skills in experiential learning. Iowa ABI identifies the following competencies to ensure success in school and the workplace (Iowa ABI, 1996):

- Communicate and understand ideas and information
- Collect, analyze, and organize information
- Identify and solve problems
- Understand and work within complex systems
Apply mathematical reasoning to work-related problems
Use technology
Initiate and complete entire activity
Act professionally
Interact with others
Learn and teach on an ongoing basis
Take responsibility for career and life choices
Read and understand work-related materials
Participate in teamwork

Iowa looks to the future in its state plan for educational excellence in the 21st century. Iowa's education system goal is to improve the level of learning, achievement and performance of all students so they will become successful members of their community and the workforce. (Education is Iowa's Future, 1996).

National, state, and community interest in educational reform, as it relates to preparing students for the future, tends to center around service and school-to-work. The literature clearly supports the concept of the community as a classroom and the classroom as a place where students of all abilities can benefit from real-world experiences. This literature, coupled with my life-long interest in simulation games, contributed to the development of this project.
Project Description

The World of Work is an intermediate level curriculum model which focuses teaching and learning on the foundations and competencies of the SCANS Report, (SCANS, 1991). Designed specifically for the fourth grade curriculum of the Des Moines Public Schools, parts of it also have been field tested in a combination 3rd/4th grade class and a combination 4th/5th grade class.

Emphasis is placed on the relationship between the work of school and the work of the future. It is, therefore, easily adapted to a multi-age classroom. The model is found in the Appendix.

The activities and simulation games are the center of the work-based experiences and are designed to be of low cost with no additional curriculum purchase necessary. They are appropriate for an inclusive intermediate classroom similar to the one in which I teach. This particular fourth grade classroom is in a Des Moines neighborhood school with special education integration, an ESL (English as a Second Language) program, and a gifted and talented program which seeks to meet most needs of the gifted in the regular classroom. The work-based activities have been field tested in this inclusive setting. The depth of involvement in these experiences
adjusts to the ability and interests of each student.

The learning environment, strategies, and activities in this model are designed to meet the individual needs of each student. Differentiation and individualization are at the heart of the teaching strategies used in this project. I have questioned and challenged my own teaching methods to find the optimum means of reaching each student and helping him or her grow. My graduate program in gifted education has increased my concern for the challenge of teachers meeting all students' needs in the inclusive classroom.

My experience supports research showing that classroom environments have a significant effect on cognitive processes affecting motivation (Pressley 1995). This curriculum is designed to be used within a nurturing environment. Positive characteristics are encouraged and praised. Respect and responsibility are key class expectations. Shortcomings of teacher and/or student are recognized and targeted for improvement. Students look at possibilities and dreams for their lives. They learn of options so they are motivated to improve and grow. The teacher's expectations are high, yet realistic, for each child. While the goal to make children autonomous,
self-regulated learners might be unrealistic, even so, "all children are expected to learn" (mission statement of the Des Moines Public Schools, 1996, p.2). Therefore, it is necessary to encourage students to discover that they can do well. This builds their self image and learning capabilities. Beginning with the "Can Do" Alphabet activity in September, the foundation is laid for positive and negative personal qualities. It is emphasized that we all have strengths and weaknesses and that we need to strive for the positive. Students also need to be willing to make mistakes as they stretch their ideas and realm of knowledge. A safe, nurturing environment becomes one in which the children and teacher are willing to risk. Students are taught and encouraged to learn from any of their mistakes. They eventually see errors as an opportunity for growth rather than as problems.

Good teaching strategies of encouraging self-regulated use of knowledge can be accomplished by modeling concepts for students, followed by the use of scaffolded instruction. In this strategy the instructor enables students during their problem solving attempts, provides support on an as-needed basis, and helps them accomplish
or discern something within their next zone of development or understanding. In an effort to stimulate children's thinking, the strategy of distancing can be used at various levels (Chung & Hegland, 1994). It is for this reason I have chosen such scaffolding strategy to assist all students on a struggling to mastery continuum.

By individualizing instruction and scaffolding interaction, I meet each student at his/her own level. During the fall simulation game of LaVelle Manufacturing, I work one on one as each student develops his/her own robot design and instruction manual. The winter postal experience in LaVelleville is a prime example of the varied abilities and prior knowledge students possess in understanding and counting money. Each student plays this game at his/her own level, is challenged in problem solving, and grows from the experience. Scaffolding is an effective and vital teaching strategy at these times. The teacher's role moves from the provider or dispenser of knowledge to a learning enabler or facilitator so that the student becomes self-regulated, independent, and creative. This approach is particularly appropriate for the teaching of work-based experiences in an inclusive classroom (Graves, 1996).
In an effort to influence cognitive processing in my students I am concerned that they acquire new schema to add to their experience and long term memory for future recall as prior knowledge. Schema acquisition is increased by worked out examples as models, partially worked out problems for guided practice, and new problems for evaluation of acquired problem solving skills (Paas, 1992). I use this approach in the instruction of mathematics, as well as in language arts and reading. This is primarily accomplished through direct instruction of mental imagery and elaboration, followed by scaffolding, within a nurturing environment. I also try to create new episodic experiences within simulation games to build schema and develop knowledge.

From the viewpoint of classroom design issues, research speaks strongly to simulated learning activities, where students carry out tasks and solve problems that are realistic or "authentic" in the sense that students come to understand the uses of the knowledge and skills they are learning as well as the different conditions under which they can apply them (Collins, 1993; Stasz, 1994). During a year in the World of Work model, episodic experiences are created in
order for children to build schema and develop knowledge. The children become temporary store owners and/or customers during lessons on the counting of change. They create imaginary scenarios of applying for a job as they anticipate a visit from the human relations manager of the Marriott, our Business/Alliance partner. Within a world of play, the use of imagination becomes almost a natural phenomenon. Students link relationships and make analogies through imagery and elaboration. Direct instruction for these and other strategies, including demonstrations and modeling, is often used to encourage students to internalize these practices. During the year, strategy use gradually shifts from being teacher directed to being student self-regulated.

A major goal for students is to progress on a continuum from teacher-directed to self-directed learning. It is expected that they will begin to have a foundation of basic skills, thinking skills, and personal qualities which will better prepare them for the world of work. Hopefully, gains also will be made in their interpersonal, information, resource, systems, and technology competencies. Assessments of the goals are carried out in a variety of ways.
Regular pencil/paper tests and specially designed evaluations are traditional means of testing which are used during the year. Letters of appreciation to guest speakers are read and evaluated for comprehension of the presentation. Weekly reflection letters written by students to their homes indicate the level of enthusiasm for the simulations and areas of greatest interest to each child. Their 'briefcase' portfolios collect various items from group brainstorming, individual journaling, and scratch paper ideas to finished products, like the robotic manual and other products created independently by individual students, out of their own interests. Individual informal conferencing with students during scaffolding opportunities also indicate instructional strengths and weaknesses.

A calendar format has been used in the presented curricular model for purposes of sequential development, organization, and pacing of activities. This emphasis is designed for subtle infusion of ideas and attitudes with occasional specific activities or simulations included. The best approach to teaching is that of balance and pacing of teaching styles and content emphasis in an effort to meet the needs of all students.
Integration of service learning into this curricular model was based upon its strong emphasis on personal attitudes. The blending of service learning with a school-to-work learning system is an effective way to ensure that all students are prepared for the future. It is a practical way for elementary levels to join in this reform. They can provide opportunities for all learners in their inclusive classrooms to begin to gain skills, attitudes, and knowledge necessary for success in their future chosen careers.
Conclusions and Recommendations

Conclusions

District academic tests were given to determine progress at the end of the school year. Results of these curriculum objective based tests showed no significant gain or loss in the basic skills after a year of implementation of this curricular model where service learning and school-to-work were integrated into the regular fourth grade curriculum. There was, however, evidence of a vast performance based improvement in writing and editing letters which were written to thank Junior Achievement, The Marriott, Des Moines Water Works, Pizza Hut, and many guests who visited our classroom. Subjective views of success were also noted based on positive responses from students, parents, and the principal as he encouraged student teachers and practicum students to visit my room during their time in our building.

The greatest gains were made in collaborative skills, thinking skills, and personal qualities. As students lived and worked side by side with ever changing LaVelleville neighbors, an atmosphere of encouragement grew. On field day Chris was seen chuckling rather
than stomping his foot in anger after placing third in a running event were it looked like he was sure to place second. You see, Kevin was right behind him and sprinted for a last second takeover. Last fall Chris showed no sportsmanship. This spring he was awed, amused, and congratulated Kevin on his sprint. Those are observed examples of the personal qualities of respect for others and responsibility that evolved out of a nurturing classroom atmosphere.

These results confirm my belief that students grow from involvement in work-related experiences, simulation games, service learning, and bringing the real world into the classroom. It also reinforces the findings of the literature that such curriculum models as the World of Work help to make learning relevant to students. I am firmly convinced from my observations that they may enter middle school less likely to follow negative peer pressure as they focus on the future with basic skills, thinking skills, and personal qualities firmly in place.

The implementation year of the entire World of Work curriculum model was effective as indicated by student assessments on district objective tests as well as subjective evaluation. However,
from a teacher's standpoint, it was very demanding from the viewpoint of curricular decision making and the elements of time which were involved. From my own experience, I am convinced that a personal commitment to the objectives and a sense of risk are required of teachers in order to be able to set aside time from regular district objectives in favor of time spent on the World of Work. Some activities may be infused naturally, while others require a significant alteration of task commitment.

Recommendations

From the viewpoint of the project itself, the design and flow of the calendar year was natural, since most activities were built upon previous skills. One improvement needed would be the inclusion of greater flexibility within the standard curriculum. It is difficult to meet all objectives without any extras. The Des Moines Downtown School, for example, is not bound by the regular district curriculum. Broad objectives are met, but there is greater flexibility needed in curriculum and scheduling for many work-related activities. Such flexibility should be a required component in the implementation of this project.
Research should be initiated to determine whether the fourth graders who experienced this year in the World of Work curriculum model scored as well on the end of the year district objective-based tests as the other fourth grade in the building, which was taught using the traditional district curriculum. This comparative evaluation might yield information which would support the expansion of this type of curricular innovation into other classrooms.

Suggestions for further study would be replication of the World of Work curriculum model in other fourth grade settings, such as another Des Moines school, a suburban school, and a rural Iowa school. Other possibilities include field testing the model in third and/or fifth grade inclusive classrooms in the same school. These further field tests would determine the feasibility of the year's activities by other teachers, other grade levels, and other district curriculums.
References


Additional Resources


APPENDIX

THE

WORLD OF WORK
THE WORLD OF WORK

Overview of a Year of Intermediate Curriculum Integrating School-to-Work and Service Learning

Virginia LaVelle

1997
THE WORLD OF WORK

Introduction

The World of Work is a curriculum model which will introduce intermediate (3rd, 4th, or 5th grade) students to the world of work in a way that integrates learning to learn with learning to work. The emphasis is on awareness and an exploration of careers/jobs in the real world of business and industry.

The major goals of the World of Work are:

Introduce children to the world of work.

Build the foundation of basic skills, thinking skills, and personal qualities through work-based experiences and service learning.

Provide hands-on work-based experiences and simulations through enhanced curriculum.

Access resources from the business community.

Using these major goals, a scope and sequence was developed showing the quarters of the school year. Also included is a scope and sequence based on SCANS. A plan of action time line delineates broad monthly goals. This is followed by the general action plans, goals, and activities for each month. There are a number of additional lesson plans available which have not been included in this overview.
### SCOPE AND SEQUENCE
of the World of Work

<table>
<thead>
<tr>
<th>Quarterly Listing of Activities</th>
<th>Introduction to WOW</th>
<th>Application of SCANS</th>
<th>Hands-on/access to real WOW</th>
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<td>Field Trips - Past &amp; Present</td>
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BASED ON SCANS REPORT (1991)

What Work Requires of Schools

A THREE-PART FOUNDATION

BASIC SKILLS: Reads, writes, performs arithmetic and mathematical operations, listens, and speaks

THINKING SKILLS: Thinks creatively, makes decisions, solves problems, visualizes, knows how to learn, and reasons

PERSONAL QUALITIES: Displays responsibility, self-esteem, self-management, integrity, and honesty

FIVE COMPETENCIES

RESOURCES: Identifies, organizes, plans, and allocates resources

INTERPERSONAL: Works with others

INFORMATION: Acquires and uses information

SYSTEMS: Understands complex inter-relationships

TECHNOLOGY: Works with a variety of technologies
## SCOPE AND SEQUENCE
Based on SCANS

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<th>Thinking Skills</th>
<th>Personal Qualities</th>
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THE WORLD OF WORK

ACTION PLAN

Virginia LaVelle
1997
THE WORLD OF WORK

ACTION PLAN

TIME LINE

Sept. Sample Skills and Attitudes for a Positive, Caring Start to the School Year

Oct. Observe the Business World from within the Classroom Environment

Nov. Notice Technology, Business and Industry

Dec. Decide to Share, Care, and Serve


Feb. Find Out about Postal and Banking Services

Mar. Move Closer to Reality

Apr. Add to the Environment

May Make Plans and Experience the Real World of Work

June Jump into Future Yearnings
GOAL for the month: Create a positive experience and lay the foundation for a nurturing environment where personal qualities of respect, self-esteem, honesty, and responsibility will be encouraged.

"CAN-DO" ALPHABET - Vocabulary and spelling enrichment begins the first day. We add a word a day for the first 26 days of the school year. This is a list of action verbs with a positive attitude implied. We hold discussion on the possible negatives in the action. Along with our class expectations of respect and responsibility, this lays an important foundation for personal qualities. It begins to establish a caring, trusting environment.

"SAILING ON A SEA OF "C'S" - W O W !!
WAVES OF WORDS FOR THE WORLD OF WORK!!
Language and alliteration are taught through the brainstorming of "c" words which are subsequently categorized grammatically as well as more obvious ways. Alliterative sentences are formed as this activity continues. Business words, like careers, corporations, committees, collaboration, etc., are encouraged and discussed. The activity culminates with a brainstorming of all the careers the class can generate in a given time. This brainstorming will be repeated once or twice during the year as a means of showing growth in career awareness.

A "C of C's ROTATION" is an exercise in the reading of schedules, a diverse group of "C" activities, and an introduction to technology and strategies to be used throughout the year. The experience encourages individual responsibility.

CAREER PORTFOLIOS - We begin portfolios with products from the "C of C's". These are placed in a briefcase-type folder.
GOAL for the month: Increase student understanding and provide experience in organizational systems in the business world through hands-on approaches such as filing, participation in the Junior Achievement activities, and presentations by adults who visit the class.

- **FILING** - Students are given access to the filing cabinet. Two files will be in the cabinet for safe keeping and their use throughout the year. They will file personal journals and weekly reflective letters. These will be filed alphabetically with the contents ordered chronologically. Students will have a book of their reflective letters and a year's journal to take home in June.

- **JUNIOR ACHIEVEMENT** - Students can learn the basics of organization, management, production, and marketing through five visits by a Business Basics Consultant. If one is not available, the basic concepts can be taught by the classroom teacher. These understandings are expanded upon in other conversations and assignments based on a book written by a thirteen year old entrepreneur:

- **SPEAKERS** from the world of business and industry come to the classroom, beginning with parents of the students who are willing to share their occupation with the class. An important component of the Business/Alliance partnership with The Marriott is the assignment of each class in our building to a department of the organization. The human resource department is assigned to my class. We invite the department manager to our classroom to speak and begin a relationship with this department. We learn the importance of personal qualities whether interviewing or performing on the job.
GOAL for the month: Provide opportunities for students to demonstrate applications of basic skills and thinking skills within the context of discussions, technology, and a business/industry simulation game.

- TECHNOLOGY - Technology is promoted and used in the classroom. We expand on the teaching of the keyboard started during the computer segment of the "C of C's Rotation" and sign up for the CD ROM in the classroom during the month. This provides for several weeks of computer saturation as we play our simulation game.

- BUSINESS/INDUSTRY - Business and industry as a concept is better understood within a simulation game. One of these work-related experiences is selected for the month: HAVELLE & CO. is a collaborative business experience between two teachers of different grade levels. LAVELLE MANUFACTURING is an industry which is developed by one teacher within a single classroom.

HAVELLE & CO. - Students have experience in the following departments of business: accounting, auditing, graphics, investments, marketing, research, systems, and personnel. Departments usually function simultaneously. Students respond, depending on specific department, to guided instruction, independent exercises, hands-on manipulatives, or collaborative group work. The departments reflect district curricular objectives with a bent toward a business foundation. Specific planning should be done collaboratively by the two teachers.

LAVELLE MANUFACTURING CO. - Detailed plans by one teacher creates a robot factory or any other type of factory decided upon by the class. Language, science, and mathematical basic skills, as well as many creative/problem solving thinking skills, are used in similar departments to that found in HAVELLE & CO. The final product is a Robot manual written by each student, as well as creative advertising of the robot.
GOAL of the month: Introduce students to the idea of service, doing for others, in a season which places emphasis on giving.

- SHARE & CARE - Class discussions lead to the recall of news stories or their experiences from Thanksgiving break. Vignettes from Kids With Courage by Barbara A. Lewis are read and discussed. We work at an understanding of the difference between needs and wants. Their earlier discussions in the primary grades are expanded upon. The social studies text refers to the Giraffe-Stick Out Your Neck program. We also look at an October, 1990, issue of Scholastic News. The feature article is "Kids Can Make a Difference" and Barbara Lewis is pictured inside with tips on getting involved. A Think-Pair-Share activity then generates ideas and ways we can make a difference in someone's life.

Resources:

- SERVICE LEARNING - Students participate in service learning on an individual basis by volunteering any number of service hours to neighbors, grandparents, family, church, etc. This is the culmination of our class study on the difference we can make in the lives of people. Students are encouraged to complete their service learning project during the month, during school or on into winter break.

Resource:
January - JOIN in an Awareness of how Cultural Diversities, Individual Differences, and Learning Styles affect Career Choices

GOAL for the month: Create an awareness and an appreciation of the diversity that makes up our school and nation. Students develop their understanding of self and others through these activities. They also see that instruction and practice may vary in the classroom depending upon needs and/or talents of their classmates.

- CULTURE DIVERSITY - The class participates in our school's January/February multicultural emphasis. Being an ESL school we especially celebrate the cultures represented in our building. During the designated time we learn of the diversity within our class. Students from Sudan, Laos, Vietnam, Poland, Mexico, and India (for example) are each given a special time to share artifacts, music, geography, careers, and customs from their culture. In addition, other students who choose to share and report on their family heritage, or a country of their interest, are encouraged to do so.

- INDIVIDUAL DIFFERENCES - The class reads biographies, writes autobiographies, and gives speeches on famous people from various cultures and occupations. Students build an awareness of individual differences.

The development of this sensitivity is helped by inviting my visually impaired friend, Mavis McVeety, to the classroom. When I tell of her impending visit, a few students recall having seen her at the State Historical Museum where she works a guide. She brings her braille typewriter, a book, and other aids. All questions are freely answered, and we grow from this experience.

- LEARNING STYLES - The concept of varied styles of learning and personality are briefly introduced and discussed to encourage a tolerance of others, as we practice teamwork and self-management.
GOAL for the month: Integrate basic skills of language arts, mathematics, and social studies with thinking and social skills in a work-based environment where students learn to think and process independently.

- LAVELLEVILLE - This simulation game covers a multitude of basic skills with a high level of enthusiasm by the students. Interest in learning and attention to detail is keen, because new "rules" are added to the game as it develops.

The community of LaVelleville is established in the classroom. Streets and businesses are "constructed" and house numbers are established for addresses. The process of choosing a house number includes discussion of odd/even sides of the street as well as sequential order. Postage necessary for each street is determined and students must purchase the appropriate stamp for the street to which they intend to mail a Valentine.

Each student is a postal worker and must refer to the work schedule to determine which shift he/she works. Salaries are earned, and correct change can be gotten from the banker. Postage is bought with exact change during the first several rounds. This allows each student to demonstrate that they clearly understand the complexity of the game, can count money of various denominations, and can practice customer courtesy. After that the practice of counting back change is added. Valentines are then mailed, processed, and "returned to sender" for corrections, if needed. They are delivered under LaVelleville policies at our Valentine Party.

Individual conferencing is done during the self-running game. Follow-up activities are also used as assessments. Students make their own postcards of a place they wish they could visit for a winter vacation. The final evaluation is the proper addressing and writing of a brief friendly card to a classmate whose name they have drawn.
GOAL for the month: Evaluate what has been gained during the first three quarters of the school year as they relate to the broad goals:

Introduce children to the world of work
Integrate applications of "workplace know-how" to reinforce the foundation of basic skills, thinking skills, and personal qualities
Provide hands-on experiences and simulations through enhanced curriculum
Access resources from the business community

- REVIEW - As three quarters of the school year come to a close, it is time to assess what has been learned about the world of work within our classroom walls before we venture out. As a part of this process we will:
  Generate a career list to compare to September.
  Recall and discuss, in small and large groups, some memorable times in the class, so far.
  Evaluate career portfolios for parent/teacher conferences.
  Set group goals for the remainder of the school year.

- CAREER DAY - This is the culmination of investigations and recording the students do during spring break. They are asked to explore several occupations/jobs by conducting interviews. They record their findings and report back after break. Each student chooses one occupation to portray on Career Day. Each student needs at least one property and/or piece of attire to "become" a worker as he/she would for a day on that job. Each needs to understand enough about his or her "work" to be "interviewed" by a "roving reporter" during the day.
April - Add to the Environment

GOAL of the month: Create an awareness of the effect of citizens and business/industry on the earth and determine a way to help.

- SERVICE LEARNING - We devote a major portion of time to discussions examining how businesses (as well as local citizens) help/hurt the earth. We begin with a compare/contrast exercise of *The Lorax* by Dr. Suess. We read the book and view the video. There are differences, and the ensuing discussion heightens their awareness. Each student then writes a persuasive paragraph. "I am the Lorax, and I speak for the .........." This is followed by a speech of persuasion campaigning for some aspect of the environment.

We then read and discuss the section on "Kids Saving the Environment" in *Kids With Courage* by Barbara Lewis (1992). Group collaboration is used to decide on projects worthy of consideration. First, we brainstorm ideas. Then, using foundation thinking skills, we evaluate them as to most wanted, most needed, most serious, most difficult, most expensive, and most feasible in our short time frame. We decide on a group service project to do during April. Also, students are encouraged to develop and complete their own project, as they did in December.

Resources:

GOAL of the month: Provide experiences which give a view of the real world of work, past and present.

- LONG AGO - We take a field trip to the Living History Farms to see work of the past. We compare and contrast what we learn there with what we already know of the present world of work.

- CONSERVATION - We visit the Walnut Creek National Wildlife Refuge Prairie Learning Center in Prairie City, IA. Through film, lecture, exhibit hall, trail hike, and games, we use observation and thinking skills to recognize the effect of time, climate, ecosystems, and human intrusion on the natural prairie. Students reinforce geographical studies of Iowa and ways to restore an environment.

- HERE AND NOW - We spend a one or two days in downtown Des Moines. We ride the metro to the city center, visit our Business/Alliance partner—the Marriott, walk the skywalk, observe geometric structures in architecture, and visit the downtown school. Notice is made of how mathematics, reading, writing, and communication skills are needed in the world of work. We enjoy a sack lunch in Nollen Plaza amidst vendors and lunching downtown workers. Then we visit a few businesses, listen for music in elevators and elsewhere, notice art work of all types in various places, speak with a few community leaders, and respect indigents from the adult group home who ride the metro home with us.

- CULMINATION - Extensive class discussion, personal letters of thanks to businesses and individuals, and individual journaling comprise the assessment process. There is also time for individual informal conferencing during the field events. We continually compare/contrast the past and present. Students project to the future as they visualize their role in the environment and the world of work.
GOAL for the month: Review with students the various class experiences related to the world of work. Evaluate which made the most impact on their attitudes of work and service learning.

- EVALUATIONS-

Students empty the files they began in September. They make a book of the weekly reflective letters they have written to their parents and returned with a signature.

Students peruse their briefcase, journal, and letters as a means of recalling the year's activities. We reflect as a class over their discoveries, opinions, and analysis of work-related experiences. They then make a final journal entry.

The class have another brainstorming of all the careers they can generate in a given time. Students then recall their projected career choice early in the fall and report how that has changed or been reinforced.

The class has a discussion on the personal growth they have made collectively and individually in the environment that promotes encouragement and acceptance encouragement of each classmate.

The class summarizes the little differences we have made in the lives of others and our environment through our service learning.

- FUTURE - Students will leave for the summer, another grade, and another teacher with a foundation of life skills and an understanding that they can make a difference in their world. They will have their briefcases, journals, and book of reflective letters as reminders of the work-related experiences. A challenge will go with them. Hopefully they will have found yearnings within the world of work and service learning.