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PROJECT BASED LEARNING

Learning by doing has been a long standing practice in education. Just as cooperative education applies that concept to learning at the worksite, project based learning in the classroom replicates the type of learning and decision making which occurs on the job.

Two factors emphasize the need for incorporating project based learning into Cooperative Career Education programs. It is widely understood that learning does not occur in isolation – that students learn within the context of their world. Learning is partly a social process which takes place within the context of culture, community and past experiences. Students use what they already know to construct new knowledge and solutions to problems. Project based learning places the focus of teachers and students on the learning process rather than the retention and repetition of facts. The result is higher levels of learning.

The second factor which supports the use of project based learning is the changing nature of the work world. The early demands of the industrial age required workers who could competently perform repetitious, discrete tasks in isolation from other workers around them. The educational structure which evolved at that time mirrored the industrial model by stressing the acquisition of knowledge in separate subjects taught as unrelated topics. Most educators now realize that education must change, as modern industry has changed, to meet the challenges of the 21st century. Today's students must acquire both knowledge and learning skills if they are to be part of a globally competitive workforce.

Project based learning offers several benefits when incorporated into the curriculum.

- Student motivation to learn is increased because they are engaged in pursing their own interest within the context of the project. Students frame the questions, use technology to seek answers, make decisions based on that information, and are involved in the evaluation of the project. Projects are challenging and adapted to individual learners.
- Interdisciplinary leaning is enhanced. Students are required to integrate academic skills with occupational competencies in order to complete the project.
- Topics are explored in depth with an emphasis on understanding and application of skills rather than a broad coverage of subject matter. Students have an opportunity to develop higher levels of skill necessary for success in the workplace.
- Projects are based on real world problems which are relevant and interesting to students. Students will develop knowledge and skills in the context of the workplace at a level required by employers.

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- ♦ Learning skills will be enhanced because students are empowered to direct their own learning. Project based learning develops the social, personal and collaborative skills necessary for continuing learning throughout a career.

Project based learning should be a component of the instructional program for Cooperative Career Education. When planning for project based learning several factors are important.

- ♦ Select a project which is based on a question central to the curriculum topic. Clearly identify which standards and objectives will be taught through implementing the project.
- ♦ Carefully plan the logistics of the project to include materials which might be required, access to technology, potential roadblocks and how to overcome them, student grouping and leadership assignments, timelines, and acceptable options in terms of product.
- ♦ Understand that the role of teacher changes from dispenser of information and controller of learning to that of mentor, observer, communicator, and learning guide when project based learning is incorporated in the curriculum. Be prepared for varied levels of participation, students pursuing questions which seem tangential to the project, and a certain level of chaos as students leave the traditional expectations for classroom behavior for the self directed learning of projects.
- ♦ Design a variety of assessment opportunities while remaining focused on student mastery of the selected curriculum standards and objectives. Teacher checklists and rubrics are certainly one part of the assessment process. Other options should include periodic student reflection during the project activities which might include journaling, student discussion or written critiques. In additional self evaluation and peer evaluation at the conclusion of the project provide an opportunity for students apply their own expectations to the learning which resulted from the project. Individual and group presentations also help build on the learning process.
- ♦ Keep notes of what worked and what didn't work during the project. Teacher leaning about how to use projects for teaching curriculum standards is very much a part of the process. Realize that things won't go exactly as planned, that not all instructions and materials will be adequate, and that individual students and groups will pursue projects differently. Professional development opportunities focusing on using project based learning can also be helpful when available.

Many of the sample activities provided on the guide sheets in this project can be developed into project based learning activities. Consult one of the many resources available for planning and implementing project based learning, and then add it to the tools you have at your disposal to deliver a quality Cooperative Career Education program.

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SIMULATION

Simulations have been a part of educational methods for many years but are generating renewed interest with the increased availability of technology in schools. The business, scientific military, and medical areas are using simulations and gaming powered by technologies which create a virtual reality context for learning. Even without the use of technology the concept of learning in a simulated reality has educational merit.

Well designed simulations build collaboration and teamwork among students. Grouping and teaming students to work through a simulation replicates the situations often found in the work world. Simulations also provide an opportunity to receive feedback on performance, either during the operation of the simulation or through post-simulation evaluation. Simulations can motivate and empower students to problem solve and purse their own learning, both skills necessary for success in the workplace.

While a great deal of interest is generated by simulations based on the technology of virtual reality, classroom simulations can take many forms. The simplest among these is the traditional case study approach to presenting problems and decision making. Projects based on real world activities and problems also represent a basic type of workplace simulation. Practice sets like those often found in accounting courses can simulate the work world in enough detail to provide real world learning experiences. Role playing can replicate situations found in the real world and allow the student to apply various solutions to problems. Simulations powered by computer software are powerful tools for replicating the work world. These programs provide feedback on decision making, introduce a wide range of variables, allow controls to be set by the teacher, and generate high levels of interest through their visual appeal. These benefits are increased when simulations are expanded beyond the classroom to on-line simulation and gaming programs.

Simulations which place the student in a real world setting as a context for learning and applying the curriculum competencies should be part of the curriculum for Cooperative Career Education programs. Students can develop skills in the controlled environment of the classroom which can then be applied through the cooperative education experience. The result is a student better prepared to meet the demands of the workplace.

CAREER AND TECHNICAL STUDENT ORGANIZATIONS

Student organizations are a vital component of every career and technical education program. CTSOs are a unique educational method which builds

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student engagement in their education, provides recognition, develops leadership, creates self-esteem and self-confidence, and makes the student aware of the role of school and community service in the growth and well being of their community. CTSO activities are integrated into instruction which leads toward mastery of curriculum competencies. They link school programs to the real world to enhance both school based and work based learning with the goal of better preparing students for the workforce and continuing education. A Career and Technical Student Organization should be an integral part of the instructional program for Cooperative Career Education programs.

COMMUNITY SERVICE

Community service projects contribute to the effectiveness of Cooperative Career Education programs by extending the classroom into the community. Community and school service projects, also referred to as service learning, enriches learning by engaging students in meaningful service which is integrated with classroom instruction. These activities are a vehicle for development of academic, personal and occupational skills. Community service also creates a sense of personal and social responsibility. In addition to skill development community service projects allow the student to reflect on their own personal and career interests in areas associated with the service project.

Quality community service projects have the following characteristics:
- Organized service activities
- Meet the needs of the community
- Fosters civic responsibility
- Integrated into academic coursework
- Provides reflection time for students

Community service can be a valuable instructional method for developing the knowledge and skills in the Cooperative Career Education curriculum. Teachers should seek opportunities to engage their students in service projects which are consistent with the curriculum standards. Support for the projects may be available through local, state, or corporate grants. Partnering with other community service organizations can be an effective way of getting students involved in service activities. Community service can be an important activity for students and for programs.