Involving students in the instructional design process

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Recommended Citation

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Instructional design is the process of analyzing learner needs and educational goals and developing a systematic approach to meet these needs and goals through teaching methods, facilities, instructional materials and evaluation techniques. Teachers and educational technologists in secondary and elementary schools have not embraced the instructional design concept as readily as people in training, business or higher education.

There are several reasons for this lack of enthusiasm: few library media specialists have instructional design expertise, little or no money for materials and staffing is available, little time is allotted to teachers for instructional development and there is little awareness or concern about the instructional design process by curriculum developers or administrators. Instructional design is very time consuming and generally requires full time commitment by someone on the educational technology staff. Most schools can not afford the luxury of hiring someone as a full time instructional designer. Ironically, it is the goal of instructional design to discover the most efficient and effective use of time, resources, staffing, funds and teaching necessary to bring the desired result of improved learning.

Instructional designers use models, diagrams, flow charts or graphic directions to educate and involve teachers in the instructional design process. There are many different models for instructional development available (see Gustafson, 1981). Though these models or flow charts vary in terms of how they represent the instructional design process, the goal is to improve learning for the intended audience.

Generally, the instructional design process starts with goals and objectives; then depending on the model used, it progresses to stages that include (1) discovering

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the characteristics of the learners or their entering behaviors, (2) gathering content, (3) determining the scope, sequence and structure of that content and (4) specifying competencies, learning events and activities. Some instructional designers might give pretests, develop prototypes or specify alternative methods at this stage. Later the instructional designers may construct and determine several teaching and learning activities, design the instructional materials, assign local production work, and have the teacher conduct a tryout. The process ends with evaluation of the results and possible revision of the system.

Obviously, this process on a sophisticated level requires expertise, cooperation, time, management, money and personnel to implement. Even without instructional designers, teachers incorporate some aspects of instructional design in their teaching. Teachers start with goals and write objectives for their courses, they are at least somewhat aware of the characteristics of their students, and they gather and know the content of what it is they wish to teach. Most teachers test their students and sometimes evaluate and change their teaching methods.

What teachers need most is help in the design of instructional materials; in some cases this can be accomplished by involving students in the design of instructional materials. Often students are better with the technologies of instruction (use of microcomputers and production of videotapes, slide/tape programs, overhead transparencies, graphs, charts, audiotapes, and films) than are some teachers.

Why not allow students to organize, design, draw, script, produce and present instructional materials for their peers? This means that students, as well as library media specialists or educational technologists and teachers, become directly involved in the following: (1) preparing and determining learning experiences; (2) developing, producing and presenting media; (3) discovering alternative learning preferences; (4) selecting methodologies and (5) learning how to organize, simplify and present information.

Asking students to become participants in the design of instructional materials allows them to learn how each thinks and thus share, develop and learn how to learn.

Involving students in the design and presentation of locally produced media or the presentation of commercially produced media is based on five principles, some of which are supported by research in the field of education and some of which are common sense principles that have worked for me.

Principle one: Student participation in the design of media works because all learners become involved and feel as if they are an important part of the process. If change in behavior is the goal, all people in the situation must help make decisions about that change. This approach has a theoretical base in the research work of Hall (1975) and Freire (1971). The decisions that affect students are made by students.

Principle two: People never really learn a topic until they teach it. Students in my classes who make their own instructional materials and teach their peers become highly motivated, enjoy the collaborative experience of learning how to learn and discover how to communicate that learning to others.

Principle three: Learning how to learn is as important as learning the content. As we have often heard, in our technological age, information changes so rapidly that

many things we learn today are outdated tomorrow. Some advantages of involving a class in the design of instructional materials are (1) students learn where to find information; (2) students compare how different students learn information; (3) students organize the materials and (4) students learn the skills of communicating that information to others.

Principle four: Instructional design is a means that may be just as important as the end products of that process. Teaching students the need for collaboration, cooperation, and community activity may be more long lasting and beneficial than the information that the teacher wishes to impart. The process of taking a body of knowledge and organizing it into some presentable form is a learning experience in itself.

Principle five: Learning requires that information be simplified and organized in some fashion. This is true for our own personal understanding as well as communicating our thoughts to others. Gestalt psychologists believe that we seek simplicity and organization in the processing of information and they have expressed this need by learners in the concepts of proximity, closure, continuity, similarity, etc. Involving students in the design of instructional materials is a means to organizing and simplifying information for better understanding.

Instructional design is not for everybody. Some situations, people and topics would not benefit from this approach. Also, involving students in instructional design is not applicable in all situations. It may be difficult to implement in training situations of business and industry. However, teachers and students should learn the value of designing materials for the classroom that are a result of a cooperative effort. The transparencies, videotapes, flow charts, audiotapes, etc. that the students produce can be used to communicate to others in the class the insights each student experiences and can thus become effective instructional materials.

References

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