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When students become actively involved in technology productions, they develop learning skills, communication skills, and visual analysis skills, all of which are applied to real-life learning within the classroom curriculum. Students participate in all stages of the production projects, which proves to be motivating for the students and allows the teacher and students to work personally and collaboratively. In this paper, some ideas are presented for student visual productions that are integrated directly into classroom curricular areas. Activities are described for the following visual media and subjects: photographs in reading, science and social studies; organizational visuals in vocabulary and language arts; television/video in language arts and health; computers in math and language arts; and sound/slide productions in language arts and social studies. (AEF)
Visual Productions And Student Learning
by Marilyn Bazeli

Abstract
When students become actively involved in technology productions they develop learning skills, communication skills, and visual analysis skills, all of which are applied to real-life learning within the classroom curriculum. Students participate in the planning, production, and evaluation of production projects, which proves to be motivating for the students and allows the teacher and students to work together personally and collaboratively. This is a different way for educators to think of classroom structure. Some ideas are presented for student visual productions that are integrated directly into classroom curricular areas.

Introduction
Many teachers want to use technology in their classrooms. However, designing classroom activities involving various media is time-consuming and busy teachers rarely have extra time for additional planning. When students become a part of the planning and implementation of technology into the classroom, the burden is lifted from the teachers and the learning process becomes collaborative, with the teacher assuming the role of facilitator rather than disseminator of information. Further, as students are actively involved in technology productions, they gain critical thinking and problem-solving skills along with curricular learning.

Psychologists have long investigated the learning process in humans, and the following have been found to be important elements in that learning process:
- Clear statement of learning objectives
- Organization of content
- Participation
- Practice and repetition
- Feedback
- Application
- Motivation (Bell-Gredler, 1986; Kemp & Smellie, 1994) When students are actively involved in their own learning, through technology productions, each of those elements of learning is addressed directly (Bazeli & Heintz, 1997). Students help in determining clear objectives of the project, and in the organization of content. They are direct participants in the project, dealing constantly with practice, repetition and feedback. As they apply their learning to a real-life technology production of which they can be proud, their learning is not only enhanced but they also become highly motivated.

In our present visual world, it is more necessary than ever to help students to be able to apply critical thinking skills to all of the visuals they are bombarded with on a daily basis. Visual literacy is quickly becoming as necessary as verbal literacy. Engaging students in producing various kinds of visuals provides them with many opportunities to analyze visuals and, even more importantly, to apply problem-solving and critical thinking skills to real situations.

Communication skills have been recognized to be extremely important, especially in the coming century. Corporations as well as educational institutions have stressed the need for more effective communication among employees and students. As students become involved in technology production activities, they develop cooperative skills and communication skills because they do not work alone on the activities. Either they are working in cooperative groups with other students, or they are working with the teacher on a one-to-one basis to plan and complete the production activity. Further, problems are solved in a collaborative way and in a real-world setting, as students find ways to solve planning and production problems.

Students need to be actively involved in their own learning experiences. When they are a part of the planning, researching, producing, and evaluating of technology projects, they become highly involved in their own cooperative, creative, integrated, and authentic learning. Additionally, the
teacher's time can be focused more on personal involvement and facilitation of learning, rather than on planning and evaluation.

There are more and more books and articles appearing, from a variety of publishers, focusing on the use of technology in the classroom. Many of those books deal with technology as a learning tool, but do not involve students in technology productions. Those that do, however, often utilize only the computer. Research on the Internet, and multi-media productions are wonderful, but have some drawbacks. Too often, the instruction centers on the technology itself, and not on the curricular applications of the technology. For example, if we want to teach students to create multi-media presentations, then that is goal. However, if we want to teach students to organize their learning into a visible and presentable form, using even simple forms of technology, then their learning is the goal. The type of technology employed is not as important as the curricular applications of technology productions. If we teach research skills using the Internet, for example, we need to follow up with engaging students in some type of demonstration of what they have learned. Changing the way classroom instruction is organized, so that students are involved in and demonstrate their own learning, is the important thing. Engaging students in authentic, real-life experiences, building on the classroom curriculum, can be effectively accomplished with technology productions of all kinds.

**Practical Ideas for Visual Productions by Students**

Some ideas for classroom activities centering around specific curricular applications will be presented here (Bazeli & Heintz, 1997). Each of the activities provides opportunity for students to link their classroom learning with a visual presentation of their learning in a real-life setting.

**Photography**

Before beginning any of the activities discussed here, a discussion of guidelines for creating effective photographs should occur. Guidelines could include such things as eliminating extra and unnecessary elements in the background, placing the central object off-center, using foreground objects to provide depth, and so on.

**Reading**

As new vocabulary words are presented, students select or are assigned specific vocabulary words to work with. Each student (or group of students) then identifies some type of visual that would clearly define their words. The discussion and selection process provides experience with visual literacy, as each word is interpreted visually. Students use either a traditional camera with film or a digital camera to take the picture of the selected visuals to define their words. Finished photographs can be placed in a classroom dictionary, with definitions printed beside each, or on a classroom bulletin board.

**Science**

Students can create visual weather records by photographing weather conditions at a specific time each day or once each week for a designated time period. These would be assembled either in a book or a chart, to visually show changes in weather. Alternate activities could be to have groups of students focus on specific aspects of weather, such as cloud formations, drifts in snow caused by wind patterns, rain run-off locations, etc. Over time, and combined with weather statistics in the newspaper, students would be able to apply thinking skills regarding impact of weather on our daily environment, weather forecasting cues, effects of a falling barometer, and so on.

**Social Studies**

Students could take pictures of various buildings, places, people, events in their community. Different groups of students would focus on a different components of the community, and carefully select and decide upon the objects or people to photograph. The decision process would develop the research skills of the students as they find out about their chosen component of the community, and would...
also develop their critical thinking skills as they decide upon specific visuals to use in order to effectively depict the component. For example, students working on buildings in the community would need to research architecture types, dates of construction, etc., and then select those buildings which would depict a variety of architectural and historical representations in the community. The photographs would be mounted on poster board and appropriately labeled or described. As each group of students completes their display, the many elements making up the community would be evident.

Organizational Visuals

Visuals of all sorts, from graphic organizers to graphs, can be produced by students to give meaning to their learning experience, and provide an effective way to present their learning. Following are some ideas for students to be involved in producing organizational visuals.

Word Sorts (all curricular areas)

Word Sorts is an activity involving visual sorting of vocabulary within a familiar and comfortable group setting. O'le (1994) states that students use this process to rehearse new vocabulary, to discuss with peers various classifications of words, and to develop thinking through defining the words. Students work collaboratively to define given vocabulary words, to sort the words into categories, and to practice pronouncing each word. This provides a hands-on, visual experience with new words.

Language Arts

Story mapping is a visual way to understand how a story is organized. This strategy can involve the use of both words and pictures. Students select main ideas, supporting details, and characters, and then organize them into a visual map. This is a very effective tool for developing comprehension. It can be applied to other curricular areas, also. For example, as students read new material in science, they can also use a mapping technique to organize the information visually. This is often more effective than traditional note-taking because of the added visual element to aid in encoding information into long-term memory.

Video

Student television productions in various curricular areas help to develop the skill of analyzing television and also aid in cognitive development within specific curricular areas. As students think about what to present visually and auditorially in their television production, they also are developing comprehension and analysis skills regarding the topic (Bazeli & Heintz, 1997).

Television Documentary (all curricular areas)

Students plan and produce a short television program about some aspect of a topic being studied in class. For example, if the class is studying animals, students could select birds or small mammals of their geographic area as a subtopic to investigate. Students would find out about that subtopic (through research in books, Internet, magazines, etc.), and then videotape real birds or mammals found on a field trip in the woods. They could also interview on video local people who are knowledgeable about the selected subtopic.

Language Arts

Students write an original story, create illustrations for the story, and read the story while someone holds the illustrations in front of a video camera. Because students are off-camera and using a microphone, they can focus on reading their story instead of looking at the camera, and can thus concentrate on such things as vocal expression, tone of voice, enunciation, and so on. The illustrations they created (with a computer or drawn by hand) would keep the attention of the listeners and enhance the comprehension of the story.

Health

Students, working in groups, write a script for a commercial to promote or sell a food that is good for them, but one that they find undesirable (such as cauliflower, broccoli, or liver). The students would first
do research to find the benefits of their selected food, and use those findings to write an effective commercial promoting the food, utilizing persuasive writing techniques. After assembling any necessary props and rehearsing the script, the commercial is then videotaped. The completed videotape could be used by students in other health classes to develop nutritional knowledge. Limiting students to a specified time limit (30 or 60 seconds) requires the development of precise and concise scriptwriting skills.

Computers

Students need to view computers as a tool for learning, and to investigate the many applications of computers in organizing and displaying information. Unfortunately, the computer is often a separate entity, not an integrated part of the curricular areas of a school. The activities presented here involve the students in computer activities that are directly related to classroom study.

Math

In this activity, students use a simple spreadsheet to calculate their grade average. An understanding of the formula for computing average is necessary, and then students apply that to the concept of a spreadsheet. Students can predict changes in averages if one score were to change, or a new score added. Students can also prepare graphs to represent averages calculated each week.

Language Arts

Each student enters information about him/herself into a database. Information such as number of brothers or sisters, pets, favorite foods, favorite TV shows, favorite books, etc., could be included. Students learn to do searches to find all students who have dogs as pets, or who like to read. Not only do students become better acquainted with each other, but they learn in a concrete way how to manage a data base. Finally, students read the data, and then use data to write a news report about their classmates, using the word-processing capabilities of the computer. For example, one student might write about the pets of the students another might write about the favorite foods of their classmates. Graphs could also be constructed to visually show the information on the data base.

Sound/Slide Productions

Students can use several media combined to express information. The activities described here involve the combination of slides and recorded sound. However, any of these activities could easily be converted to computer multi-media productions involving videodisc images or scanned images, combined with a computer created text. The media used are not important; what is important is how they are used to engage students in their own learning.

Language Arts

The teacher selects a groups of slides, either on a particular topic or completely unrelated. Students write a script for those slides, selecting an appropriate objective, and arranging the slides into a logical sequence. Students can work individually or in cooperative groups. Upon completion of the scriptwriting, students rehearse the narration, and then record it. The students share their completed sound/slide presentation and discuss the various interpretations of the set of slides. Implications of varied interpretations or perceptions of everyday visuals, such as news, TV shows, should also be discussed.

Social Studies

Students create a visual presentation of the community by combining slides made of old photographs from the past with new slides or video from the present. Students select a theme to represent visually, such as schools in the community, or businesses. Old photographs would be located showing the selected theme. Students make slides of the photographs by taking pictures using a copy stand. Then, new slides or videos are taken to represent the theme in present time. The old and new would be combined, with appropriate narration written.

Conclusion

The activities described here are just a few that could be designed to involve students actively in technology productions that directly relate to curricular areas (Bazeli &
Heintz, 1997). As students work together to produce a visual representation of information gathered in a specific curricular area, they not only use the technology as a learning tool but they also demonstrate comprehension of the subject studied. Helping students learn how to learn, and to love learning is a goal of schools; we want our students to become life-long learners, with a knowledge of the tools to aid them. One way to do that is to change the way we structure learning in the classroom, engaging students in the planning, researching, and demonstrating of their learning. As students feel ownership and accountability for their learning, they become more motivated. Technology productions by students empower them to take some control over their own learning experiences, and provide them with real-life, relevant learning experiences. Finally, the collaboration between teacher and student as such productions are developed allows the teacher to be a true facilitator of learning and enthusiastic guide for life-long learning skills.

References


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