This paper provides a brief description of multimedia technology available in schools, details the "Multimedia Technology and Kid TV" project, reviews the project's preliminary findings, and discusses their implications. The project focuses on using technology to improve students' self-image, self-motivation, and decision-making skills. Seven sixth-grade students participated for 2 hours a week for 1 school year. Students were expected to produce products utilizing the following media: audiocassette and microphone; video camera and microphone; video animation; television studio equipment; audio and video mixers; and computer software packages including word processing, graphics, spreadsheets, and hypermedia. Thirty-two specific activities are outlined. At the end of the project students rated themselves as having completed a mean of 86 percent of the activities and the teacher rated students as having completed a mean of 91 percent of the activities. Students, parents, and teachers had generally very positive evaluations of the project. (DB)
Multimedia Technology and Kid TV: A New Approach to Learning

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In order to be successful today, children must be flexible in a changing environment, able to problem solve in groups, and to communicate. To do this, they must be taught, at an early age, to take responsibility for their own learning and be informed and accountable for their own actions.

The Multimedia Technology and Kid TV project was an attempt to address these concerns by changing the way teachers interact with children and by changing the way children learn. The most important factors from the researchers' point of view is an attempt to improve the self image and self motivation of children by improving their ability to communicate; to produce high quality materials; and to demonstrate good decision making skills.

This paper provides a brief description of multimedia, then details the Multimedia Technology and Kid TV project, followed by a review of the preliminary findings, and a discussion of implications for the future.

Multimedia

In this paper, Multimedia refers to the integration of audio, visual, graphics, text, and computer technology. Unfortunately, multimedia cannot be easily quantified. In teaching children how to use multimedia, it is important to emphasize that there are no rules. Each multimedia project is a unique and very personal experience. Producing multimedia is like sculpting, there are no guidelines. Tools plus ideas equal multimedia. If you teach students how to use technology, they can use their own ideas to develop new and exciting creations.

Multimedia projects range from simple computer graphics with music such as the animated Courante (a Snoopy story to music) which is activated by clicking a mouse and was developed by a very creative student; to very expensive interactive laserdisc based programs which incorporate broadcast quality audio and video, together with computer graphics and touch screen control.

The Project

If one enters almost any grade school class at the beginning of the day, children are usually waiting to be told what to do next. If one asks the students what they will be learning, they may know when it is math class or social class, but it is unlikely that they will know the objectives for that day, or for the week, month, or year. The teacher may have extensive lesson plans, but these are rarely communicated to the students. By not knowing the plan, or being a part of the plan, it is difficult for the students to have any commitment to what they are learning. The students are passive learners, waiting for the teacher to direct, not just each day, but for each hour.

The Multimedia Technology and Kid TV project was trial tested on a group of grade six students. They were handed an outline of the project, including purpose and activity lists,
and told that they would be part of the decision making process with regard to the content and timelines necessary to complete the various project components. They were also told that the purpose of the project was:

Create an environment where the student begins to take responsibility for his or her own learning, is required to be accountable for his or her actions, and is encouraged to develop good communication skills. This program will enhance the student's ability to write, reason, plan, speak, show leadership skills, create, make decisions, keep detailed records, and cooperate.

The project was entirely voluntary, and children, parents and teachers were given the option to participate. There were seven children in the pilot project. Figure 1 gives a visual representation of the project goals.

Figure 1

Children were also told that by the end of the program, they should be able to:

- prepare and narrate a story onto an audio cassette by appropriately using a microphone
- interview a fellow student and record the interview onto an audio cassette
- use a video camera and microphone including: focus, zoom, light adjustment, camera set up and take down
- interview a fellow student in front of a video camera
- draw a picture, write an accompanying story, and record the picture and narration onto videotape with accompanying music.
- Create a poem, prepare a picture to highlight the poem, and videotape the picture and narrate the poem with music.
- work in groups to draw a story, write the accompanying narrative, and narrate and record the pictures onto videotape
- work together in groups to develop an animated story and to record animation onto video with narration and music
- work in groups, develop a script which teaches a physical skill, prepare a story board, a shot list, and shoot, narrate and edit the program for presentation to other students
In addition, students should be able to:

- use a computer keyboard
- use word processing, graphics, spreadsheets and hypermedia
- create a computer graphic and record the graphic onto video with narration and music
- prepare and give a presentation which incorporates computerized overheads using Hypercard

In order to learn how to do the skills and activities listed above, a number of sessions with special instructors were planned including:

- a radio personality to teach students how to speak into a microphone, and how to have confidence in the sound of their own voices;
- a technical writer to teach students how to write scripts for television and radio;
- a camera person to teach students how to set up and use cameras;

Also, students were scheduled to visit:

- a video production centre, and
- a television news set

The Evaluation

Students participated in the multimedia and Kid TV project for two hours per week for one school year. During the year, ninety percent of the tasks listed above were completed. This included two live news broadcasts which were wired by the students, to three areas in the school so that their schoolmates, teachers, and parents could watch the broadcasts. At the end of the project students were asked to evaluate their ability to do the tasks on a rating scale of yes/no for each skill or task. In addition, the students were asked to comment on:

- The things they learned
- The things they enjoyed most
- The things they enjoyed least, and
- Suggestions about how the project could be improved.
Their teacher was also asked to rate their success at accomplishing the tasks on a yes/no basis for each student. Moreover, other teachers who knew about the project were asked to prepare written comments. Parents provided spontaneous feedback about the project.

Results

Rating Scale

Children rated themselves as having completed between 62% and 100% of the 32 listed activities. Average mean rating was 86% (median = 88%). The teacher rated the children as having completed between 72% and 100% of all 32 listed activities with an average mean rating of 91% (median = 100%). The inter rater agreement between teacher and student ratings varied from 66% to 100%.

Comments in the students' own words

The things they learned

set up the camera and audio; typing skills; write stories; hook ups like the switcher, and mike: technical writing; going on air live; how to tape; speak on camera; be less nervous; did lots of language arts while doing the project; edit stuff.

The things they enjoyed most

going on field trips; filming; working with classmates; learning how to do different things; doing technical stuff; the satisfaction after we did a broadcast; doing a live production; being able to do two live broadcasts

The things they enjoyed least

Did not like the fighting; took a long time; did not enjoy hooking up because it was confusing; speaking on camera in front of everyone; at first it was kind of annoying when you try to learn but you can't but it got easier; didn't like the pressure or when people asked you to do something you didn't know; I really enjoyed everything

Suggestions about how the project could be improved.

more equipment; bigger classroom and more people; more rehearsals and working on things before told to; more organized; use time more wisely; it was a great year;

The classroom teacher stated that:

The students ultimately derived a sense of satisfaction from the completion of projects as well as developing a sense of team work which they needed as a group. This cohesiveness carried over into other class projects.

Another teacher noted that:

the children learned how to use a wide variety of media, but I am uncertain as to how this influenced their academic subjects aside from giving the students a sense of accomplishment which would impact on their self esteem.
The major concern of teachers was the integration of the project into the Alberta Curriculum, and the time it took away from regular program.

All the parents responded very favourably to the project. Two parents stated that it was the best part of the school year for their child.

Implications for the Future

When children start school at age five or six, they usually come with lots of enthusiasm, curiosity, and energy. When children are interviewed six years later, their levels of enthusiasm and curiosity have been substantially reduced (i.e. young children look forward to going to school- the older they get, the less they look forward to it). The multimedia and kid TV project rekindled that early enthusiasm. Attendance at the weekly meetings was higher than for any other day in that week. The quality of the broadcasts was beyond even the researchers' expectations. A local TV station did a story on the Kid TV project, which was very well received. The cost of the equipment necessary to implement the program was less than $2000 and most of that was donated. Moreover, the level of technical expertise expected of the teachers was minimal. The basics of developing multimedia programs can be taught to most teachers in less than twenty hours of instruction. Moreover, the students quickly learn the skills necessary to run the operation, leaving the teacher in a primarily consultative role. Teachers can expect to spend two hours a week running such a program. Time well spent when one considers all the skills the children learn.

The objective of this project was to unlock the potential of the students through innovative experiences which challenge the students to take an active role in their own learning. With careful planning, this participation can be directed toward achieving educational goals which will alleviate the teachers' fears of not reaching their curriculum mandate.

A good learning environment should excite and challenge students, and should encourage them to actively participate in their own learning. The multimedia and Kid TV project is one tool for accomplishing those goals.