

Introduction

Delivery of education is changing in an effort to provide solutions to arising needs of the society, as well as the increasing level of technology and its impact on the society. Technology, particularly the emerging ones, has such a profuse heterogeneity that it has transformed daily lives of people, especially those whose lives are fascinated by the use of new technologies. In the classroom setting, technology has changed the way classes are conducted. It could be a traditional classroom with the presence of teacher and learners physically together, or a virtual classroom in which teacher and learners could be in separate parts of the world yet are brought together and learning together through technology-intervention. Yet even traditional classrooms have been invaded by technology (Means, 1994; Morrisett, 1996).

Technology in the Classroom

When technology is integrated into educational programs, students receive additional tools that help enhance their learning experience. Technology can respond to different learning styles of learners using a wide range of learning tools in which students can understand their experiences through a variety of means such as verbal, written, quantitative, spatial, and/or graphical. This results in deeper engagement of students in the learning process. Moreover, technology has the ability to integrate various disciplines that help students in combining their logical, mathematical, scientific, artistic, linguistic, and social knowledge. This gives them a clearer interaction with the world around them.

In modern science, technology is used in measuring, documenting, interpreting, obtaining, and managing data, particularly in modeling research techniques. The disciplines of teachers notwithstanding, technology aids in efforts that support teachers. It enables the demonstration of teaching strategies and in delivering training that provides skills and confidence

to teachers to become leaders in their classrooms and schools. Using technology in the classroom is then akin to using an amplifier when playing musical instruments. It helps learners extend their senses and interact better with their environment. Thus using technology is a logical element of instruction in teaching about the environment.

Technology in Teaching About Environment: An Example

Digital cameras are one of the most prolific gadgets used by adults and children alike. They are simple to use; easy to transfer, print, and share; and easily available and accessible. Children have fun using digital cameras taking pictures of themselves, their friends, family members, and their favorite things. They instantly see their outputs and retake if the results did not match their expectations. Photo editing tools also enable them to modify their photos to enhance or highlight the aspects that need to be emphasized.

In Teachers.Net (2008), teachers shared that they use digital cameras for many purposes, all intended to reinforce learning. Some use digital cameras in taking pictures of children while doing their activities. According to this particular teacher, this activity helps students to have better and more active involvement in group works. Another teacher helped children visualize what they will become in the future. She starts by asking the children what they wanted to be in the future, then take their pictures individually, have them printed, cut out their heads or faces, and then drawing the rest of the pictures according to what the students thought of themselves when they become adults. The children have fun seeing their “caricatures” as nurses, doctors, teachers, and others.

Others use their taken pictures as wallpapers or screen savers in classroom computers. This helps maintain good mood of children in the classroom. Pictures taken can also be used in newsletter, powerpoint presentations, and in websites which are highly appreciated by parents

and students alike. In my own experience, I use the digital camera in making First Grade students have better grasp of mathematical concepts.

Description of Digital Camera

Digital camera refers to a camera that records images in digital form (PC Mag.com, 2008). It uses flash memory cards or optical disk for storing images, unlike traditional film cameras that record images on films. Using digital cameras, users can review taken images right away and erase images that are inferior to their preferences. These cameras also offer convenience because photos can be immediately printed without having to use up an entire roll of film before having them developed. Moreover, the storage media such as memory cards can be used over and over, unlike films which can only be used once. Images taken by digital cameras can also be altered or rendered with effects. Hence, images taken from digital cameras can be quickly manipulated according to purpose.

Description of the Teaching Product Developed

The teaching product or media that I developed using digital camera is a scrapbook. Because I teach first graders, I take advantage of their fresh creativity and novel way of looking at things. Their output can be seen in the photographs that they take using the digital camera and the scrapbook that they put together highlighting their very own pictures.

In teaching mathematics, such as shapes and numbers, the digital camera serves as a recorder and affirmation of the things that the children learn. For example, in teaching counting numbers, I let the children take pictures of one object, two objects, three objects, and so on. This way I can check if they have a clear concept of numbers and actually know how to count things. This is also true with teaching shapes. For example, when I teach how to distinguish shapes such as circle, square, rectangle, and triangle, I instruct the children to take pictures of objects around

them that have the same shapes. The output of the children always fascinates me. This is because I realize that there are many things that I normally take for granted but children have a unique way of looking at them. For example, a long umbrella partially opened is a “triangle” to a seven-year-old child. Even a mother’s nose is a “triangle.” In the same way, an old man’s bald head is a “circle,” and a Lay’s chip is a “rectangle.”

After photos are taken by the children, the images are printed in the classroom. The printed images are then put in a scrapbook where the photos are labeled and decorated. The learning experience of the child in this phase is then reinforced. To have a significant learning experience, all domains of a person need to be involved. In learning the concepts such as numbers and shapes, the cognitive domain of the child or learner is involved. In taking the pictures and putting them in scrapbooks, the physical domain of the child as a person is at work. The child’s appreciation of concepts can be observed in the child’s way of translating them into reality or actual experience and putting them all together in a repository such as a scrapbook. This pertains to the affective domain of the student.

Achievement Level in the NETS for Teachers

In demonstrating knowledge, skills, and understanding of concepts related to technology in NETS for Teachers I (Learning Point Associates, 2008), this activity that I developed is in the “Proficient” level as it developed my knowledge in recognizing, managing, and maintaining computer files in various media and formats. In this activity, I manage files using folders in the hard drive, plus a back up flash drive, and a hard copy pasted by the children themselves in a personalized scrapbook. IN the demonstration of continual growth in technology knowledge and skills to keep up with current and emerging technologies, my level would be in “Proficient” as, through this media, I am able to involve my students in the investigation and assessment of

possible effects of evolving technologies on daily lives. In this case, the concepts are translated into actual knowledge and experience of the student.

Benefits of Using Technology in Elementary Classroom

Arizona State University in its website mentions several benefits of using technology in the classroom, such as flexibility of technology, a wide range of resources, facilitates communication with other people from any point in the globe, and an extended way of viewing concepts. These are all true in my case of using digital camera interfaced with the computer and its peripheral, the printer. The technology (digital camera) is quite flexible as it can be used and its outputs manipulated. It also offers a wide range of resources including online. Photos taken through the digital camera can be shared, printed, and even manipulated. The most evident benefit as mentioned by ASU is the last one regarding the extended way of viewing concepts. As elaborated in a previous section, the children's concept of numbers, shapes, and other mathematical concepts are affirmed and enhanced using the digital camera to take pictures of things that apply to the concepts they learned.

According to Lawther (2002), using computers in the elementary classroom positively affects "student motivation and desire." The computer's effect on the affective domain of students is specifically mentioned by Lawther as a contributory to a student's success. Using the computer, Lawther said, or any other technology for this matter, can make a student's learning experience meaningful and interactive, leading to a student's success.

Thus technology should be treated as an asset that should be used in classroom teaching. This use of technology should be coupled with self-confidence building, increased motivation, and hard determination. Integrating technology with literacy in the curriculum, as proven by various findings, would have incalculable positive effects in the learning experience.

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