

Creating Multimedia For Your Digital Classroom

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Why Multimedia?

The Death of a Cell

Programmed Cell Death (Apoptosis)

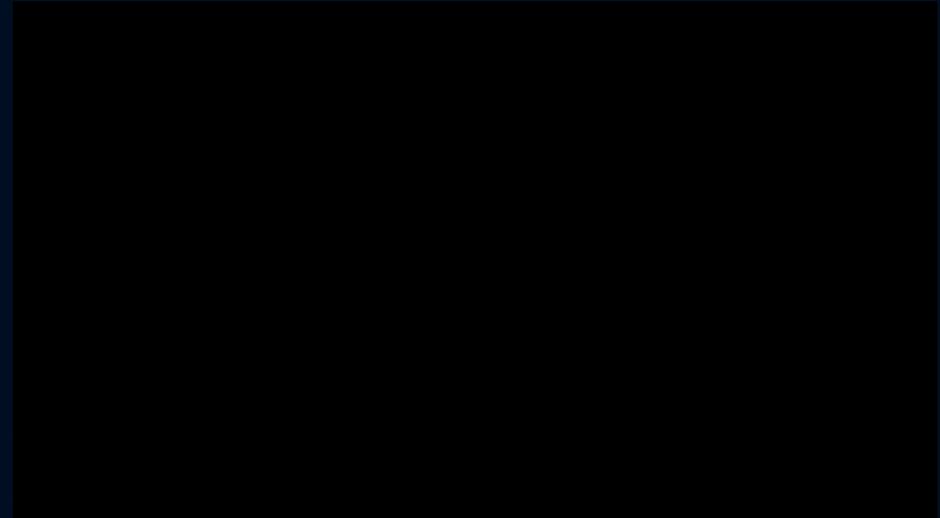
The cells of a multicellular organism are members of a highly organized community. The number of cells in this community is tightly regulated—not simply by controlling the rate of [cell division](#), but also by controlling the rate of cell death. If cells are no longer needed, they commit suicide by activating an intracellular death program. This process is therefore called [programmed cell death](#), although it is more commonly called [apoptosis](#) (from a Greek word meaning “falling off,” as leaves from a tree).

The amount of [apoptosis](#) that occurs in developing and adult animal tissues can be astonishing. In the developing vertebrate nervous system, for example, up to half or more of the nerve cells normally die soon after they are formed. In a healthy adult human, billions of cells die in the bone marrow and intestine every hour. It seems remarkably wasteful for so many cells to die, especially as the vast majority are perfectly healthy at the time they kill themselves. What purposes does this massive cell death serve?

In some cases, the answers are clear. Mouse paws, for example, are sculpted by cell death during embryonic [development](#): they start out as [spadelike](#) structures, and the individual digits separate only as the cells between them die ([Figure 17-35](#)). In other cases, cells die when the structure they form is no longer needed. When a tadpole changes into a frog, the cells in the tail die, and the tail, which is not needed in the frog, disappears ([Figure 17-36](#)). In many other cases, cell death helps regulate cell numbers. In the developing nervous system, for example, cell death adjusts the number of nerve cells to match the number of target cells that require innervation. In all these cases, the cells die by [apoptosis](#).

Sculpting the digits in the developing mouse paw by apoptosis. (A) The paw in this mouse embryo has been stained with a dye that specifically labels cells that have undergone apoptosis. The apoptotic cells appear as *bright green* dots between the developing [\(more...\)](#)

Apoptosis during the metamorphosis of a tadpole into a frog. As a tadpole changes into a frog, the cells in the tadpole tail are induced to undergo apoptosis; as a consequence, the tail is lost. All the changes that occur during metamorphosis, including [\(more...\)](#)



Why Multimedia?

- Direct correlation between course grades and multimedia content. (Wilson, 2014)
- Gives flexibility to students for on-demand situation; robust learning.
- Invited speakers, lecture capture, faculty screencasts, webcasts
- Video Announcements, comments, etc. are more efficient.
- Smart device usage will increase and multimedia will be a necessity.
- Instructor created videos are authentic and students enjoy and appreciate the effort put in to the making of multimedia.

Benefits to Students

- Engages students in course content
- Encourages group work and creativity
- Develops 21st century skill set
- Encourages research, organization, and planning skills
- Value an impact of various media types
- How to analyze content and synthesize it for learning
- Improving presentation and speaking skills
- Potentially increase motivation and self-esteem

Is it all Good?

- Hardware and software isn't always available or free
- Learning how to use hardware and software can be challenging
- It often takes more time to design, plan, create, develop and evaluate multimedia materials, projects and activities.



Why "multimedia"?

Multimedia uses a combination of text, sound, pictures, or videos to capture the multi-sensory components of the brain.

When an educator excites more than one sense to convey the lesson to the learner, the learner has a larger opportunity to recall the material.

When a learner is given the opportunity to create their own multimedia project, they gain a deeper understanding of not only the subject but they also improve their 21st century skill set, their ability to organize their thoughts and strengthen their reflective thinking.

How to Choose the Right Thing(s)!

- Audio
- Video
- Images
- Live Guests or Interactive lessons
- Web-based (or Device based) activities and materials
- Web portals (YouTube, Moodle, Blackboard, iTunesU, Coursesites, etc.)

Seven Steps to Building Quality Multimedia

- Create a Storyboard – (plan - it is still a lesson!).
- Choose the best media for presenting the lesson.
- Find the various kinds of media content you will need. Quality matters!
- Script – think about what you will say, how you will say it and what purpose your lecture has in the context of the lesson.
- Build the multimedia using the tool (s) that best fits the lesson plan.
- Review your multimedia – don't just "put it out there"
- Upload your multimedia to an appropriate digital location. And be a good digital citizen!

Small example of Multimedia (Voki)



Multimedia in Education using iMovie



Multimedia using Windows MovieMaker 2.6

What Kinds of Tools Are Out There?

AND ARE THEY FREE?

WINDOWS (PC)



Windows Movie Maker 2.6



DVDVideoSoft

MAC (Apple)



iMovie



Video Monkey

Where Do I Put This Material?



Multiplatform



Engage your Learners



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