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A model of a class that implements animated movies developed for specific purposes of learning in primary schools

Introduction

The process of development of our animated movie has been based on our insights into cognitive theories of multimedia aided learning and on the principles of adjusting the multimedia content [Mayer 2001, 2005; Hilčenko 2008a, 2008b].

The popular Web Site **BrainPOP** [www.brainpop.com] has published the results of their experimental research on effects of its (animated movie) use in learning when compared and contrasted to the traditional approaches that never had such animated content [Harcourt Assessment 2002].

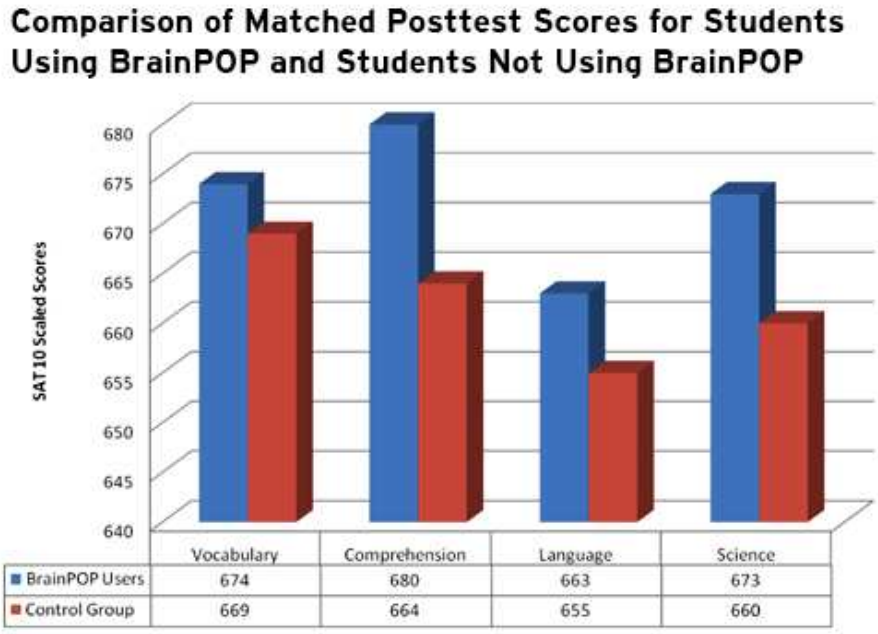


Fig. 1

BrainPOP users showed substantially greater gains in Reading Comprehension, Science and Language and moderately greater gains in Vocabulary than students in classes that did not use BrainPOP. When controlling for students' initial ability, BrainPOP users finished the year with scores that were 16 scale-score points higher in Reading Comprehension, 13 scale-score points higher in Science, 8 scale-score points higher in Language, and 5 points higher in Vocabulary than the Control Group on the SAT 10 assessments (Fig. 1).

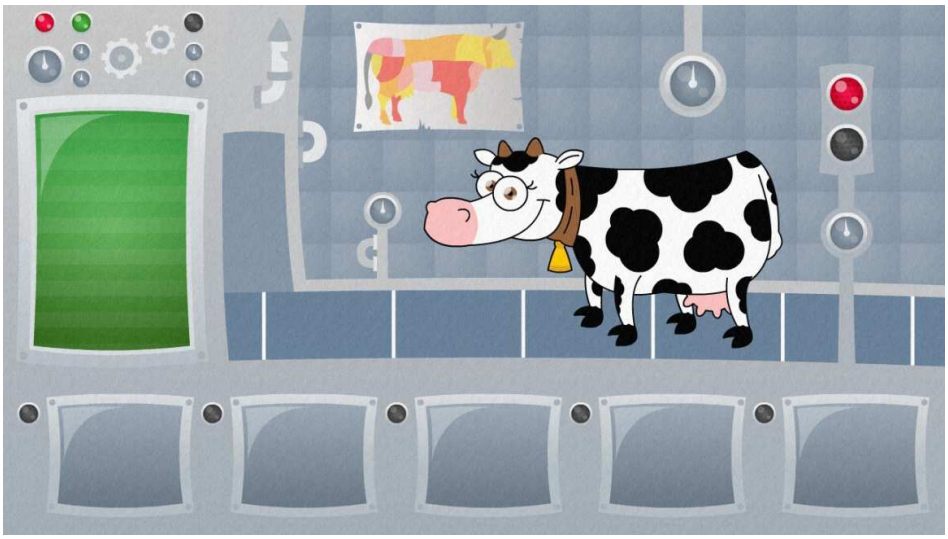
We found effect sizes of +.34 for Reading Comprehension, +.29 for Science, +.17 for Language, and + .09 for Vocabulary. The effects for Reading Comprehension, Science and Language are quite substantial, indicating that the students in classes that used BrainPOP performed well above the students in classes that did not use BrainPOP in these skill areas. In comparison, the effect sizes for Reading Comprehension and Science are above the typical effect sizes seen in other studies of instructional programs. Language and Vocabulary were more typical of the comparative gains seen in other studies of instructional programs. (For example, Slavin (2008) in his comprehensive synthesis of middle and high school Reading program research studies reports a mean effect size for instructional-process Reading programs of +.21.)

When it is about our animated movie, we will focus our attention on a research done on its qualities of the following: 1) Effect = the results that are compared to the traditional *„bookish"* approach, 2) Memory retention when this model is applied and 3) High level of motivation when such content is given.

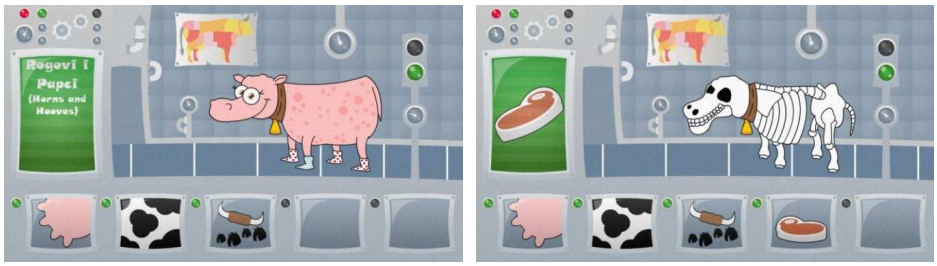
Furthermore, we will poll many teachers for their methodological feedback and suggestions, corrections and better implementation.

1. A model of a class with the animated movie

The multimedia animated movie **Cow Affairs**, has been developed for specific purposes on the Adobe platform (Adobe Flash Professional CS4) for **The World Around Us** school subject and for the Unit on *Deriving Benefits from Cattle* – **Cow** for Year 1 pupils. The content is given in a rather funny way with the familiar *„language"* that kids understand. The movie lasts for 1min and 55 seconds (3000 frames, resolution 1920x1080 pixels).



Pic. 1. Snapshot taken from the movie Cow Affairs and teachers' handouts



Pic. 2. Snapshots from the animated movie Cow Affairs

Since this is about our approach to IT in this model, we aspired to make it humane; and so in respect to that we did not insist on the interactive application, but more on a classical animated movie (= pupils' perception) in combination with other teachers' aids and manipulative activities. Let us examine the model of a class:

Lesson tasks and lesson stages:
Year 1. (20 pupils)

Lesson objective: Deriving Benefits from Cattle – Cow *(presentation)*

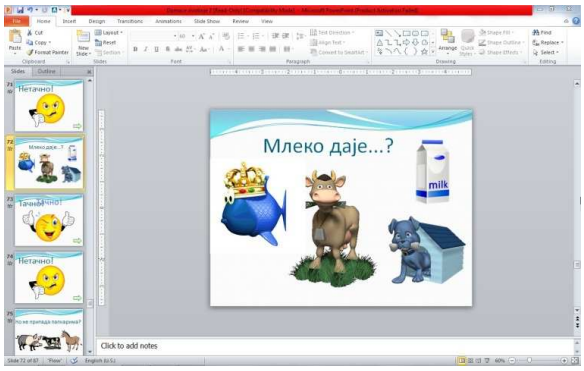
1. <u>Preparation – Warm-up stage</u> (5–10 min):

– Interpreting a poem *„a cow"*, (Raško Jovin's poem); Following a discussion about the song and making them aware of today's objectives and goals.A Cow.

Each cow has got to be healthy,
'couse kids take her milk for a drink, my dear little sister.
If it weren't for a cow and her milk,
Our children of the world would be far from being as they're now.
It's the milk that makes them grow like grass sprinkled with water,
But this song about a cow is not only about that!
Of cow milk, we make our cheese,
Where there's cheese in the house, there's peace as well.
Of cow milk, we make our sour cream,
When we eat it, it cures our bellies.
A cow can even pull the couch,
Then she needs no shoes or slippers.
Let her have her horns long and spiky,
Be fearful of them, they can beat you hard.
A cow eats hay and green grass,
In Voivodina she's transported on a raft.
Over the summer a cow grazes on a meadow,
Where she grazes, plant no vegetables.
A cow can drink a lot of water,
But needs not a droplet to wash in the morning.

2. Presentation (20–25 min):

- A projection of the movie (**Cow Affairs**); Discuss about its content = uses of a domestic cow, its diet and eating habits, its habitat;
- A group work on prepared *„circular"* stations for the assigned tasks: (4 groups x 5 pupils):
  1. Work station: teacher's handout (visually show the benefits of a cow, pic. no. 1);
  2. Work station: „Supermarket" – buy only the products that are cow products;
  3. Work station: PowerPoint interactive **quiz** presentation: *Domestic animals* – a cow (a teacher prepares it alone, pic. no. 3);



Pic. 3. Quiz, Domestic animals – a cow

4. Work station: Make use of didactic materials to reconstruct the natural habitat for a domestic animal where domestic cow can live (a barn, feeding…).
   - The timing for completion of the assigned tasks is given from 5–10 minutes for a station, after which they change work places (rotate) to solve other tasks in all stations.
   - Discussion and deriving general (wholesome) understanding and comprehension of the previously given information.

3. <u>The Last Stage</u> (5–10 min):

- An arranged visit to a nearby factory of milk „Somboled" in Sombor city;
- We browse to Web Pages with interesting data on cows, such as:

http://www.csoftcorp.com/k/krava-na-mjesecu
http://www.dodirnime.com/zanimljivosti/tag/gajenje-krava-com/

Pic. 4. A miniature cow of only 84 centimetres in height that has broken the Guinness record book for being the smallest cow that the World has ever seen

- Homework: Find the most interesting data about a domestic cow in the given resources online.

Teaching aids: (1) HOST – The main computer with a projected screen, (1) a computer for pupils' group work, *PowerPoint* interactive quiz presentation, *speakers*, printer, printed handouts, products made of cow origin, a miniature farm and domestic animals, (alternatively an IT room)...

Learning method: verbal-textual method, conversational approach, illustrative-demonstrative methods and a trial & error method.

Groupings: frontal, group and individual work (pair work – browsing the Web Pages on the Internet).

Aims/targeted goals:

- The established correlation with the school subject *Heath Education* (Lesson objectives: Being **Resourceful in Eating Habits –** a way to healthier life);
- Get acquainted with the featured and the habits of a domestic cow, the living conditions in the natural habitat, eating habits and care; developing respect toward domestic animals (cows) and peasants and farmers for all the „treasures" that we are given from this one animal;
- Developing healthy habits of taking the cow products on regular basis for a healthier life and stronger immunity;
- The established correlation with the school subject of Arts (lesson objective: **village**), to be able to visually depict the village-like household (house, barns, sheds, pig sheds, agricultural tools and machines...), domestic animals (cows) with all its unique features.

Conclusion

The described model of a school class is illustrating the integration of animated movies (contemporary IT technologies) to the traditional approaches to learning and teaching that can be very resourceful and encouraging for the pupils if their teacher is creative and innovative. Our attitude is that the best way is always to combine with „measure" the old and the new educational aids and technologies, approaches and groupings, because all extremes are counterproductive and will never yield desirable results.

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Abstract

The *penmanship* of our instructional team has given birth to a specifically developed short multimedia animated movie (**Cow Affairs**) – as a new resource in learning and an alternative to the traditional approach to teaching in schools in Serbia. Its content is designed for pupils of the first grade and for the school subject The *World Around Us*, for the lesson on *Deriving Benefits from Cattle – Cow*. Since the pupils of Year 1 in Serbia are the most overwhelmed pupils in Europe, the roots of which are in the old-fashioned technologies, books being the domineering resource, overwhelming goals and tasks for nonfunctional skills and old syllabus, we aim to innovate the approach to teaching and learning and to bring about dynamic changes in the process of learning of our children. The described model here of a class that implements animated movies tends to innovate the traditional way of teaching, to modernize it, to make it attractive, engaging and encouraging for our Year 1 pupils. The results published abroad on Computer Assisted Learning with Animated Movies among first graders show that IT has a great supremacy over the traditional approaches to teaching. The described animated movie will only make for the Introduction to a series of animated movies with the follow-up quizzes for on-line (or DVD) learning in primary schools. The described animated movie will show the extent and depth of our research and teachers' questionnaire answers before its immediate use in the classroom.

Key words: a short multimedia animated movie developed for specific purposes, innovative approach, computer, Year 1 to Year 4 grades.

Modelowanie zajęć lekcyjnych z wykorzystaniem filmów animowanych w nauczaniu wczesnoszkolnym

Streszczenie

W artykule przedstawiona została propozycja, specjalnie opracowanego na potrzeby nauczania wczesnoszkolnego, filmu animowanego oraz scenariusz zajęć z wykorzystaniem tego filmu. Dotychczas w Serbii dominuje tradycyjne podejście do nauczania-uczenia się. Odbywa się ono głównie z wykorzystaniem tradycyjnych podręczników szkolnych. Opisana tu propozycja jest próbą połączenia tradycyjnych metod nauczania z nowoczesnymi technologiami multimedialnymi i stanowi nowy sposób modelowania procesu dydaktycznego na poziomie nauczania wczesnoszkolnego w Serbii.

Słowa kluczowe: animacja, opracowania multimedialne, innowacyjne nauczanie, edukacja wczesnoszkolna.