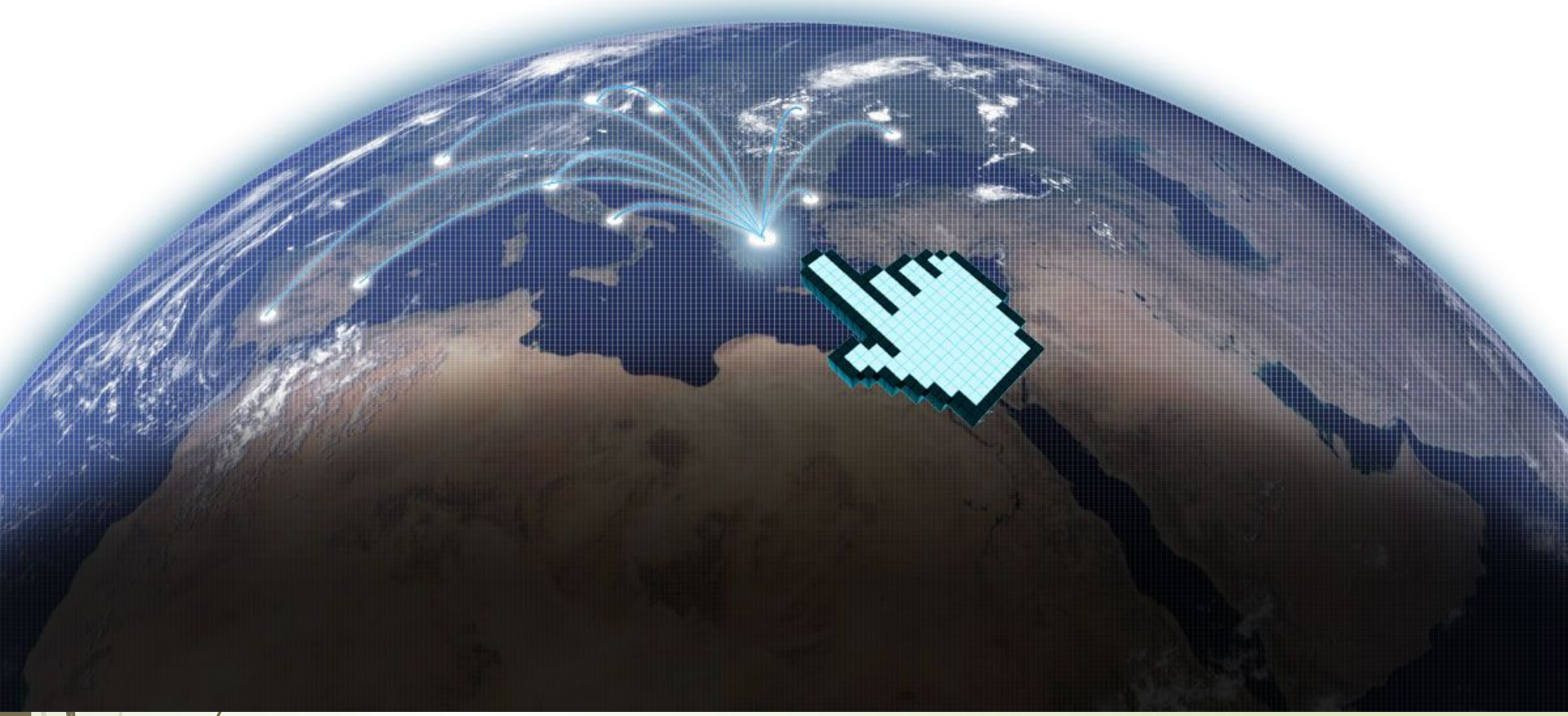

Platon schools

Application of Content Management Systems on Secondary Education by Means of the Driver Constructivist Model

Education and Culture
Socrates
Minerva

- Socrates program via Minerva action aims to encourage cooperation among European students as far as the educational process through the use of new technologies is concerned.
- This program covers all the educational sections, what is more, it promotes both open and distance learning.

MOODLE

- Moodle is a Course Management System (CMS), also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). It is a Free web application that educators can use to create effective online learning sites.
- Moodle has various characteristics typical of an e-learning platform, in addition to certain revolutionary features (such as the filtering system) and other enhanced features. Furthermore, Moodle is versatile enough to be applied to multiple curriculum subjects, training courses and skills development activities.

Application

During the pilot trial of this application were used two different teaching methods Traditional learning and Distance learning, as the cross-examination of their results, the comparison of mutual and different advantages and disadvantages and the facilitation of the transition of students from conventional to EDL learning were issues deemed imperative.

Application

Application of Moodle was conducted on the required curriculum of third year junior secondary school students on the subject of Biology and second year senior secondary school students on History, by “PLATON” private schools in Katerini, Greece, throughout the academic year (2009), and was funded through the EU Educonlinux project, Minerva action. The former class consisted of 22 students, the latter of 16. Courses were conducted for 2 hours per week and included one complete subject matter chapter.

Pedagogical

The teaching method involved the constructivist educational model introduced by Driver and Oldham (1986), who proposed a five step course procedure:

- Orientation
- Previous knowledge check
- Reformation of false points of view
- Application of student knowledge
- Evaluation of student knowledge

Courses were held at the computer labs of the school and involved two observing teachers, who provided guidance and coordination, namely observing the student progress, interfering when students encountered difficulties to support them with prescriptive suggestions only. All students had satisfactory computers skills, the majority was acquainted with the use of web browsers but none had former Moodle experience.

Pedagogical - Biology

- Preface: There was no need for familiarization because students have used ICT tools in the past
- Implementation
  - Aim: The basic aim was to introduce the evolution theory to pupils
  - Expectations: The reconstruction of pupils circumstantial knowledge
  - Resources: Wikipedia articles, Documentaries.
  - References:
    - ✓ Βιολογία Γ' Γυμνασίου Ο.Ε.Δ.Β (Ευαγγελία Μαυρικάκη- Μαριάννα Γκούβρα- Αναστασία Καμπούρη)
    - ✓ The Effects of Reconstructing Biology Teaching (Lin, Wan-Ju)
    - ✓ Αντιλήψεις των μαθητών της Δευτεροβάθμιας εκπαίδευσης για έννοιες της εξελικτικής θεωρίας (Λουκία Πρίνου, Λία Χαλκιά, Κώστας Σκορδούλης)
- Evaluation
  - Students
  - Public

Timeline - Biology

1. 1st Week
   - Orientation
   - Articulation
2. 2nd Week
   - Reconstruction
3. 3rd Week
   - Application
   - Review
4. 4th Week
   - Evaluation

Timeline - Biology

1st Week

- Orientation

At that stage the pupils studied a short text about evolution from the famous book *A Short History of Nearly Everything* (*Bill Bryson* ,2003), some wikipedia hyperlinks relative to the text, and a part of a well known BBC documentary titled *What Darwin didn't know 1/9* .

- Articulation

At that stage the pupils had to answer four open-type questions. Each question was addressing a main parameter of the topic, and wherever definitions were necessary the pupils were given relevant wikipedia hyperlinks.

Timeline - Biology

2nd Week

- Reconstruction

That stage was build upon the pupils answers at the articulation stage. Four different units were created – one for each question – in order to reconstruct the pupils wrong ideas

3rd Week

- Application

At that stage the pupils were called to answer five new questions, based on the knowledge they got from the previous lessons.

- Review

At that stage the students should recognise the importance of what they discovered, during the previous stages, and compare their initial opinions to the new ones. For that they are given to answer the same questionnaire as in articulation stage.

Pedagogical - history

- Preface: There was no need for familiarization because students have used ICT tools in the past
- Implementation
  - Aim: To understand the facts from the death of Ioustinian up to the restoration of the icons and the Verden treaty and to understand the financial and social situation of this period of growth, from the end of iconoclasm to the schism of the two churches.
  - Expectations: The reconstruction of pupils circumstantial knowledge
  - Resources: Wikipedia articles, Documentaries.
- Evaluation
  - Students
  - Public

Pedagogical - history

Financial changes in Western Europe	**9/10 - 23/10/2008**
Economy and Society of Western Europe. The system of feoudarchy	**24/10 - 15/11/2008**
Islam	**16/11 - 7/12/2008**
The Crusades	**8/12 - 14/1/2009**
The Greek territories: Trapezounta, Ipiros, Nikea	**15/1 - 6/2/2009**
Fall of Constantinople 1453	**7/2 - 3/3/2009**
The dynasty of Paleologos (1204-1453)	**4/3 - 10/3/2009**
Reformation of Luther (1517-1555)	**1/4 - 15/4/2009**
Great Discoveries	**16/4 - 25/4/2009**

Important features

1. Pupils have the choice to work either in the classroom or at home.
2. Evaluation of the assignments is given to each pupil individually and no one has access in it.
3. All the other activities (quizzes etc) are evaluated automatically after they are submitted in the platform.
4. Pupils have the opportunity to enrich their knowledge beyond the book via links to the web.
5. The teacher can build his material through a big variety of activities.
6. Pupils' beliefs were influenced by their former circumstantial knowledge.
7. It is proposed that the Reconstruction stage should be constructed on the pupils answers at the Articulation stage instead of being scheduled from the beginning.

Negatives

1. They all have to be fluent with the basic skills on using a personal computer.
2. They aren’t accustomed with this type of learning.
3. Pupils don’t have face to face contact with their teacher.
4. Pupils can not get an answer to their questions immediately.
5. Teacher isn’t able to know if a student has worked alone.

Conclusions

1. Learners are able to track and evaluate their own progress. Self-tests are similar to the final evaluation instruments
2. Examples of assignments that meet the criteria may be included for pupils to review
3. Evaluation and grading procedures are clear and explicit
4. A variety of feasible and content-relevant assignments or evaluative exercises are provided

Conclusions

5. The pupils were motivated to participate.
6. A frame of collaborative knowledge was created.
7. The need for the appropriate change to teacher’s role.
8. There was a reconstruction of the opinion for the majority of the students.

Suggestions

- Take care to

1. Use new teaching methods
2. Plan your teaching strategies in that way that it attracts pupils.

- Avoid to

1. Try and force your scientific opinions to students. It is much better to try to guide them to knowledge.
2. Use the traditional dogmatic teacher model.

Thank you for your attention

Spyros Blatsios

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