Development of Online Computer Aided Instruction in Comparative Anatomy of Vertebrates for Human and Medical Biology Students of DLSUD

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Abstract

The Online Computer Aided Instruction in Comparative Anatomy of Vertebrates is an online tutorial system that covers the introduction, and anatomical and evolutionary concepts based on the book: Ching J. A. 2004. Comparative Anatomy of Vertebrates Compedium.

In traditional method, the subject coordinator said that she only writes the score in the quiz in the piece of paper then transfers it to the computer. Proponents notice that it may lead to the loss of data and inconsistency. The study was made to provide a system that could improve the way of learning Comparative Anatomy of Vertebrates for 2nd year Medical and Human Biology students of De LaSalle University- Dasmariñas. It is an online tool which is designed and developed to increase the learning of students taking up this subject and provide them with additional resources to make them understand difficult topics concerning the first two chapters presented on their textbook, the Compendium by Dr. Johnny Ching. The system provides three ways of viewing the lessons and a chapter exam to test the understanding of the students.

The online computer aided instructions in Comparative Anatomy of Vertebrates was developed through gathering of information. C#.NET was the primary language used by the proponents in most part of the system. The proponents presented the system to the subject coordinator of Comparative Anatomy of Vertebrates Ms. Luisa V. Cuaresma and biology students to test the overall functionality of the system as well as to know their feedback regarding the system. In the final results in testing the system, it only shows that the system got the satisfaction of the users in the system. The system is well accepted by the students, professors and subject coordinator of DLSU-D based on the results.

across students Anatomy can be primarily learned through the use of cadaver dissections, textbooks, and lectures. Recently, there has been increased interest in alternative methods, including the use ofCAI, to aid the learning process which can take many forms, such as image databases, dissection videos, course websites, and computer animations (Chatterjee, 2011).

1.2 Purpose and Description

CAI-CAV (Computer Aided Instruction for Comparative Anatomy of Vertebrates) for second year students MEB and HUB students of DLSU-D is an online tool for teaching Comparative Anatomy of Vertebrates which is designed and developed to increase the learning of students taking up this subject and provide them with additional resources to make them understand difficult topics concerning the first two chapters presented on their textbook, the Compendium by Dr. Johnny Ching. The system provides three ways of viewing the lessons and a chapter exam to test the understanding of the students.

1.3 Objectives of the Study

1.3.1 General Objective:

To develop an Online Computer Aided Instruction in Comparative Anatomy of Vertebrates for Human and Medical Biology Students of DLSU-D.

1.3.2 Specific Objectives:

1. To gather accurate information by interviewing the subject coordinator.
2. To analyse the steps in system development through story-boarding.
3. To design a database through Entity Relationship Diagram and Normalization.

4. To design and code the graphical user interface for an easy interaction between the user and the system.
5. To develop the actual system by using C# as the programming language and ASP.NET as the framework.
6. To test the overall performance of the system by conducting a survey to the subject coordinator and 3rd year HUB and MEB students.

1.4 Scope and Limitations

Online Computer Aided Instruction in Comparative Anatomy of Vertebrates includes selected topics written in the syllabus for 2nd year college students taking Bachelor of Science in Biology Major in Human Biology and Bachelor of Science in Medical Biology at De La Salle.

University- Dasmariñas. The study will include topics from chapters 1 to 2 of the textbook used which was entitled Comparative Anatomy of Vertebrates Compendium by Dr. Johnny A. Ching.

The following topics will be included in the study:

Chapter 1:

- Introduction
- History of Anatomy
- Significance of Studying Comparative Anatomy

Chapter 2:

- Similarities: Homology, Analogy and Homoplasy
- Adaptation and Speciation
- Phyletic Lines and Evolutionary Trends
- Parallelism and Convergence

- Dendograms
- Grades and Clades

Comparative organ systems that are not covered by the stated chapters above would not be included. Moreover, since the proposed system is online, users who are unable to provide an internet connection is not within the scope of the study. Calculation of students' grades based on the grading system stated in their course syllabus will not also be included in the system. The only responsibility of the system is to compute grades coming from the chapter exams.

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