Improving computer science and software engineering education in cyberlearning environments through understanding UI and UX design *

Márk Bartalos

Slovak University of Technology in Bratislava

Faculty of Informatics and Information Technologies

xbartalosm@stuba.sk

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Abstract

In our day and age cyberlearning for computer science and software engineering education has become more popular than ever. The article will be about how understanding UI and UX design principles can serve as a basis for future improvements in teaching these fields. My goal is to understand UI/UX design techniques to be able to identify the problems with currently implemented cyberlearning environment designs. The identified problems then could be used to improve already existing environments. Knowledge of these problems would be greatly beneficial in the design and development of new, learning focused, student oriented cyberlearning environments for computer science (CS) and software engineering (SE) students.

1 Introduction

We speak about distance learning from around two centuries ago [MDDG11], but only now it is becoming a neccesity rather than an option. Especially now in the middle of a pandemic, use of online education environments is more needed than ever. This article will focus on online cyberlearning environments mainly designed for computer science and software engineer students. Implementing cyberlearning environments for teaching these fields can be the more beneficial than implementing it in teaching for non computer related fields. Design of the environment has a very big role in the effectiveness and in its ability to properly convey information. About the most common problems with the currently running cyberlearning environment (CLE) designs I will talk about more in the following section. The used methods which will be explored more in section *put section number here*.

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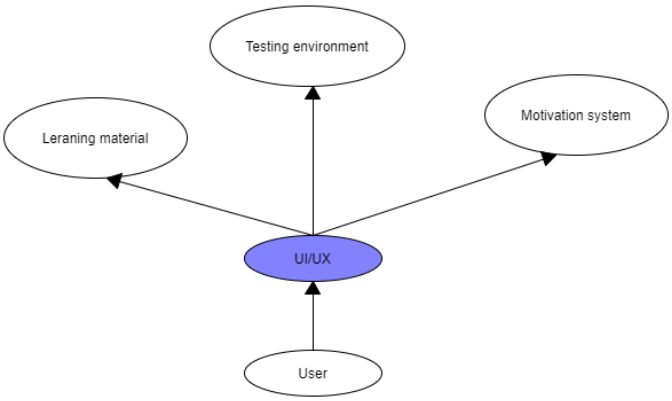

2 Definitions

2.1 Cyberlearning

For cyberlearning I will use the definition by National Science Foundation: "the use of networked computing and communications technologies to support learning" [BAD+17] Cyberlearning itself is a form of distance learning, but its main focus is building an all encompassing online environment which can motivate, inspire and and teach students using computer systems and networking technologies as primary tools. [ARKP20] Primary goal of cyberlearning is to provide learning experiences via a technology-based platform. Cyberlearning in some way is an extension of e-learning and a form of distance learning. [ARKP20] It is a complete platform for learning instead of a method.

2.2 Cyberlearning env. for CS and SE students

Under the term "Cyberlearning environments for computer science and software engineer students', I am mainly referring to those online CLE which enable students to write and compile code online. Using these CLEs students are able to learn the curriculum through lectures and through practice.

References

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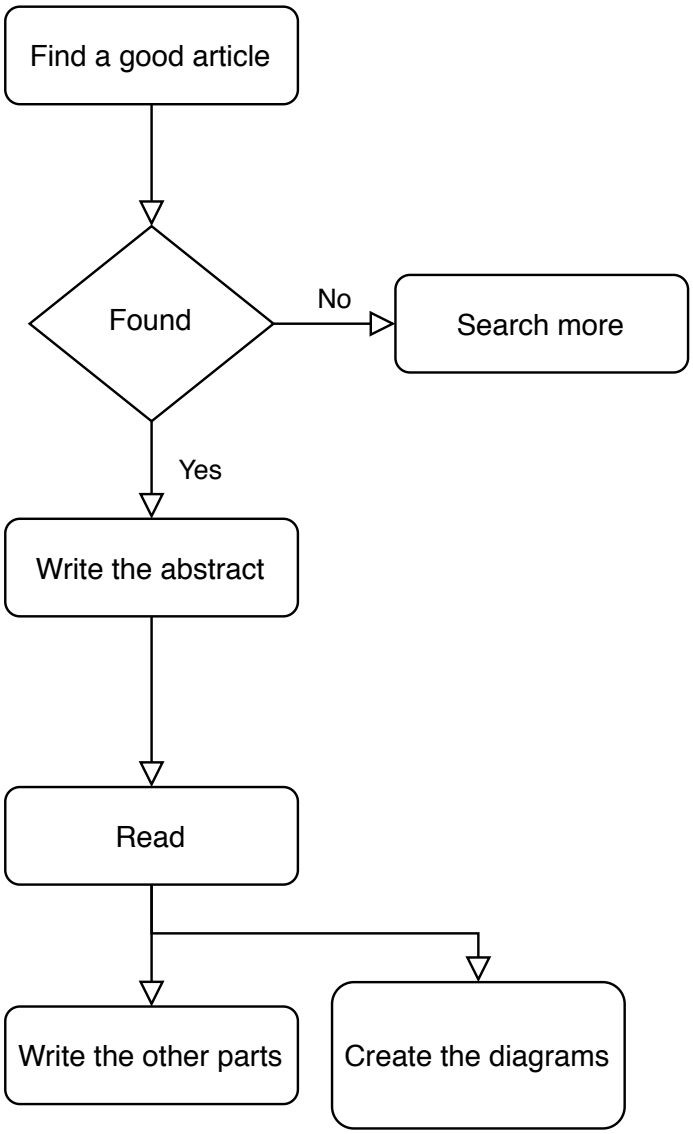
Find a good article
Found
No
Search more
Yes
Write the abstract
Read
Write the other parts
Create the diagrams

[MDDG11] Joi L. Moore, Camille Dickson-Deane, and Krista Galyen. e-learning, online learning, and distance learning environments: Are they the same? *The Internet and Higher Education*, 14:129–135, 03 2011.