

TWO NEW PHD DISSERTATIONS IN METHODOLOGY OF INFORMATICS TEACHING

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Abstract. Annotations of two new dissertations of PhD students are presented. Both of them are in the domain of methodology of Informatics education and are defended successfully in Plovdiv University “P. Hilendarski”.

Keywords: PhD student; dissertation; methodology; Informatics; education; teaching

Application of Cloud Technologies in Education

Denitza Sharkova is the author of this dissertation. The dissertation itself presents a model of a cloud-based course for teaching English writing and communication skills to students in the Faculty of Mathematics and Informatics at Plovdiv University “Paisii Hilendarski”. The model provides optimal conditions for learner engagement through the integration of cloud technology with principles of innovative teaching approaches. It includes an interactive website, a cloud-based textbook, Google apps, a YouTube channel and a variety of assessment instruments.

Furthermore, it offers evidence about the effectiveness of the cloud-based model gathered through two experimental investigations on two modules of the course: summary writing and writing for the web. The experiments were carried out in two consecutive fall semesters in the period 2014 - 2016, involving 189 students. Both experiments included a pretest, immediate post-test and delayed post-test with two experimental groups, team work and individual work.

The results showed a significant gain in the writing skills of both groups in both experiments from the pretest to the immediate and delayed post-tests. However, the between-group comparisons revealed a significant priority of team work over individual work. These findings were corroborated by the results of an exit survey, where the majority of the participants indicated a preference for team work, regardless of their group.

Extrapolating from the results, it is concluded that the model of cloud-based education presented in this dissertation leads to significant gains in student learning and to a high level of mastery of the target content and skills. Another conclusion is

that team work produces better learning outcomes than individual work in a cloud-based educational environment.

Short CV of the author. Denitza Sharkova is a specialist in Applied Linguistics and Second Language Teaching. Her professional interests lie in technology-based student-centered teaching and learning. Denitza earned her BA from the American University in Bulgaria majoring in Journalism and Mass Communication and European Studies. She holds an MA in Applied Linguistics and recently defended her doctoral dissertation on the application of cloud technologies in education. Denitza has co-authored two textbooks for teaching English in Cloud-based environments and has published related research in national and international journals.

Denitza strives to inspire her students by providing them with real-life learning experiences. She believes that education should empower people and help them find their real calling. Creative projects and team work are the core elements of her teaching style.

Denitza loves the diversity of human cultures and languages. In addition to being a fluent speaker of Bulgarian and English, she has been studying French, Persian and Portuguese. She believes that diversity, not homogeneity, makes this world a richer and a more humane place.

2. Intensification of the Processes of Evaluation and Assessment in English with the Help of Information Technology

Vanya Ivanova is the author of this dissertation. The dissertation thesis defines the terms intensification of the processes of evaluation and assessment and education technologies. The implementation of web based didactic tests is studied. The problem of academic fraud is considered.

A method is proposed to automate the processes of generating test questions, generating tests for all students, and conducting test evaluation and assessment. Major emphasis is placed on the automatic generation of test questions which are different for each individual student, but of the same level of complexity on a given topic/subtopic.

The object of the design is a technology model for intensification of the processes of evaluation and assessment in English by using IT. Five main criteria for test construction are developed and various test tasks are proposed for each of them. Criteria-based self-study tests practicing the material from the seminars are created by the author of the thesis. The test items are arranged hierarchically by levels of difficulty and are implemented in the education of students from FMI.

The activities performed in the realization of the pedagogical experiment include conducting three experiments: stating, forming and conclusive. A statistical analysis of the examination tests is performed, the validity of hypotheses is verified and the results of the experimental group are compared with those of the control group. A survey is conducted with students about their opinion of self-study tests in English.

Short CV of the author. Vanya Ivanova has taught English for general, academic, specific, and vocational purposes at the University of Plovdiv for over 20 years. She has taught courses in English for ICT, Business Communication, Marketing, Project Management, etc.

She has participated in a number of national and international projects, including PICTURE (Portfolio Intercultural Communication - Towards Using Real Experiences), A Common European Framework of Reference for Professional Language and Communication Competencies (CEF Professional), and others.

Her research interests include intercultural communication and intercultural learning, developing tests for self-study, classroom-based testing and assessment, along with others. She has also published in these areas.

ДВЕ НОВИ ДОКТОРСКИ ДИСЕРТАЦИИ ПО МЕТОДИКА НА ОБУЧЕНИЕТО ПО ИНФОРМАТИКА

Резюме. Представени са анотации на две нови докторски дисертации. И двете са в областта на методиката на обучението по информатика и са успешно защитени в Пловдивския университет „П. Хилендарски“.

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