Section 6. INFORMATION TECHNOLOGIES IN SCIENCE AND EDUCATIONAL PROCESS

CLOUD COMPUTING TECHNOLOGY OPPORTUNITIES IN THE DISTANCE EDUCATION

L. Girinova, I. Sybiryakova

The use of distance education is growing exponentially. To better support faculty and students for teaching and learning, distance learning programs need to constantly innovate and optimize their IT infrastructures. The new IT paradigm called “cloud computing” has the potential to transform the way that IT resources are utilized and consumed in education and is expected to have a large impact on educational computing during the next few years. With its focus on helping distance learning administrators and practitioners to understand cloud computing and to make plans for successful cloud adoption, this paper provides insights into the adoption of cloud computing for distance learning, based on a thorough review of the literature about cloud computing. Implications and considerations for additional research are provided as well.

Keywords: IT, cloud computing, distance education.

THE USE OF COMPUTER DESIGN IN LABORATORY WORKS

I. Lebedinets, S. Saenko, S. Kostenko

Nowadays, the introduction of information technologies in the process of teaching of technical disciplines to the students of engineering specialities is one of the topical tasks. The introduction of laboratory works with the use of computer modelling in the process of teaching is of great importance as knowledge and skills from the individual research work with the real engineer devices will undoubtedly improve the level of training and will be used by students in the academic process and future work according to their specialities.

The result of introduction of teaching computer-aided laboratory works on the disciplines «The theory of mechanisms and machines» and «Details of machines» into the process allows both to model cutting of gear teeth, toothing cog-wheel with and without the displacement of cutting instrument, toothed gearings of reducers, and also evidently to watch the changes of geometrical parameters of the toothed gearing of wheel, cog-wheel, worm.
The use of computer modelling by software GearTraxe and Inventor in the laboratory works on cutting of toothing gear-wheels by the method of rolling, creations of toothed and worming transmissions improves the understanding of material and the level of learning by the students on the proper topics of disciplines.

**Keywords:** modelling, program, laboratory, cutting, indents, gearing, wheels, transmissions, reducer.