THE DYNAMICS OF ICT INTEGRATION SKILLS DEVELOPMENT OF THE STUDY COURSE "IT IN EDUCATION"

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Abstract. purpose of the research was cleared out the dynamics of Information and communication technologies (ICT) integration skills development for the prospective teachers of Household and Home Economics in the study course *Information technologies (IT) in education* and other study courses, where ICT are used in the study process. Research is based on the created a model of ICT integration skills development for the prospective teachers of Household and Home economics. According to the analysis of the average assessment of the student achievements it is possible to declare that, if a traditional study course is supplemented with the elements of ICT, the students' educational level increases, besides, it increases in proportion with the number of computer programs acquired in the study course, it means the more computer programs are used, the better success the students have.

Keywords: ICT integration, prospective teachers, Household, Home Economics.

Introduction

By analysis of different researchers about ICT using in education- Apple computer [1], G. Knezek and R. Christensen [2], J. Kortlik and D. Redmann [3] research about phases of ICT acquisition; author defined four main levels of ICT integration skills development: ICT basic skills are *ICT standard skills integration level,* ICT extended skills are *ICT competent integration level, on the subject Household and Home Economics oriented integration level* and *Integration level in pedagogical creative action* (Fig.1).

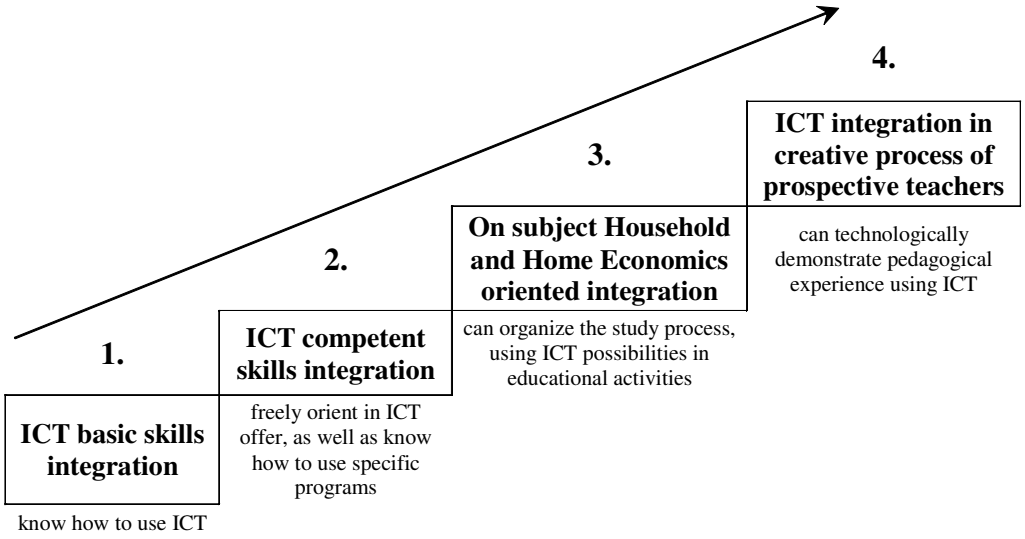

Fig. 1. **Levels of teachers ICT integration skills development (Vronska, 2012)**

Analysing the theoretical literature about development of ICT skills for the prospective teachers of Household and Home Economics and basing on V. Bizuka's statement – the choice of didactic and methodological aids and link between ICT, the Household and Home Economics study courses are required to integrate [4], as well as G. Sornikova's statement about elaboration of integration skills indicators [5], a model of ICT integration skills development for the prospective teachers was created, which is summarized in Figure 2.

The model of ICT integration skills development was evaluated by five experts who consider that:

- skills to integrate ICT in Household lessons are necessary for the prospective teachers of Household and Home Economics;
- it is possible to characterize the development of ICT integration skills with the development levels, criteria and indicators, worked out by the author, that describe these criteria sufficiently wide;

- criteria and indicators create understanding of ICT integration skills development [6].

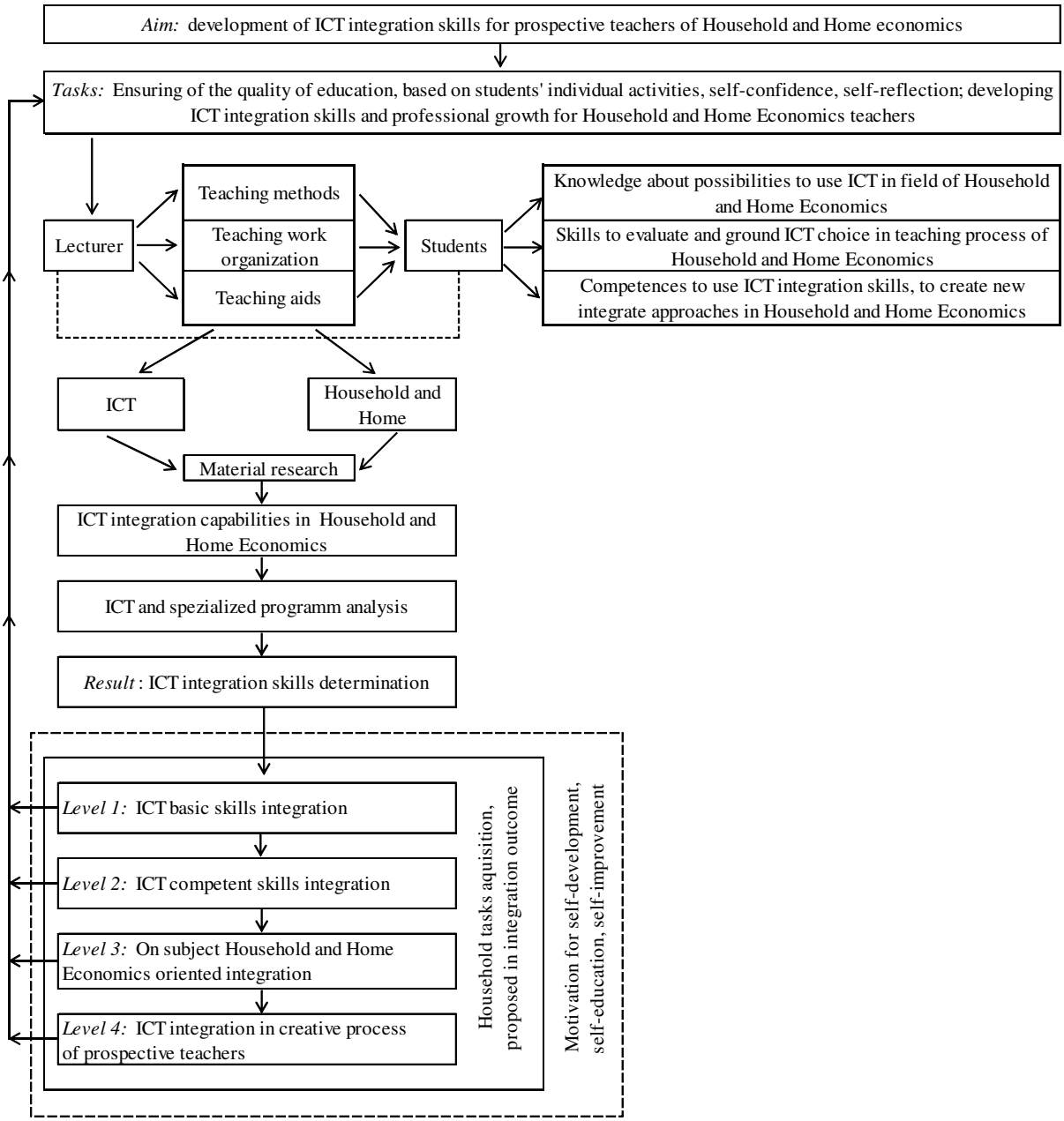

Fig. 2. **Model of ICT integration skills development for prospective teachers of Household and Home economics (Vronska, 2012)**

Materials and methods

Research base – the Latvia University of Agriculture, Faculty of Engineering, Institute of Education and Home economics study program *Home environment and informatics in education* 74 full time students and 3 teachers.

By means of document analysis the dynamics of ICT integration skills development for the prospective teachers of Household and Home Economics was cleared out in the courses, where ICT are used in the study process.

Evaluation of ICT integration skills was carried out by: 1) the author of the promotion work, teacher of the study course *IT in Education*, 2) teacher of the study course *Weaving*; 3) teacher of the study course *IT in Education II*.

Results and discussion

In the study program *Home environment and Informatics in Education* it can be seen that the study course *IT in Education* is the first of all the courses, in which different ICT and specialized computer programs are used, therefore, wide analysis of this course program content is given. The changes in last three years of the study course *IT in Education* program content are analysed (2009 – 2011).

In 2009 the content of the study program was supplemented with the theme *Computer program MS Movie Maker usage in Education.* The students learned to process photos and video files by means of *MS Movie Maker* program. In 2010 the content of the study program was supplemented with the theme *Computer program Adobe Photoshop usage in Education.* The students learned to create animated video fragments from photos by means of *Adobe Photoshop* program.

In 2011 the content of the study program was supplemented with wider exposure of specialized computer programs (*AranPaint, Stitch Art Easy, Guntram'sTabletweaving Thingy*). The changes of the students' achievements in the study course *IT in Education* can be seen in Fig. 3.

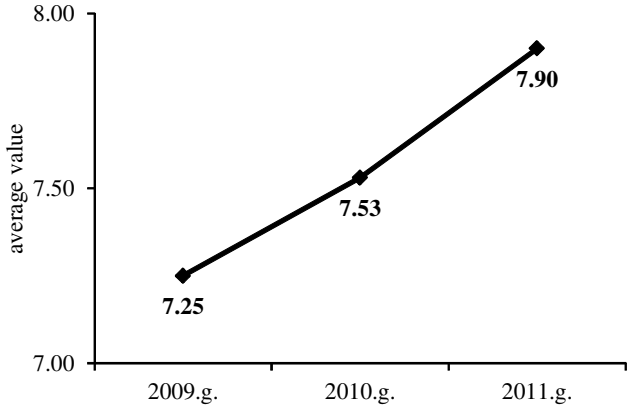

Fig. 3. **Average assessment of student achievements in the study course *IT in Education***

The analysis of the average assessment of the student achievements in the study course (Fig. 3) indicates that supplementation of the study program with wider exposure of ICT's and specialized computer programs gives better results in student assessment finishing the study course.

For purpose to find out the dynamics of ICT integration skills development of the prospective teachers in other study courses where ICT are used in the study process, comparison of the average assessment of the student achievements in the study courses *IT in Education, Weaving* and *IT in Education II* was carried out (Fig. 4).

According to the analysis of the average assessment of the student achievements it is possible to declare that, if a traditional study course is supplemented with the elements of ICT, the students' educational level increases, besides, it increases in proportion with the number of computer programs acquired in the study course, it means the more computer programs are used, the better success the students have.

The obtained results confirm the statements of humanitarian education of N. Gage and D. Berliner that integration skills in the study process improve if the students are oriented on self-dependent cognitive action, where inner development and self-regulation of the student's personality are stressed [7].

It is possible to declare that dynamics of ICT integration skills development can be observed for the prospective teachers of Household and Home Economics by using the model of ICT integration skills development in their education process. But to get higher results the lecturers have to use the methodology of ICT integration in their study courses.

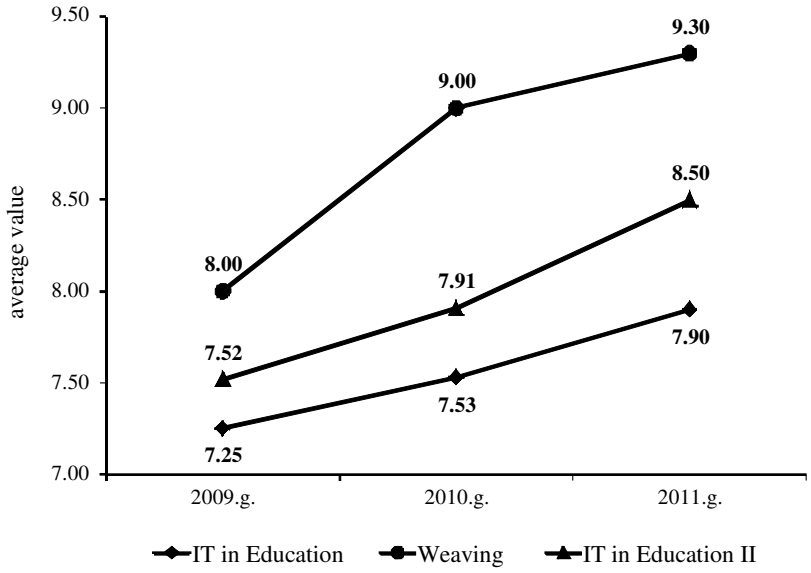

Fig. 4. **Comparison of average assessment of student achievements in the study courses *IT in Education, Weaving and IT in Education II***

Conclusions

To discover the possibilities to use ICT in the Household and Home Economics study process, the author concludes that usage of ICT promotes individualization of the study process that depends on the qualification level, skills, individual peculiarities of acquiring the learning material, students' interests and needs; as well as it promotes the change of the students' cognitive activity character to higher self-dependency, investigative activity and aspiration to independent self- improvement and self-education.

The model of ICT integration skills development is based on humanitarian education, integration and student-centred approach implementation in the study process as well as on scientific research about ICT usage in education and the author's created and for seven years taught study course *IT in education*.

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