INNOVATION IN SCHOOL SUBJECT HOME ECONOMICS

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Abstract: Research objective- explains and substantiates the necessity of innovative learning process and introducing in subject „Home economics and technologies", improving the content of learning process and updating the development of life quality comprehension, what can be achieved by acquiring a variety of handicraft and modern technology. In the article compared the Ministry developed subject programs and the author's programs of A.Pridāne parts "Technological creativity and practical application to the human habitats to improve" and "Product ideas, ideas generation, presentation".

Keywords: innovative and creative learning process, life quality, the subject „Home economics and technology"

Introduction

The century of new technologies influences our every day life- as well as in communication, as work, as spending free time. 21 century challenge and task is to create such approach that is involving and interesting, easy to adapt and it is in conformity with out-of- school life of young people (Inovatīvas ierosmes izglītībā, 2010), it creates young people's natural inquisitiveness and succeeds their effective activities in future. Teachers and scientists constantly think about, what knowledge are necessary and how the teaching process is organized more effectively in order that corresponds to social process, development of society in future, when student finishes the school and solve arisen life problems independently (Žogla, 2002).

As well as the education documents of World, Europe, and Latvia give the references to teachers, that nowadays educational process must be innovative and creative, sort of that allows student to have a good knowledge of real life, prepares them for cognitive, estimative, practical, creative action in future.

In pedagogical and psychological literature the notion creativity means as the personality features as the process, action, (Damberga, 2005, 49; Miķelsone, 2000), as independence, nonstandard thinking (Katane, 2005, 61). With the word creativity is understood the transformation of acquired information and experience in new quality (Katane, 2005, 63), as a mean for solving problems, as an adventure not being afraid of making mistakes (Piaget, 1969, Lieģeniece, 1999).

Notion innovative-derivative from English word innovation- novelty, novation, urgent, significant (Pedagoģijas terminu skaidrojošā vārdnīca, 2000, 248) it is related as to novelties of learning process and content, as to creative approach of learning process, as usage of new non-traditional learning materials methods, and ways as establishing and using the latest information and communication technologies in education. The notion is used to define creative action and its results and products. Innovation is, flow of knowledge, it is creation process of knowledge and applying process of it, likewise - subject, thing, new idea, technical manner, approach, method, etc.; developed creatively, with the help of strange methods, means.

Considers that, the bases of innovative process are cooperation, talking, communication and sharing the ideas that can turn into successful result (Neimanis, 2011). Krivoručenko (Криворученко, 2008) explains the notion innovation as significant novation, improvement, for example: method, technique, practice, product, service with value-added, that is connected with its establishment and realization in life. On the bases of given explanations in English dictionaries Stabulnieks (2009) indicates that innovation must be understood as creation of new things, it denotes the process, where something new is created (The Merriam-Webster Dictionary, 1974), denotes the process where something new is created or old things are replaced with new ones (Oxford English Dictionary, 2006).

I have to admit that, that innovation in all fields of life develops faster than it is possible to do improvements in education. Therefore teacher himself must improve the professional qualification and critically estimate the action in context of new demands. In order to insure innovative learning process teacher must be: knowing, creative, able to generate and create new ideas, design and model situations and practical actions that is directed to student's personality development and needs.

From one hand, in its professional experience it makes teacher to use new ideas, methods, shapes, techniques, as well as teachers have to have good knowledge and be able to use effectively the latest information and communication technologies.

On the other hand appropriate learning and supplementary aids, made up adapted digital learning recourses and methodologies, and freely accessible equipment in classes are necessary for introducing the innovations in practice.

The usage of IKT in subject „Home economics and technologies" is very diverse. It is as acquiring and selection of the information about resources and services the ability of using them in browsers as well as the observation of the ways of technologies and developing methods in video materials, and carried out different calculations and data processing, making presentations as well as preparation of learning tasks, fulfilment and testing, just like correspondence and consultations. I have to admit that the usage of IKT is many times wider but unfortunately teachers and students do not have appropriate knowledge and skills.

Materials and methods

The author has more than twenty years doing research on Home economic education in Latvia and abroad. In recent years, particularly in the context of educational reform and topical subject "Home Economics and Technology" place of primary education. This paper analyzes the collected part of the theoretical knowledge of modern and innovative content of the necessity to implement. Compared Ministry of Education developed subject programs and the author's programs parts of A.Pridāne "Technological creativity and practical application of human habitats to improve" and "Product ideas, idea generation, design". This basic difference is included in the curriculum and diverse contemporary craft technological learning opportunities.

Methods used: the scientific study of literature, analysis and evaluation, experience reflection, content analysis.

Results and discussion

Effective changes in education demands versatile approach in order to change completely learning process (Dynarski, Agodini, Heaviside, Novak, 2007). Nowadays innovative approach in didactics means pre-emptive teaching which prepares person for future self education necessity, it gives necessary skills to distinguish and solve problems and the alternatives for solving them (Lanka, 2005). Consider Innovations in didactics are not only modernizations of learning process, improvement of material technical and informative resources, but also improvement of syllabus, approach of new progressive learning methods and learning styles, that creates critical, creative thinking, approach of social and practical skills and development of competences (Kuzņecova, 2010).

Innovative learning process demands creative and involving work-out and implementation of learning content, where students are active participants, researchers and discoverers (Brunner, 2000). Students and teachers relations change during teaching and learning process- they are directed to cooperation and partnership, teachers and students desire for continuous improvements that promotes students development of ability and experience (Brigmane, 2010).

As to the meaning of innovative and reflexive approach in education and purposeful planning of pedagogical experience (Inovatīvas ierosmes izglītībā, 2010), there is emphasized to look over the content of learning process, the conformity according to propounded demands contemporary education. It must be competitive internationally open, interdisciplinary (Klasons, 2010), studied in ethical and cultural, science and technologies, social and economical aspects (Delors, 2001, 26). The content of learning must be pointed to future *Learning Futures* (Hamlyn, 2012), and brought closer to life reality, where acquiring knowledge must be less theoretical but really practically used (Inovatīvas skolu sistēmas struktūras īstenošanas izaicinājumi un iespējas, 2010). Amonašvili Š. points out to it

expressing the attitude, that students action is connected with his every day self awareness (Амонашвили, 2001). It is promoted by learning that is not only connected with his future interests but also with its present life interests that are clear and acceptable.

Besides learning process should be student centred, thus stimulating interest about learning subject, motivating students to participate in learning process more actively, to distinguish the sense of life action, learn to solve problem situations, improve the problem solving skills such as (ability to persuade, influence, make position, to motivate his choice and point of view), choose suitable information and adapt to his own needs. (Gardner, 2011; Hamlyn, 2011; Frondeville, 2011) Emphasize must be both to clarifying questions what? Where? When? but to comprehension searching answers to questions why? how?. It means to change the accent in content of learning process from approaching the volumes of facts and information to analytical-in order to develop processing present information, evaluating, discussing and argumentation skills.

The usage of appropriate methods and techniques are just as significant component of innovative learning process, that demands from student more independent and more active learning, problem approach, stimulates student to go deep into the content of learning, stimulates his creativity and development (individual and group projects) as well as promotes the ability to use their knowledge in real life situations; the necessity e able to judge independently, to be responsible, ability predict changes and be able to adapt to them. (Šmite, 2004). The special place is shown to project methods, that promote critical thinking and (Šmite, 2004; Rubene, 2004; Frondeville, 2011; De Bono, 1996a, 1996b), that helps student to show analytical abilities to get rid of traditional way of thinking. This is the way how students can learn to transform present ideas with its new combinations, to see the things and process in the best advantage, as a result find the best way of solving the problem to carry out appropriate action for the goal (Garleja, 2007, Inovatīva domāšana, 2007, 9), be ready to take a risk, to make mistakes, in practical work understand creating process. The acquirement of thus organized learning purposeful action of the teacher despite of subject student learns, gives opportunity to develop students individuality, experience, skills, it promotes formation of many sided personality (Izglītības likums, 1999).

People in knowledge based society should be able to plan and develop their life with responsibility- be able to manage with present resources in the interest of itself and society, be competitive, live successfully in language and ethnic diverse society. All these questions are vital and they are solved in subject „Home economics and technologies".

The content and title of home education has changed in many years time. It was influenced by social economical situation in society the society raised demands for education. Appreciating the demands, aims, tasks, and content propounded for home economics education, it was concluded that it was connected with handicrafts approach for long time and educating students for labour forgetting about the importance of subject in the development of students' personality (Pridāne, 2009, 61).

Nowadays Home economics education is complicated subject with various tendencies of action and technologies. It is based on research of economical, social and cultural field and directed to social and responsibly developed personality. It must be taken into consideration in Latvia as well considering the subject as essential component of secondary education for boys and girls, drawing attention to acquiring necessary competences for every day life provision.

Innovations in the content of subject "Home economics and technologies" in Latvia, means giving individual the ability learn to live in rapidly changing society, developing understanding, the present interaction of processes in society and home economics, acquiring knowledge and understanding about peoples habitat environment, evaluation of self abilities and using them for the improvement of life quality. It must be based on the recent quotations of home economics and mastery diverse technologies used in household. There for the author in her promotion paper (Pridāne, 2009) based on principals of human pedagogy where student and his needs and interests are in the centre of attention, has motivated the urgency of life quality and its meaning of comprehension in subject "Home economics and technologies" and further in whole life.

When solving the question about person's lifestyle and living conditions, the choice of food, the food culture, the health and hygiene, the provision of peoples working capacity, finances, planning and the economical supply of home economics, the market of production and services, resources and

goods consumption, the relation with finances institutions, cooperation and relation in family, ethic and art in family life and work, handworks and crafts, it is possible to motivate personal home economics role in people life, gradually developing all-round comprehension about life quality and its reaching abilities and ways.

In order to realize the life quality principle in home economics education in primary school standard of primary education (Noteikumi par valsts standartu pamatizglītībā un pamatizglītības mācību priekšmetu standartiem, 2006) in subject „Home economics and technologies" with the choice in textile technologies, the sample offered by the Ministry of education were evaluated (Mācību priekšmetu programmu paraugi pamatskolai *Mājturība un tehnoloģijas 5.–9. klasei* ar izvēli tekstila tehnoloģijās, 2006) as well as the author program for form 5-9 was developed, reflecting the achieved results of the content- the comprehension of life quality (Pridāne, 2009, 79, 125).

The Standard of subject „Home economics and technologies" shows that 75 % from amount of studies should be mastered in creative work, practical approach, emphasizing the initiative and responsibility of personality. The demands mentioned above are fulfilled using creative, problem exercises and business like games, that are close to real life and demand analytical thinking, enquiring the situation, searching the connections, joining the present and new experience. For example, working with imaginative budget, students work out, and successful model for planning finances, this is realized while student begins its independent life. The ability to solve the tasks like this and similar to this make student to realize its needs, forms the comprehension of life quality, motivation, and necessity to reach it.

Table 1

Creative and practical usage of technologies in development of people habitant environment
(Pridāne, 2009)

Form	Number of hours 10	Questions to acquire	Number of hours 40	The result to achieve
5.-9.	2	Folk art traditions, the usage nowadays. The historical development of technologies. The abilities to use them in producing various things Materials and instruments, the calculation of amount. Technical interpretation.	8	usage abilities of technologies has been introduced. The latest, modern technologies are acquired. Does exercises, evaluates its skills in them with making samples, Reads and writes in technical interpretation, makes drawings. Has comprehension about the calculation on amount of material. Selects and uses appropriate materials, determines the quality. Has knowledge and introduces with obtaining sources of information about definite technology. Chooses and uses appropriate tools takes into consideration the rules of safety. Distinguish and evaluates subjects and value of ethnography, handicrafts, applied art, as the part of nation culture heritage and the usage abilities in nowadays interior. Comprehends the national costumes of Latvia's region, the distinctive features and diversity, and used producing technologies. Distinguish the ability how to use the features of national costume in modern clothe.

Besides in home economics education allocated great role to creativity and creative work. As a result of acquired program the Standard of primary education (Noteikumi par valsts standartu pamatizglītībā un pamatizglītības mācību priekšmetu standartiem, 2006) there are shown acquiring knowledge and skills for students has an opportunity to freely to choose technologies. They are reflected in author programme sections "Creative and practical usage of technologies in improvement

of peoples' habitant environment (Table 1) and "Goods, ideas, the development of ideas and design" (Table 2).

In the sample of programme (Mācību priekšmetu programmu paraugi pamatskolai *Mājturība un tehnoloģijas 5.–9. klasei* ar izvēli tekstila tehnoloģijās, 2006) included mainly traditional handicraft technologies (knitting, crocheting, weaving, embroidering, sewing) (Table 3).

Table 2

Article ideas, creation of ideas, decoration (Pridāne, 2009)

Form	**Number of hour 5**	**Questions to acquire**	**Number of hour 10**	**The result to achieve**
5.- 9.	1	The usage of article, abilities of technical solutions Modelling principles of drafts and compositions. The abilities of using ethnographical elements, stylization. Description of technical interpretation and draught.	2	offers, motivates and realizes the his ideas for making or decorating, combining different technologies and materials Search and selects articles, model, appropriate materials, technologies using different sources of information. Evaluates accessible resources, its abilities. Makes drafts or drawings and composition for chosen object. Evaluates the work, time put in, material and quality of produced object.

However contemporary and innovative content can be formed, if teachers offer and student choose acquire contemporary technologies that corresponds students interest and technologies that corresponds the trend, for example: painting of glass and silk, floristic, macramé, pearl technique, and others (Table 4). Acquisition of new technologies gives students opportunity to:

- use them spending qualitative free time- creative self-expression (making things in order to create persona image, for development of self environment quality);
- think about using new technologies in private enterprise, further career.

Table 3

Acquisition of textile technologies using the sample of syllabus in subject „Home economics and technologies"

(Mācību priekšmetu programmu paraugi pamatskolai Mājturība un tehnoloģijas 5.–9. klasei ar izvēli tekstila tehnoloģijās, 2006)

variants/form	**Form 5.**			**Form 6.**			**Form 7.**			**Form 8.**			**Form 9.**		
	1.	2.	3.	1.	2.	3.	1.	2.	3.	1.	2	3	1.	2.	3.
crochet	16	18	16								16		12		12
Knitting				26	20	18		20	14	20		20			
Embroidering	18	16	18			16	16		12		18				
Batik, fabric printing								10	6	10					
weaving							12				12	10			
sewing		12	12			12	18		14	16		16	18		16
appliqué work	12				16										
macramé				10										8	
paper plastics				10	10										
combined works								16					18	20	20

Table 4

The Curriculum "Home Economics and Technology" with a selection of textile technology and the author's program included handicraft forms of learning technology comparison 5th - 9. form
(Pridāne, 2009)

The ways of technologies		The sample of programme	Possible variations in author's programm
traditional technologies	Embroidering	colourful works, clean works, planking embroidering	embroidering with laces, pearls
	Crochet	form crochet, lace crochet	crochet with fork, Irish technique, crochet from untraditional materials (rope, pearls, texture yarn and others.)
	Knitting	lace knitting, round knitting (socks, mittens, hats)	Knitting from untraditional materials (laces, pearls, texture yarn ect.). loom knitting
	Weaving	its weaving (book marks, ribbons)	gobelin tapestry, using untraditional materials (pearls, nature materials ect.)
	Sewing	clothe production of interior things appliqué work, textile mosaic	embroidering with sewing machine (clothe, decoration of interior objects)
	Batik Fabric printing	adornment of things or production of fabric, using traditional cold, hot batik, printing	adornment of interior objects and clothe or production using cold, hot batik, wax batik, marblebatik
untraditional technologies	Painting on a glass, silk		adornment of crockery and interior crochet objects, silk painting
	Jevelery		making of décor and decorations
	Macramé		making laces, book plates, telephone purse
	Felting		making decors and decorations and other objects.
	Dekupage		adornment and decoration of objects, furniture, renovating of interior components.

In the year 2010, 2011 the author as senior expert was involved in ESF project „Further education of compulsory education teachers". In the content of this project there was formed and approached teachers' programme model of further education *the comprehension development of life quality in home economics and technologies in household.* The aim of project is to increases competences of home economics and technologies, household teachers in order to provide contemporary and innovative learning process. Develop training and methodological materials, as well as part of the author's programs are given during the learning program („ESF projekta „Vispārējās izglītības pedagogu tālākizglītība" pedagogu tālākizglītības programmu un kursu izdales materiālu izstrāde un aprobācija. „Mājturības un tehnoloģiju, mājsaimniecības skolotāju Profesionālo un pedagoģisko kompetenču pilnveide", 2011) for teachers, as well as access to programs available on the Web. Author ideas, teaching materials and programme are expected to meet with approval and will be used in schools of Latvia.

Conclusions

- The changes in education are directed to young people needs, stimulating their natural thirst of knowledge, promotion of successful action in future. The content of subject must be turned to the student rouse the interest and motivate student to participate more actively in learning process, to distinguish the sense of life action. It must be competitive internationally open, interdisciplinary.
- Innovations in education are related to the innovations in learning process and content, creative approach to learning process, with using new, unconventional learning materials,

methods, and ways, implementing and using the latest information and communication technologies in learning process.

- Innovative and creative process in subject „Home economics and technologies" provides:
  - introducing the principles of life quality in content of subject;
  - acquiring modern technologies appropriate to student interests and trends;
  - the possibilities of using technologies for student self-expression and further career;
  - creative, promoting critical thinking, problem solving and project methods are used.

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