

AUTONOMOUS ENGLISH ACQUISITION IN BLENDED E-STUDIES FOR ADULTS FOR SUSTAINABLE DEVELOPMENT: IMPLEMENTATION OF THE SYNERGETIC SYSTEM MODEL

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Abstract. *Researchers' attention has moved from solving a problem to united methodology for solving different problems. It resulted in paradigm shift in the science and using system approach in social researches. The topicality of „Autonomous English acquisition in blended e-studies for adults for sustainable development” follows from results of the previous part of the research. They show that vertical hierarchy of responsibility has stucked together and learners' interest towards methodological factors increased in virtual English acquisition. Next research problem is how to facilitate transformation of horisontal values from directed English acquisition to self-organised its acquisition in virtual learning environment. Hypothetically, it is assumed that there are sensitive factors, facilitation of which can call a resonance and transformation of other factors according to synergetic system model for facilitation the transformation of values in blended e-studies in adult nonformal education. The article presents reinterpretation of the results of the active research according to system approach of the whole research. The aim - to work out recommendations for implementation of the research model is reached in it.*

Keywords: *autonomous English acquisition, methodological factors, synegetic system model.*

Introduction

The topicality of „Autonomous English acquisition in blended e-studies for adults for sustainable development” follows from results of the previous part of the research. They show that vertical hierarchy of responsibility has stucked together and learners' interest towards methodological factors increased in virtual English acquisition. Next research problem is how to facilitate transformation of horisontal values from directed English acquisition to self-organised its acquisition in virtual learning environment. The article aims to work out recommendations for implementation of the synergetic system model for facilitation transformation of values.

The results of active research *Autonomous English acquisition in blended e-studies for adults for sustainable development* were presented in the article (Bojāre, 2014), but, after the revision of their interpretation, it was concluded that interpretation of the data according humanistic approach does not fit to the system approach and synergetic methodology choosen for the research.

It allows to present a human being as a system, a whole of which includes the intellect, emotions and will. They are presented as self-regulated learning,

self-directed learning and self-determined learning in the context of education. Hypothetically, it is assumed that there are sensitive factors, facilitation of which can call a resonance and transformation of other factors according to synergetic system model for facilitation the transformation of values in blended e-studies in adult nonformal education.

Theoretical background

Platos (Platons, 1997) and ecological philosophy is the background of weak ecological paradigm of sustainable development. The direction of its implementation has been changing from its opposition to strong technological paradigm to their compatibility and integration. It expresses as technological support of the learning process and virtual learning environment in education. Nowadays it is the fourth direction of educational reforms beside the reforms of standarts; teaching methods and teachers' professional development and learners' development (Fullan, 2006).

Historically, the levels of the system has developed from the first to the third level with appropriate understanding of the whole and the model of education. The third level of open system follows from the General Systems Theory (von Bertalanffy, 1968) and examines a biological system which exchanges with the environment with substance, energy and information.

There are three system models used in the literature devoted to education. They are shown in figure 1. Structural model has a vertical and horizontal dimension. It shows the process as well, but processual model has a vertical hierarchy and particularly shows the structure. Functional model shows the structure, hierarchy and functionality or intercommunication. The resonance mechanism acts in it instead of reflexive connection and changes in one element transform the whole system.

Traditionally system approach is used for linear investigation of development or for investigation of stable forms of educational process. Nevertheless, changes include nonstability and they are complex where individual is equal to group (Fulans, 1999) and make a dynamic system for practical realisation of the idea of changes (Stacey, 1992). Essential is the characteristic of the whole of the states of the system. Directed learning is considered to be a stable and structural in this research.

Autonomous English acquisition in blended e-studies is structurally divisible and functionally undivisible synergetical learning process and its organisational form where transformation of learner's values from directed English acquisition towards its self-organised acquisition is facilitated. Autonomous English acquisition is based on Rodger's approach of adult education (Роджерс, 2004) and the approach of learning of foreign languages (Holec, 1981) where learning process includes collaboration with a facilitator

and group. Blended e-studies present classroom technically supported learning environment.

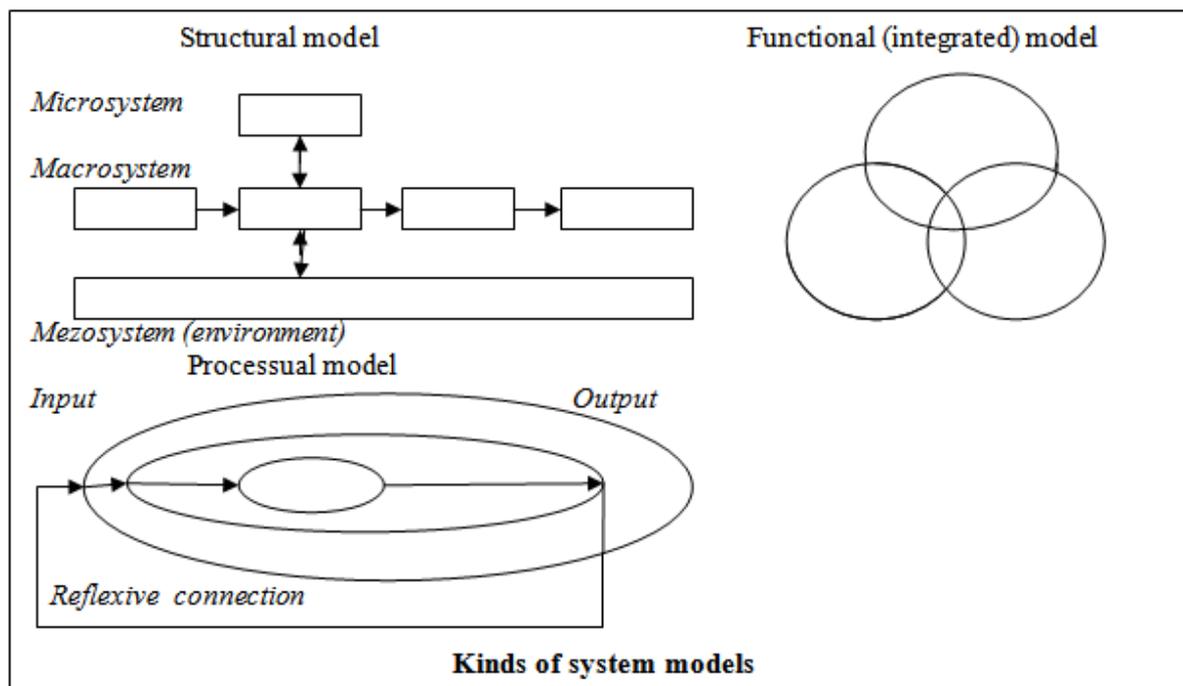


Figure 1. **Kinds of system models**

The functionality expresses the quality levels in education: directed learning, autonomous learning and co-learning of autonomous learners. Autonomy and the co-activity do not exist one without other. The boundary between the complex system and the environment is considered to be a layer where not only planned, but also emmergetical changes occur.

In nowadays cross-section, three didactic models based on actualisation of values are realised by systemapproach in education: cybernetic, synergetic, and holistic didactic model. The first reflects flow of investments (HEPS [Higher Education Partnership for Sustainability], 2004) to learner, for example, programmes for unemployed, and communicational flow to educator. The second – flow of investments to educational programme and communicational flow to learner. Holistic didactic model should ensure flow of investments and communication in both directions and is the mean of reaching learners' participation and integration in holistic model of sustainable learning society for person's creative development in and with the environment (Lāslo, 2011).

It is supposed that a value, in general, is a whole of the phenomena with positive characteristics and learner's behaviour depends on his/her attitude towards values. A dynamic tension between adults' experience of directed learning and a new value of self-organised learning is a precondition of transformation of values. The attitude towards different levels of responsibility and methodological factors of learning English in classroom and in virtual

learning environment is investigated in the quantitative part of the research. The methodological factors of learning English express learner's competence of English acquisition.

The synergetic system model for facilitation of transformation of values in autonomous English acquisition in blended e-studies includes learner's inside system, the outside system of organization and the environment. It is created for reflecting the structure of vertical values - the levels of learner's responsibility exposed by the process of self-directed learning, the process of self-regulated learning and the process of self-determined learning in group and the process of developing horizontal values: learner's experience of directed English acquisition, facilitated learning in blended e-studies and developing towards metalearning in self-organised learning in virtual learning environment as a new formation, value and experience of English acquisition, figure 2.

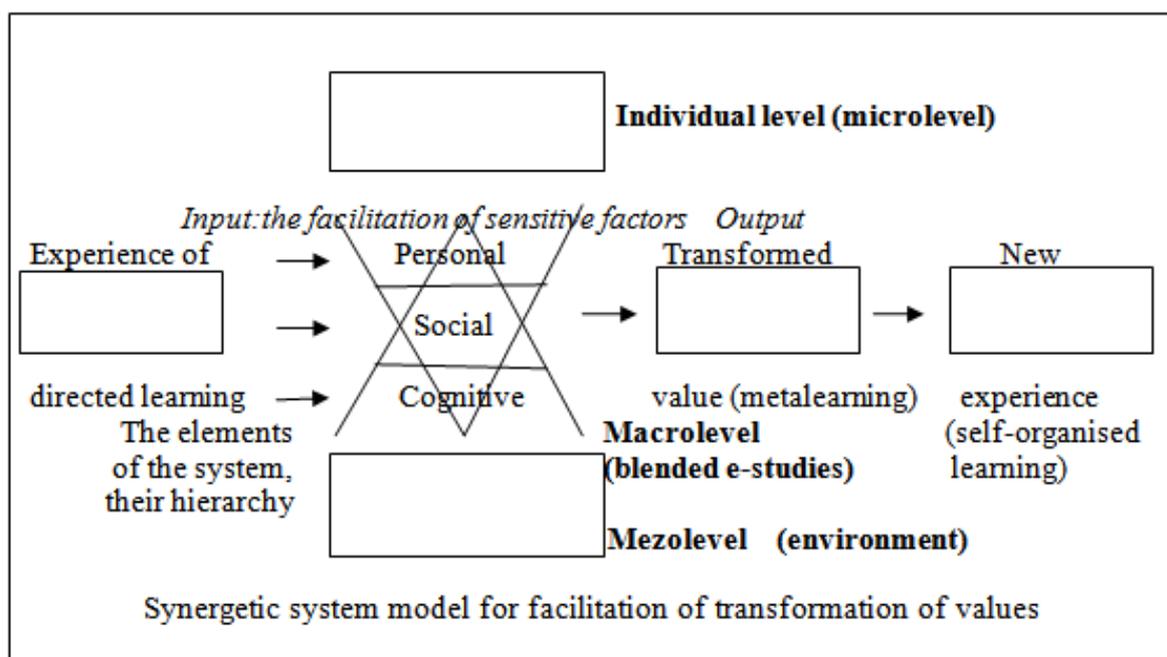


Figure 2. Synergetic system model for facilitation of transformation of values

Autonomous English acquisition in blended e-studies includes collaboration with the facilitator and group and blended learning environment. The model shows that the values of responsibility can transform vertically by changing their hierarchy. Nevertheless, results of quantitative research show that vertical hierarchy of responsibility has stucked together and learners' interest towards methodological factors increased in virtual English acquisition.

The synergetic system model is suitable for facilitation of transformation of values in English acquisition programmes of nonformal education by developing learners' experience from traditional directed English learning in the classroom

learning environment to self-organised its acquisition in open virtual environment.

Facilitator's input in transformation of horizontal values depends on methodological criteria of the research reflecting different aspects of learning English. They are exposed in the questionnaire and evaluated by participants of the quantitative part of the research. They are united in groups as F1= the personal factor, F2= the factor of participation, F3= the factor of organisation, F4= the factor of evaluation, F5= the factor of knowledge, F6= the factor of skills and F7= the factor of development.

The weak characteristics of methodological factors were removed by factorial analysis in quantitative part of the research, but strengths were included in the working sheets for SOT (Strengths, Opportunities and Threats) analysis in action research. Determination of sensitive factors allow to reduce the amount of factors for facilitation.

Methodology

Researchers' attention has moved from solving a problem to united methodology for solving different problems. It resulted in paradigm shift in the science and using system approach in social researches. Using of SPSS programm is an example of using mathematical analysis and modelling in education, but united methodology for investigation of dynamic processes in self-organised systems is proposed by synergetics. It follows, that unification of language is necessary for convergence of natural, social and humanistic sciences and system approach in interpretation of the data is appropriate for that.

The revision of the results of the action research as a part of the research about autonomous English acquisition in blended e-studies for adults for sustainable developments showed that their interpretation according humanistic approach does not fit to the system approach of the whole research. Their reinterpretation is done in this article. The methodology of action research has already described by the author (Bojäre, 2014), but synergetics in educational researches will be discussed in this article.

Prigogine (Пригожин & Стенгерс, 1986) connects a new transdisciplinary paradigm with transformation from being to becoming. So the accent is moved from investigation of invariants of balanced system to investigation of the mechanism of transformation and holistic investigation of appearance of new structures and their reconstruction. It means investigation of the evolution of open dynamic system, its self-organisation and its way out of chaos of changes.

Beside the world outlook and the science, synergetics is a method used in researches about self-developing systems. It has been recognised and denied by critics. It is recommended for using in education by Budanow (Буданов, 2007) and adapted for researches in education by Marulevska (2011). Prieditis (2011) connects its value with recognising the chaos, nonstability and nonlinearity as a

part of the process and the beginning of a new situation. This point of view is created by the new concept of the progress which should maintain the order during changes and the opportunity to transform in the phase of order. Irreversibility is another important characteristic of the process and show that it is not possible to get exactly the same results by recurrence the research.

Language learners' self-evaluation about readiness to learn English in virtual learning environment show their attitude to way of learning that is different from their learning experience and to necessity to transform their attitude and values. Quantitative and qualitative characteristics of the process determined by inside conditions of the system and outside impact on it (Буданов, 2007) are important.

Outside impact is described in the model for project work (Marulevska, 2011), but it is substituted by facilitation in implemetation of synergetic system model in this research. The accent from phenomena moves to research resources in synergetic methodology. Creating of alternatives, examples of forms and patterns of behaviour, synthesis, horisontal relationships, assumptions and modelling of solutions of the problems are general methods of synegetic methodology. Special methods follow from principles of synergetics, perspectives of observation and point of bifurcation.

Orientation towards general scientific methodology allows researcher to avoid of too narrow specialisation of different theories of education because of their lingvistically close terms and aims of education as it happens in a case of orientation to the problem and the task when a researcher choice of the method depends on the task.

The direction of choosen educational theory in the area of English acquisition is kept by analysis of general and didactic models and choosing of the prototype (Liepa, 2011) for creating a new research model. The interpretation of obtained research data depends on the method of synergetics and synergetic system model for facilitation of transformation of values in blended e-studies of adult nonformal education.

Respondents

The action research was conducted in autumn and early winter, 2013. Its first cycle participants are ($N_1=46$) learners of EA programmes of nonformal education organised for unemployed. Thirty-two participants ($N_2=32$) of 46 have taken part in the second cycle and four their facilitators ($N_3=4$) took part in the third cycle of the action research. Out of all respondents 59% have professional education, 9% - basic education, 17% - general secondary education, 13% - higher education, 2% - master's degree. 67% of them evaluate themselves as beginners and 33% - as independent users of the English language.

The choice of the participants depends on the results of the quantitative research. They show that the most abstained from virtual EA are the participants

of EA programmes of nonformal education organised for unemployed. They make 61% of the distinguished group (Bojāre, Ignatjeva, 2014). This group is not homogenous. Their decision depends on their education and their language proficiency level. In general, participants with positive attitude towards virtual learning environment show more interest about methodological factors of English acquisition.

Results

The whole research consists of qualitative research what resulted in working out a scale for the quantitative research. The scale was shortened in it for practical uses. Its pedagogical function is to facilitate learners' self-reflection in English acquisition programmes of adult nonformal education. It can be used for nontraditional completing groups according to learners' occupation and education based on *Sagacious competence* (Bernstein, 1996) of holistic education. It includes freedom in a psychological sense, self-governance, self-development, social abilities, values and metalearning.

Quantitative research also showed that transformation of values from directed English acquisition to self-organised its acquisition in virtual learning environment is horizontal because vertical hierarchy of responsibility has stucked together and learners' interest towards methodological factors increases in virtual English acquisition.

Methodological criteria - factors of the research were exposed in quantitative part of the research. The participants were inquired by short form questionnaire (Bojāre, Ignatjeva, 2014) in the first cycle of action research. It confirmed, that participants of nonformal English acquisition programmes prefer self-regulated learning directed by teacher.

Their attitude towards methodological factors is variative in different organisational forms of learning process. A facilitator can get the information about acquired competences of English acquisition and directions of facilitation from that (Bojāre, 2014). Mean value of understanding of methodological factors are given in figure 3.

In total, the best understood in directed learning is the factor of skills with total mean value – 3,58 where the best understood is translation (3,69 points) and less understood is using learning materials and acquisition of listening skills. The factor of skills is less understood factor in virtual learning where acquisition of listening skills has got the highest estimation – 3,09 points. The factor of knowledge is close to understanding of the factor of skills (3,56), but the highest absolute estimation is given for readiness to enjoy learning English, translation and reading.

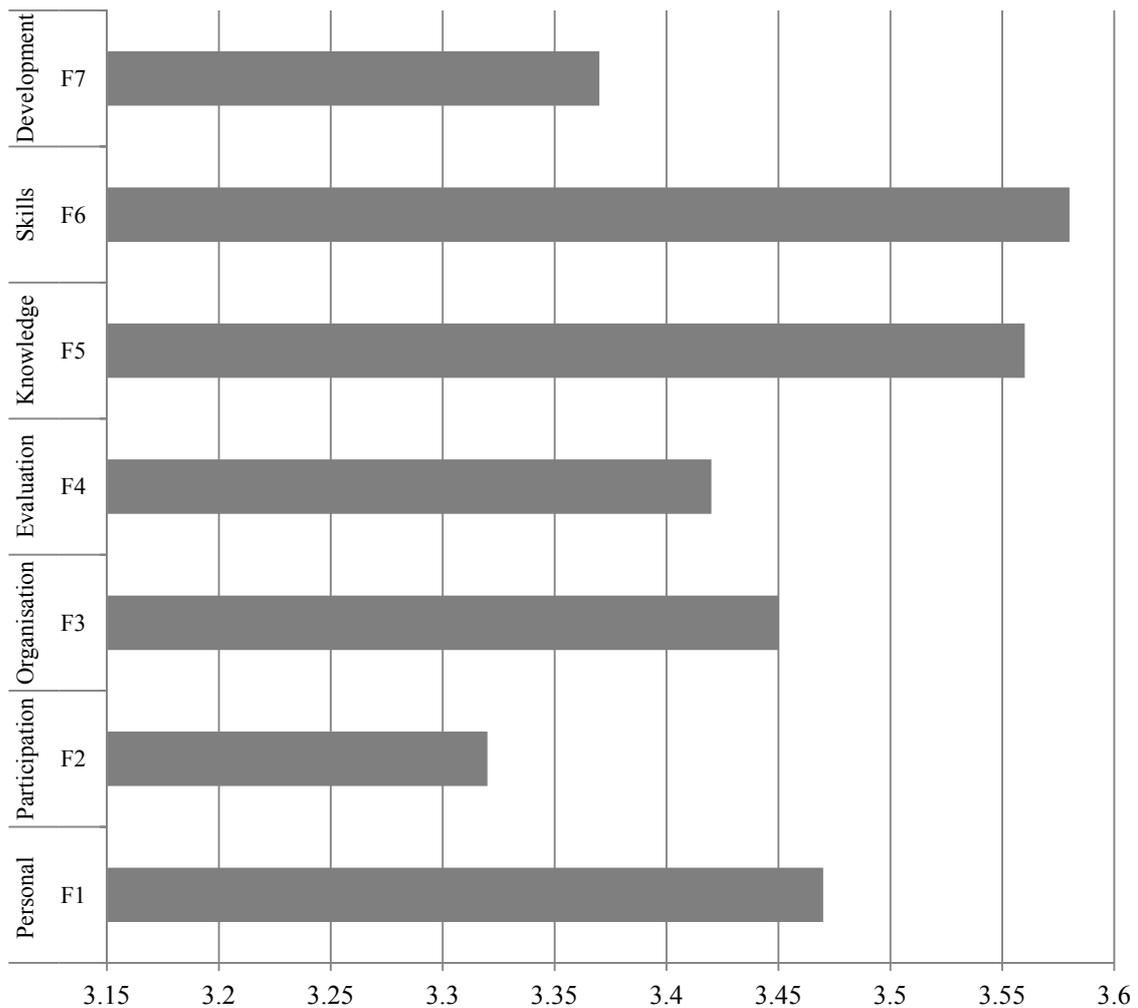


Figure 3. Understanding of methodological factors

The less understood is the factor of participation where more understood is making mind maps and tables about acquainted topics and grammar laws (3,35), but less understood is choosing strategies for doing the task (2,28). Priority is given for directed learning. The factor of participation is the less understood factor in virtual learning, but it shows that a new formation in the form of metalearning has appeared in the stable state of the system – directed learning.

The necessity arises to investigate the understanding of sensitive border factors - the factor of skills and the factor of cognitive participation - in details for facilitation the paradigm shift in individuals and in the group. It is assumed that it can be done by strenghtening the competitive factor of skills and/or by developing the factor of participation. The facilitation of sensitive factors could call a resonance in other factors and promote their transformation.

Participants of the research analysed proposed methodological factors by a SOT (Strengths, Opportunities and Threats) analysis in the second cycle, but for data analysis only sensitive factors are used according to synergetic research

methodology. Sensitive factors were analysed by 16 participants of the research (12 learners and 4 their facilitators).

Strengths of the factors follow from the short form of the questionnaire because their weak sides were excluded by factor analysis. It can be considered as structured SOT analysis where strong sides are partial restrictions because they do not reflect all language skills. Working lists of SOT analysis were prepared. Participants of the research analysed opportunities of using strengths and threats why those opportunities could not be used.

Strengths of the factor of skills are: using of learning materials, acquisition of listening skills and translating the text. Strengths of the factor of participation are: choosing strategies and methods for doing tasks; making tables about the acquainted topics/ grammar rules; making mind maps about the acquainted topics/ grammar rules. As the less understood factor, it shows a new cognitive formation for paradigm shift from learning exposed by the factor of skills to metalearning exposed by the factor of participation.

The summarization of the results show that learners and their facilitators consider their role in nonformal education as continuing of school learning tradition. The recognised value is correctness of information and doing tasks what depends on facilitator's authority. Learners wait outside learning stimulation from the facilitator. Facilitator's role has been connected with encouragement – motivation to learn, explanation, supplying by appropriate learning materials, control. Learner's role has been connected with attending lectures, doing tasks and independent work at home for memorizing given information and looking for additional information.

It can be concluded from data analysis that blended e-studies are not enough used in English acquisition programmes of adult nonformal education for communication in virtual environment because participants of the research suppose learning in virtual environment as independent and without facilitator.

They do not connect virtual learning environment with opportunities of pair and group work regardless of wide using virtual communication in general and the created opportunities of virtual learning communication. Cognitive relief expresses in the opportunity to connect entertainment with learning, for example, to learn English by playing games and watching videofilms.

Nevertheless, e-studies are desirable because they give the opportunity to get tutorial and mutual help in acquisition of English not only in the classroom, but also individually and in group in virtual learning environment. It could change the point of view about learning English alone in virtual learning environment and change the understanding of learner's and facilitator's new role where learner's performance is diminishing and self-organisation increases, but facilitator's leadership is substituted by facilitation. It refers to acquisition of any foreign language.

Research factors expose transformation of inside values to self-organised learning. Sensitivity of the factor of skills show that acquisition of English for

adults is important for practical its using. Technological support is appropriate because different technological devices give different training opportunities. The factor of participation show learners' readiness to widen learning self-experience and develop the competence of English acquisition.

The pedagogical facilitation is important here because the factor of participation is connected with the skill of systematisation of knowledge. Pedagogical function of SOT analysis is to facilitate the conciousness of opportunities of learning in classroom and virtual environmet and threats of not using given opportunities. The method of SOT analysis consits of doing it individually, discussion in pairs, groups and with the facilitator. Filling of working sheets of SOT analysis in the mediator language or in English depends on the level of proficiency and supplements the content of the topic about learning languages.

Further transformation of values, depending on the factor of skills, traditionally would be based on making an individual plan of acquisition the language. The method of modelling gives the opportunity to facilitate making an individual model of acquisition English or other foreign language. One of such models is described in qualitative part of the research (Bojāre, 2013). Nevertheless, facilitators' points of view show that learning strategies is more admitted method of facilitation of learning. Involving learners in choosing strategies for doing tasks, making mind maps and tables about different acquainted topics and grammar rules is the way how to facilitate by activation of the factor of cognitive participation.

Next task of the research is verification of the model in another groups of English acquisition programmes of adult nonformal education.

Conclusions

1. Complecting groups is a sensitive moment for facilitation of transformation of values.
2. The implementation of synergetic system model for facilitation of transformation of values from in autonomous English acquisition in blended e-studies of adult nonformal education is recommended in five steps:
 - investigation of learners attitude towards different forms of organisation of learning process depending on different levels of responsibility and towards learning methods in classroom and virtual learning environment by making a survay;
 - nontraditional complecting groups that depends on learners' occupation and education because of similar learning needs and experience of learning foreign languages;
 - determination of sensitive methodological factors for facilitation of transformation of values from directed English acquisition in the

- classroom learning environment towards self-directed its acquisition in virtual learning environment;
- autonomous English acquisition in blended learning environment is convenient for increasing learners' understanding of different learning opportunities and removing threats of not using available opportunities by doing SOT analysis individually, in pairs and in group and discussion with a facilitator;
 - facilitation of competitive factor of skills by working out an individual model for autonomous English acquisition or facilitation of less understood factor of participation as a new formation of value by involving learners in using different strategies of English acquisition.
3. The questionnaire and working sheets of SOT (Strengths, Opportunities and Threats) analysis is the mean of facilitation of transformation of values according to synergetic system model. Their pedagogical function is to develop learners English acquisition competence and learning experience by changing learning habits and behaviour on the base of their attitude towards the new value of self-organised English acquisition in virtual learning environment.

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