

Discourse and Communication for Sustainable Education,
vol. 6, pp. 21–29, 2015

Searching for Sustainability in Teacher Education and Educational Research: Experiences from the Baltic and Black Sea Circle Consortium for educational research

Ilga Salīte

UNESCO/UNITWIN Chair, Daugavpils University, Latvia

Abstract

The Baltic and Black Sea Circle Consortium for educational research (BBCC) was established at the beginning of the Decade of Education for Sustainable Development (2005). BBCC has obtained its name in the Third International Conference *Sustainable Development, Culture, Education* in the University of Vechta (Germany, 2005).

The paper will give insights into *preconditions* of the establishment of the international network in: (1) the stage before the Decade (2000–2004) when the UNESCO/UNITWIN Chair from Toronto and team from Daugavpils University from Latvia were started to prepare participatory action research for the reorientation teacher education towards the aim of sustainable development and (2) the stage of the Decade (2005–2014) when the network and its development continued as an open network for participation. The structure of the network provides the international environment for cooperation and welcomes new participants.

The initiative of the network's foundation was offered by the UNESCO/UNITWIN Chair in Toronto. For the coordination the BBCC actions and self-development the Institute of Sustainable Education (2003) was established in Daugavpils University (DU) and later UNESCO/UNITWIN Chair on Interplay of Tradition and Innovation in ESD were emerged at Daugavpils University (2013).

Action research experience was viewed in current article as a complex development process and at the same time as a complex system in which attention on the adaptation and evolution of cooperative relations will be emphasis. Metaphors approach and characterisation of frames of references for reorientation education towards sustainability will be examine in order to find the answers that allow realising reorienting of teacher education towards sustainable development. The analysis will be based on the topics which were discussed in annual BBCC conference *Sustainable Development. Culture. Education* sections.

Conclusions will offer main assumptions from the most significant BBCC network lived experiences in teacher education which is the real heritage from ANO Decade and

in future it will serve as the frame of reference for realization of UNESCO/UNITWIN Chair in DU and BBCC actions in education and educational research for sustainable development in action.

Keywords: participatory action research, teacher education, sustainability, metaphorical approach, complex systems development, *kumatoid*

Mission and General Background of BBCC Development

The Decade of Education for Sustainable Development is the time when the global action was implemented by searching for the purposeful idea of sustainability and possibilities to implement it in education. The foundation and activities of the Baltic and Black sea Circle Consortium in educational research is one of the action cases, real European network experience within which action research in the field of teacher education and education research for sustainable development were implemented. This experience is valuable for the evaluation of several issues, because, by its nature, it is a complex process within which several universities started cooperation and are looking for the way towards sustainability. The formation of BBCC was initiated by the participants' interest about the issues of sustainability and teacher education which network participants accepted also with a desire to engage in their research within the action research. It was a voluntary agreement of competent participants taking part in reorienting teacher education towards sustainability. This interest was supported by the institutions which, according to their possibilities, gave a chance to individual participants to take part in network activities or undertake a responsibility for organising the annual BBCC conferences.

On the stage before the Decade the network's activity it has started as a *participatory action research*. This initiative in its formation should be linked to the activities of UNESCO/UNITWIN Chair programs because the idea of the network's foundation was offered by the UNESCO/UNITWIN Chair in Toronto. The Chair was founded with the project of global teacher education reorientation towards the aim of sustainable development in 2000. Daugavpils University was invited to take part in this project, DU accepted this invitation because issues of teacher education and sustainability in some ways had intrinsic values for the identity of DU. Within few years DU began to form an international working group that maintained cooperation with the UNESCO Chair in Toronto. This cooperation has started as a formation of *European international network* in reorienting teacher education towards sustainability (2003). The network was established at DU and the responsibility for its activity was entrusted to Daugavpils University (Latvia) and University of Debrecen (Hungary) and to participants from Finland, Germany, Estonia, Lithuania, Brazil and Australia. Now the time until 2005 BBCC members call as *network formation stage*. BBCC has maintained the cooperation with the global project and this is a tradition according to which BBCC members consider themselves also as a *sub network of the global network*.

In order to coordinate the network activity and to build the international base as well as to participate in action research at Daugavpils University we have established *Institute of Sustainable Education* (2003). The cooperation of DU with Latvian National committee of UNESCO was developed and strengthened over the years and the agreement about the establishment of UNESCO Chair was signed up. UNESCO / UNITWIN Chair on Teacher Education and Continuing Education: Interplay on Tradition and Innovation in Education for Sustainable Development at DU was confirmed on 15th July, 2013.

One of the tasks of the Chair is to promote the development of BBCC as an open cooperation network, to enable and to sustain the participation of students, faculty and researchers from BBCC in educational action research. International partners for the implementation of this task are BBCC universities that participate in the network activities since it was founded or joined later. Now they are from more than 30 countries. Both individual members and universities participate in the network. Nowadays we can talk about internal structure of the network that during gradual process of cooperation was crystallized as an activity of several sub networks and complementary interactions.

Metaphorically speaking, the process of BBCC formation began as cooperation and can be viewed as a *wave* that arose and spread from the action that was started as the global project by the UNESCO Chair in Toronto and its purposeful activity caused the emergence of the *action wave* in the European region. In the BBCC action wave has been the emergence and self-development of a new entity – the Institute of Sustainable Education (2003) and UNESCO Chair at DU (2013).

Metaphors and Frames of References for Reorientation Towards Sustainability

The perspective in which we will continue to look at action research experience is as following. We will examine it as complex development process and at the same time as a complex system. In this perspective we will focus attention on the *evolution of cooperative relations* which will be viewed both as a process and as a system of established relationships. There is no doubt that it is not an easy perspective. Therefore, for the characterisation of evolution of cooperative relations, we will turn to the *use of metaphor approach*. For each period of action research, which was distinguished before, we will identify the most characteristic metaphors that were used in communication among participants when they directly or indirectly turned to cooperative relations in the network.

Looking at the experience of BBCC action research from this perspective it is undoubtedly seen that the most often used metaphor for cooperative relations in both network stages is *family*. In addition, in the use of this metaphor we can see development of relationships: (1) *family* metaphor emerged during the network formation stage, it was based on common sense, (2) the establishment of BBCC brought **BBCC family** metaphor which was understood as BBCC family that is expanding in search for common sense and during this search process a dynamic open network structure was formed and developed in which new participants enter and change, when exchange and enrichment of experiences take place in this structurally evolutionary unit of dynamic process, (3) **BBCC family as the kumatoid**. After the BBCC conference in St. Petersburg (2013) in one of the newest books about science philosophy issued, which was brought from St. Petersburg, we have found a scientific category *kumatoid* (*kuma* – wave from Greek). Face with which some of the network's participants realised that it is *the precise* category which allows understanding the development of BBCC family as *kumatoid*.

The stage of family metaphor. From the third person perspective during the network formation stage family metaphor was adopted *as natural*. It came in: (1) with cooperative relationships and participants' emotional state that developed in the working group, (2) with the previously mentioned interest and willingness to take part in the participatory action research and (3) with a conformity of lived experience content and meta-content acquired during the communication with participants' individual professional identity. Metaphor was accepted easily but viewed after more than ten years as a process of deve-

lopment of cooperative relationships that remained *not expressed in words as inexpressible experiences*. Things which in the past in real activities were unexpressed, in words inexpressible experience now research participants can explain and comment due to their extended perspective of action research experience, from the time distance, from the view of their different experience, now these are experiences which can be explained expressing in words. It is a language of culture: it combines both the expressible in words and the inexpressible in words. Action research is open for the language of culture with the chance to base on the inexpressible in words that, after some time, in the perspective of more extensive experience will become expressible in words and will allow describing the development of relationships in an evolutionary process. It is a possibility to reduce lingo centrism that outshines the importance of communication part that is unexpressed in words.

Environmental education, ecological upbringing, holistic approach to education form the basis which was used and activated by the work group that during the stage before the Decade began to establish the network and the basis of action research. It was the basis which reflected network founders' individual and professional identity with its intrinsic values. In more general units between these values there were ecology, integration, spirituality, sustainability, complementary connection of content and meta-content of education and life, complex interconnection of nature and people's co-evolutionary relations. During the years of environmental education prosperity of these complex phenomena in participants' awareness was formed from their experiences and time when environmental education and ecological upbringing were considered as the basis for the maintenance of people's and nature's co-evolutionary relationship. In this perspective people's social and economic activities were viewed as a part of culture that people created by their actions in the world and ecosystem. Environmental education gave a possibility to see such comprehension of sustainability. Therefore, based on the experiences of environmental and human pedagogy, the network participants found their four – dimensional understanding of sustainability as a basis on which the conception of annual network scientific conference *Sustainable Education. Culture. Education* was worked out (www.ise-lv.eu/). Within the visual model of sustainability it was also accepted as self-evident: human and economical dimensions overlap and they were displayed as included in culture and then included in broader ecological dimension.

Looking at the experience of beginning stage of action research from a distance of time gives possibility to see that in cooperative relations it is important to recognise communication participants' frames of references, contextual diversity of live experience. We should speak about people's sensitivity towards inclusion in co-evolutionary processes. In the action and action research this sensitivity is influenced by (1) inexpressible in words and expressed in words lived experience and congruence between both and (2) people's undifferentiated identity with nature un live relations with social and human created environment.

The stage of BBCC family. Metaphor was adopted in a describing of network relationships and development along with approval of consortium name (Fehta, 2005) and the involvement of network in implementing the tasks of the Decade. These metaphors have appeared in the BBCC conference speeches and discussions, as well in the informal talks that are currently associated with the research experience acquired during ten years which has become personally significant for the network participants. Around this metaphor researchers have accumulated their own personally significant and compre-

hensive conceptual content and related frames of references which participants of action research have adopted as the basis for their interest and participation in the action research. More as 5 southern page scientific articles were published in English during the Decade and activities of BBCC network.

After BBCC establishment participants have focused on various topics which were proposed for research in the following order: Holistic Education, Education for Democracy as a Part of ESD, Theories and Practices for ESD, Collaboration in ESD, Research and Implementation for ESD, BBCC Mission – Reorientation of Teacher Education and Research in Education for Sustainable Development, **Reorientation of Teacher Education towards Sustainability through Theory and Practice**, Learning environment: Seeking sustainable solutions (www.ise-lv.eu/).

Discussions about these issues took place in the environment where entered diversity, where experiences of Eastern European countries met with experiences of other European regions and the world. Within cooperation appeared comparative studies. During BBCC members' formal and informal talk's *ideas about possible* continuation of the process always permeate live communication in the network as visible ideas and as possible future intentions. This tendency, which is characteristic to action approach, suggests the idea that within the network relationships we should search for phenomenon of *self-potential* that is inherent to complexity nature. Rescher's (1998) Self-Potentiating Theory views this phenomenon as universal, now this phenomenon is also studied within the theory of network development and the verity that the framework of complexity offers other possibility for awareness of reality which is deeper and wider than the known and its epistemological, ontological and ethical profundity is a perspective to aim for (Rescher, 1998; Jorg, 2011; Wells, 2013). Self-potential theory (Rescher, 1998) was not used in BBCC scientific discussions and reports on the conducted studies. But examining BBCC experience from the third person perspective, we should admit that things which have happened during development of the network allow seeing changes which could be explained referring to Rescher's theory. In the research the impulse of participation moved from uniting participants' experience for the common aim through interaction of various live experiences and individual frames of references, caused synergetic connection and series of effects which in non-linear way are sustained and increased the creation of energy necessary for the common action, enthusiasm and forming of network of self-organizing skills and emergence of new inquiry in the process of participatory action research. The research participants had an important role in this process that gave an interdisciplinary and transdisciplinary perspective to the action research.

Looking at the experience of action research from the third person perspective, we should highlight the initial moment of the network formation, the fact that involvement in the action research was based on each participant's: (1) reasoned interest in involving in the research that we will further view as inquiry to participate in action research and (2) inquiry to work in the field of education research where research participants were already involved as professionals or prospective scientists in their institutions. Participants' determined action realising inquiry to participate in action research and inquiry to work in the field of education research and the results gained in this action influenced participants themselves – during this action they received *practical wisdom*. Wisdom was received through joint action, in the way that humankind knows for a long time – *work transforms the doer*. It is well-known truth in the action theory and action research theory that a participant, who is involved in the research activities, changes and then

implements already the other kind of action in the real world. In the action where interacts a researcher's inquiry we cannot ignore function of self-potentiating. It is one of the complex-generative system's functions. Such kind of systems are dynamic, they develop during time through evolution and are based on their ability to achieve more getting acquainted with the complex.

It is one of many experiences of participatory action research which proves that it is possible to diminish rationalization and reduction of philosophical cognition of education. It is a real chance to resist to the changes expanding in the education that make a value of philosophical framework and development of philosophical wisdom less important in this sphere.

The Beginning of BBCC Family as the *Kumatoid* Development Stage

As it was mentioned above, for many network participants the last two years unexpectedly highlighted a new metaphor relevant to BBCC development process and ongoing activities – *development of kumatoid*. Currently the kumatoid idea and concept have become a focus of scientists' attention in the issues about explanation of evolutionary basis of biological diversity and species development (Schwartz, 2007; Zuev, 2002) and in science philosophy (Rosov, 2011). Rosov developed concept of kumatoid in his Social Relay Theory which explains development of kumatoid in social processes. Zuev's and Rosov's interpretations of kumatoid are complementary to each other and together they advocate complementarities of natures' and human co-evolution.

Idea about the use of *kumatoid* concept was mentioned in conversations during the BBCC conference in Helm (2014). Now this metaphor has become meaningful for some participants, especially, when discussions about development process are viewed in time dimension. This metaphor gave new intensity for discussions searching for the main things which hinder comprehension of sustainability problems in many scientific researches and teachers' education practice. Problems are also caused by the education and science that have stayed too long at acquisition of elements, normative and measurable understanding of the aims even though the reality is more complex than education is familiar with and challenges of science in order not to lose this uncertainty and probability which is characteristic to complex reality. In discussions about metaphors, action research and education there was found an opinion that it is important to learn to see that elements which are included in the nature system do not exist there as sand and water, they are within interaction processes acting as waves where water involves sand in its movement and it is a complex phenomenon which has its own strength, interaction and very different results. Zuev's and Rosov's *kumatoid* concept have a focus on epistemological discourse as surface and ontological time dimension when deep water arises and intermingle with shallow, and not possible to predict results of this intermingle of water and sand.

In previous years concept of *intermingle* was emerged in science as the notion that *humans and nonhumans flow through one another and intermingle is a powerful one, as is the idea that, in the absence of obligatory points of passage, any part may connect with any other* (Knappett, 2005, 83). In kumatoids concept needed connection with *intermingle concept* and *floating concepts*. Discussions about it emerged at the end of Decade and open discussion about changes in terminology. In open frame of references that began as a gradual and complex use of characteristics describing the process. The experience of use of action research allows to identify one more change that is noticed

in BBCC discussions: in recent years it **became visible** that in the discussions *complicated* and *complex* are no longer synonyms or concepts that are not distinguished. One of them excludes the co-evolution idea and, therefore, we may not ask the question about the aim or context of sustainability. Many participants noticed it in their previous publications and their conceptual thinking. The ability to recognise the content of these two different concepts developed imperceptibly in the action research.

In participatory action research we viewed the development of BBCC network as the evolution of a complex system and a process, and we focused attention to the evolution of cooperative relations. This perspective was used in order to find the answers that allow realising reorienting of teacher education towards sustainable development. In *the mission-oriented pedagogy* evolution of cooperative relations is a self-evident requirement, a real condition for pedagogical relations which develop as complex and non-linear. Educators understand it as a non-linear process, they are used to evaluate and receive its results after some time that is characteristic to complex processes. It is true that only after some time pedagogy can see the results of its work. Various formulations of educator's mission also highlight it as a philosopher's, an artist's and a prophet's missions. A teacher's mission is to look at the world and to see more of what is known for society, education and science. Mission-oriented pedagogy science has always, since the emergence of the science, been tended towards a broader understanding of the world.

Currently, in education and science the use of pedagogy concept has accumulated a large variety within which the essence of pedagogy mission is understood narrowly or even almost lost. It is promoted by the exclusion of the interest about upbringing which is inherent to pedagogy and transition to the global use of education concept. Regulatory requirements for education, providing education as a service, evaluating the service quality, administrative reforms that have transformed from local to global have caused the consequences: the understanding of pedagogy science and pedagogy as practical action has changed.

BBCC action research issue about reorientation of teacher education towards sustainable development clearly points to the need to promote diminishing of society's un-sustainability. Openness for the use of new, complex, developing processes characterising categories, in BBCC research perspective new scientific categories entered and were accepted. Within this perspective it is better seen that education is kumatoid and it is included in the frameworks of Anthropocene period. Anthropocene is also a kumatoid that is based on distortion of co-evolutionary relation that deepens un-sustainability in the world.

The use of the concept of *mission oriented pedagogy* now helps to reflect those cases when pedagogy and educators have not lost the highest humane ideals and the function of searching for sustainability which is characteristic to pedagogy. We should admit that in educators' education researchers' live experience we can see clearly that the current, un-sustainability maintaining and reproducing, education and global searches for sustainability competences are the consequences resulting from the reduction of the essence of pedagogy and sacrificing this sustainability searching function for other aims of un-sustainable development.

Some assumptions from BBCC participatory action research, that are valuable for inclusion in the strategically frame of references for the future actions in education and educational research for sustainable development in participatory action research of UNESCO/UNITWIN Chair in DU and BBCC after the Decade.

- (1) Frames of reference of action research that have been designed at the beginning stage of action research even in a time frame before the Decade, it was preserved as a frame till the end of the Decade, thus, its further use is not in danger. The idea of co-evolution and ideas related to it, as well as self-organization were not excluded from the frames of reference, as well as the appearance of new researchers in action research. Thus, the understanding of sustainability has been preserved and developed, where socio-cultural relations are interpreted as part of culture (as created by humans) and are included in a wider ecosystem.
- (2) The question about the anthropocentrism and egocentrism in person–nature co-evolutionary relationships was essential in the whole process of preparation and implementation of action research, as well during the discussions about the un-sustainability of democracy, un-sustainability of global development, un-sustainability in education as found as a new perspective for the understanding of causes of un-sustainability on a system level – Anthropocene. It has been studied for a while what the person initiated with his/her attitude towards the world. The idea of Anthropocene as viewed holistically is not popular, but few processes that are taking place are known as global problems. If Anthropocene is viewed holistically, this allows evaluating the un-sustainability of this time frame, but, as viewed systemically, we can notice the self-poisoning of those processes that develop with a destructive influence on a culture and ecosystem.
- (3) The emergence of the notion of *kumatoid* in science and action research allowed to widen the bases of system theory, as well as to comprehend that complex systems have an evolution according to a *kumatoid* type. It appears, develops and disappears, but, education, Anthropocene time, culture and other features can be viewed as *kumatoids*. If Anthropocene *kumatoid* includes in itself other *kumatoids*, this is essential to comprehend, that the conditions of Anthropocene for the development of other *kumatoids* demonstrate the quality of un-sustainability, the bases of which is the deformation of relationships of a person and nature.
- (4) In action research we have maintained and developed the theme of practical wisdom that was developed to the idea to phronesis of action research and was implemented in participative action research. Those processes have initiated an attention to self-potentiating and the research of the development of complex networks features for reorienting education towards sustainability. To continue work on initiated research and initiating new research on a development of new complex systems and the study of the use of those ideas in education. The ideas are connected with the co-evaluation idea and deeper understanding of interrelatedness among those issues. This can open a new perspective in understanding of development of sustainability and un-sustainability.
- (5) The essence of science and the mission of a teacher is its orientation to sustainability. Current frame of Anthropocene is un-sustainable that narrows and threatens the existence of mission driven pedagogy. The exclusion of mission driven pedagogy fosters poisoning of the society. Within the frames of Anthropocene we need to renew pedagogy and the call for a teacher's to search for sustainability. The persuasion is that the current model needs a critical reevaluation.

References

- Rescher, N. (1998). *Complexity: A philosophical overview*. New Brunswick, New Jersey: Transaction Publishers.
- Jörg, T. (2011). *New thinking in complexity for the social sciences and humanities: A generative, transdisciplinary approach*. London: Springer.
- Knappett, C. (2005). *Thinking through material culture: An interdisciplinary perspective*. USA: University of Pennsylvania Press.
- Wells, J. (2013). *Complexity and sustainability*. New York: Routledge.
- Schwartz, J. (2007). *Focus on biodiversity research*. New York: Nova Science Publishers, Inc.
- Zuev, V. (2002). *The problem of reality in biological taxonomy*. Novosibirsk: Novosibirsk University Publisher.

Correspondence concerning this article should be addressed to Ilga Salīte, UNESCO/UNITWIN chair at Daugavpils University, 1 Parādes street 220, Daugavpils, LV-5401, Latvia. Email: ilga.salite@du.lv