



EDUCATIONAL ENVIRONMENT OF SCHOOLS FOR SUSTAINABLE DEVELOPMENT OF RURAL CULTURAL ENVIRONMENT

Irena Katane¹, Ineta Kristovska²

¹Latvia University of Agriculture, ² University College of Economics and Culture, Latvia

Abstract

Sustainable development of society depends to a great extent on sustainable development of rural communities and their cultural environment. In Latvia, the sustainability of rural cultural environment can be provided by, first of all, maintaining and then further developing educational environment in rural areas. The aim of this article is to justify the concept of community school and compare, analyse and assess the results of two empirical studies within the context of sustainable development of rural schools, rural communities and rural areas in Latvia. The results of this research indicate that, in order to provide for sustainable development of schools themselves, rural communities and areas in general, rural schools expand their target audience, formal and informal education and training offers, expand the range of their functions by taking additional functions, thus becoming lifelong learning environment providers for the whole rural community. As a result, self-complication and innovation-searching processes can be observed in the educational environment of rural schools. The results of this research show changes in and diversity of educational environment of rural schools, and it lets at least partially solve the issue of balanced development in the *urban-rural* dimension in Latvia. Models of the Latvian rural schools' educational environment are categorized into four main groups: 1) traditional educational model of environment; 2) educational environmental model of structural reorganization; 3) multi-functional and multi-structural educational model of environment in the frame of one school; 4) combined educational model of environment.

KEYWORDS: rural school, educational environment of rural schools, rural community, rural cultural environment, sustainable development.

Introduction

The sustainable development of the society to a great extent is related to the rural community and the sustainable development of its cultural environment. The future existence of the Latvian nation and the awareness of the Latvian identity are impossible without the preservation of rural cultural environment and further development. It is especially important at the present moment, when assessing the consequences of the demographic and economic crisis we look at the future of our nation. The sustainability of rural cultural environment can be ensured, first of all, maintaining and further developing educational environment in rural areas. At present, approximately 30% of Latvia population live in rural areas. Despite the fact that it is almost one third of the population, the historically inherited disbalance and disharmony between the opportunity for education in the two dimensions is persistent in Latvia: 1) the capital and regions; 2) cities and rural areas. The problem of different education offered in the dimension *Riga-regions* is being solved on the level of higher education institutions- along with Riga higher education institutions successfully operate regional higher education institutions that try to maintain equilibrium in the educational environment providing their own educational offer. Unfortunately the problem of educational offer in the *urban and rural* dimension is still current.

To ensure the viability of Latvian rural schools in the contemporary conditions of crises, the changes in the rural educational environment take place not only „top down” but also „bottom up”. Schools become self-

organizing, self-assessing and self-developing systems of educational environment, that change with an aim to ensure sustainable development for themselves and the whole rural community, and its cultural environment in future.

The *aim of this article* is to justify the concept of community school and compare, analyse and assess the results of two empirical studies within the context of sustainable development of rural schools, rural communities and rural areas in Latvia.

Methodology of research

Since 2000 the *theoretical* and *empirical research* of the rural educational environment has been performed in the Institute of Education and Home Economics at the Latvia University of Agriculture.

The aim of research: on the base of *Ecology of Education* to work out methodology of research and study educational environment of rural schools under the changeable conditions in Latvia (structural, functional and developmental approaches). *The methods of research* were the following: 1) studying, analyzing and evaluating scientific sources about the research topic (theoretical research); 2) internal expertise at rural schools of general education (basic and secondary education schools) for data collection; 3) Sign Test and Chi-Square Test for data processing (SPSS software).

Three stages of the research can be defined: 1) work on the basis of ecological approach in the research of education, the creation of theoretic basis for the research of the educational environment of rural schools, empirical research on the changeability of the environment of rural schools (2000-2005); 2) the completion of methodology-

cal basis for the research (2005-2008); 3) empirical research on the changeability of the educational environment of rural schools (2008-2012), which was based on the results of the research performed at the previous stages and served as a continuation for the commenced research. The results of research are reflected in several publications of the authors performing the research (Katane, 2005; Katane, 2007; Katane, Laizane, 2011; Katane, Laizāne, 2012).

During the first empirical research (2000 – 2005) of the educational environment of rural schools there was developed a **methodology of assessment**, while an important part of this methodology was a specifically developed system of assessment indicators (altogether 128 indicators), which represented several levels of the educational environment of schools and environmental contexts.

In the second empirical research (2008-2012) the system of indicators for assessment of the educational environment of schools was *modified* (shortened), through analysis and evaluation retaining indicators that were the most essential and conforming to the contemporary conditions for the assessment of the educational environment of schools (altogether 50 indicators).

The basis for the first empirical research (the first stage of the research): 277 rural schools, including 33 rural primary schools which participated in the internal investigation of the educational environment.

The basis for the second empirical research (the third stage of the research): 60 rural schools, including 31 rural primary and secondary schools which participated in the internal investigation of the educational environment. Schools of both empirical research bases represented all regions of Latvia.

During both research stages the changes in the educational environment of schools were investigated during the respective periods (2000-2005; 2008-2012).

Results of research

Schools for the sustainable development of rural community: results of the theoretical research

The sustainable development of education is related to the change of the scientific paradigm, the passage from modernism to the period of post-modernism. The development of education is aimed at sustainable development of the society, i.e. coordinated, systematically planned process, based on self-research and self-improvement. M. Fouilhoux (Fouilhoux, 2004, 44) writes that „...education has the main role facilitating objective and sustainable development. It is education that creates basis for the struggle against poverty, it opens the door to information technologies and science, it is a way how other cultures can be discovered.” As a token of development changes must be perceived as natural qualitative transformation of things, phenomena or processes under the influence of certain conditions. The synergic and ecological paradigm evolved in the research of educational environment. B.K. Lawrence (Lawrence, 1998) holds a view that sustainability is an ability to survive and prosper, which is very essential

since no organism, no live system, community or school is able to exist without it. We support the finding of M. Fullan (Fullan, 1999) *that the basis for successful transformation of education is not only the ability to implement the latest approaches, but rather an ability to overcome rises and falls created by planned and unplanned changes, at the same time growing themselves and developing.*” The concept of community school became a guarantee for the viability and sustainability of rural schools.

Already in 1976 J.D. Minzey (Minzey, 1976, 77), one of the first authors that gave theoretic ground for the concept of community school, stressed the idea that „...there must be close cooperation between the community and the school. As a result of the bond between the school and the community grows friendship that helps to achieve the aims of education more effectively”. H. Morris (Morris, 1984, 54) has come to a conclusion that „...the main task of education is to transform the society into the communities of culture. Education, which is managed corporately, has the principle of unity. With the help of education modern communities can exist and develop further both in the west and in the east and be integrated in different social processes on both a regional, state and even global scale.” According to B.A. Miller (Miller, 1993), the more actively the school functions as the centre of the community and serves as a provider of different services, the more effective means it becomes for the maintenance of the community. Other scientists (from Katane, Laizāne, 2012) have also expressed their opinion on the essential role of rural schools in the rural community both from the perspective of education and economics. Only a school that provides opportunities for lifelong education for the inhabitants of the community and functions as the educational and cultural centre of the community can be defined as a community school.

From the economic perspective a rural school is the main employer in rural areas, where both teaching and technical staff are employed. H. Harmon, K. Schafft (Harmon, Schafft, 2009) hold a view that well-functioning schools increase the social integration of the community within the environment, securing the identity of local people and the importance of realizing a mutual task. Schools operate as a centre for different community events with an aim to involve people in various civic and community matters. They also provide premises that facilitate the getting together of community inhabitants in order to participate in physical activities, stage theatre plays, organize the meetings of the board of the school. Especially rural schools serve as a symbol of community's autonomy, viability and identity. S. Bingler, L. Quinn, K. Sullivan (Bingler, Quinn, Sullivan, 2003) hold a view that schools as the centres of community reach their status in two ways, firstly, integrating even more in the community, secondly, widening the educational environment, in order to use all the resources of the community more effectively. Also S.A. Agbo (Agbo, 2007) maintains that effective relationships between the school and the community help people to pool the local resources, which is necessary and important for the improvement of school's environment. Moreover, a paramount importance in the improvement

of the bond with the school is attributed to the director of the educational institution. K. Budge (Budge, 2006) stresses that the directors of rural schools must have a whole vision about the creation of mutually beneficial process of cooperation between the school and the community.

Thus it can be concluded that already beginning with the 1970-ies till nowadays an important place in the science of western countries has been given to the concept of a rural community school, and the theoretical basis and future development of it can be found in the publications of several western scientists, who point out the importance of interdisciplinary approach in the research of the educational environment.

School as an open environment for the whole rural community education in Latvia: results of the empirical research

During both empirical research periods there were two internal expertises (2005:2000 and 2012:2008) in each monitoring school (in the first empirical research 33 rural schools; in the second empirical research: 31 rural schools) carried out. Every member of the rural school expert groups (in the group: 3 experts at each school) received worksheets, where they had to evaluate each indicator of the educational environment of rural schools (128 indicators in the first empirical research and 50 indicators in the second empirical research): *whether it is characteristic for the particular rural school or not at the time of the each internal expertise.* In the beginning this

evaluation was performed by every expert individually. At the final stage of each expertise all experts gathered together and collectively evaluated the results of the individually performed evaluation of the educational environment of the rural school. As a result of experts' discussions there were filled in the mutual worksheets that were sent to the author of the research to be summarized.

Authors of research stated the hypotheses for data processing using Sign Test (SPSS software).

H₀: there exists correspondence between the experts' evaluation of a particular indication of the two selections (2004:2000 and 2012:2008).

H₁: there exist differences between the experts' evaluation of a particular indication (parameter) of the educational environment of rural schools of the two selections (2004:2000 and 2012:2008).

In order to evaluate the changeability of the educational environment of rural schools during both the first empirical research (2000-2005), and the second empirical research (2008-2012), on the basis of all obtained results, all indicators of the rural educational environment of schools were divided into two large groups: 1) indicators (qualities) that indicate the constancy or unchangeability of the educational environment of rural schools ($p\text{-value} > \alpha = 0,05$; see Group 1 in Table 1); 2) indicators (qualities) that indicate the changeability of the educational environment of rural schools ($p\text{-value} < \alpha = 0,05$; see Group 2 in Table 1).

Table 1. Distribution of qualities according to the qualities group (2000 – 2005; 2008 – 2012)

Groups of qualities	2000 – 2005 (N = 128 indicators)			2008 – 2012 (N = 50 indicators)		
	The Observed qualities N	Indicative allocation N	Difference	The Observed qualities N	Indicative allocation N	Difference
Group 1. Qualities (Indicators) that indicate the constancy or unchangeability of the educational environment of rural schools	67	64	3,0	24	25	1,0
Group 2. Qualities (Indicators) that indicate the changeability of the educational environment of rural schools	61	64	-3,0	26	25	-1,0

The data were processed checking the correspondence of qualities (indicators) selections applying the test for the determination of Chi-Square (χ^2) criterion.

The question of the research was as follows: *Is the number of qualities (indicators) in the first group equal to the number of qualities (indicators) in the second group?* There were two hypotheses for data processing using Chi – Square Test.

H₀: $n_i = \hat{n}_i$

H₁: $n_i \neq \hat{n}_i$.

We obtained the following results (see Table 1 and Table 2).

In the first empirical research it could be concluded that with the materiality level $\alpha = 0,05$ and the degree of freedom $df = 1$ the value of the Chi – Square criterion is: $\chi^2 = 0,281 < \chi^2_{0,05;1} = 3,84$; but $p = 0,586 > \alpha = 0,05$. However, the results of the second empirical research enabled us to conclude that with materiality level $\alpha = 0,05$ and the degree of freedom $df = 1$ the value of the Chi – Square criterion is: $\chi^2 = 0,08 < \chi^2_{0,05;1} = 3,84$; but $p = 0,777 > \alpha = 0,05$.

Table 2. Obtained results (2000 -2005; 2008 – 2012)

N	Indicators	The Obtained Values	
		2000 - 2005	2008 - 2012
1.	Chi – Square (χ^2)	0,281	0,080
2.	df (n-1)	1	1
3.	Asymp.Sig.	0,586	0,777

This meant that the number of qualities which indicated the constanteness of rural schools' educational environment was statistically equal to the number of those qualities which indicated the changeability of rural schools' educational environment. These qualities were evenly distributed. This means that in Latvian rural schools' educational environment the process of bifurcation or splitting takes place: 1) the specifics of educational environment in rural schools is maintained, its traditional values; 2) the process of searching for innovations and changes takes place.

The results of the research enable to pinpoint several tendencies in the development of the educational environment of rural schools, which were equally conspicuous in the environment of schools: research basis for the first empirical research, as well as in the environment of the schools: research basis for the second empirical research. Here are the most important of them.

- In order to ensure their own and rural community's sustainability, the rural schools broaden their target audience, including in its environment also pre-school children and adults, thus ensuring an opportunity for lifelong education in rural areas.
- Rural schools expand the range of their offer of non-formal education, including the offer of professional development, interest-related education, offer of professional profile programmes etc., using the technical and material resources of the school.
- Rural schools expand the range of their functions, assuming additional functions, including functions that are not typical to a school, for example, the elimination of social negations and their prevention, as well as the functions of social rehabilitation in the rural community, taking care for children in the day centres of these schools.
- With the growing of educational offer, increase of the target audience and the functions, the process of self-complicating in rural schools' educational environment has been observed. Different types of subdivisions of the environment are created (educational centres for adults, associations, school development funds, bodies of pre-school education within the framework of the school, centres for the rural tourism etc.)
- Rural schools act not only as educational but also the cultural centres in rural communities.
- Schools become the informative centres of the whole rural community, developing and offering to the whole community the resources of their library and computer classes.

The results of the second empirical research testify that there has been a great diversity of the educational environment of rural schools in Latvia. There are the

following environmental models groups of the Latvian rural schools.

1. Traditional educational environmental models offer the most widespread educational environmental models such as a basic or secondary rural school (functioning of schools responds to the Educational Law of Latvian Republic, the school's functions correspond to pupils' audience accordingly to basic or secondary school's educational programs). The school's operation is without any changes because, firstly, *the school's administration does not see any danger for school's existence and sustainability in future*, there is enough number of pupils and set of forms that have not substantially changed in the last years, that is why the rural school does not want to change anything in its every day work because the basic audience is saved – schoolchildren and youngsters, secondly, *the school's administration and all personnel perceive danger of school's existence and its sustainability in future* because the number of pupils and forms have decreased or it has been always a situation that the amount of pupils and forms were very low. Therefore the school as an environmental system is not opened to changes from inside („from the bottom”), but waits for favourable reforms from outside („from the top”).

2. Educational environmental models of structural reorganization include multi-structural educational environment. It is related to comprehensive schools that as a result of the optimization in the time of the reform in 2009/2010 school year have become the component of the multi-structural educational environment or substructure: 1) have become a multi-structural educational environmental center that has got one or more branch offices; 2) have lost their independence and were joined to some rural secondary school or basic school in such way becoming the branch office of this particular school.

3. Multi-functional and multi-structural educational environmental models within the framework of one school encompass rural schools that offer multi-divisional educational environment for all rural community because the rural schools are social-cultural environments which offer the formal and non-formal education in the aspect of life-long and wide-long learning. By broadening target audience and functions in the aspect of a person's age period 'down' – preschool and school age children and 'up' – adult formal and non-formal education, rural schools as an educational environment system form new substructures.

4. Combined (mixed) educational environmental models include the features of a multi-structural and multi-functional educational environmental model. The rural school as a multi-structural educational center or as

a branch office broadens its functions and increases its target audience by offering a wide range of formal and non-formal educational programmes.

Summary and conclusions

Already beginning with the 1970-ies till nowadays, an important place in the science of western countries has been given to the concept of a rural community school, and the theoretical basis and future development of it can be found in the publications of several western scientists, who point out the importance of interdisciplinary approach in the research of the educational environment.

In the 21st century in order to ensure sustainable development for itself and the whole community the rural schools' educational environment is continuously changing: many Latvian rural schools extend their educational offer and increase their target audience, widening the scope of the target audience's age and offered educational programmes, assuming additional functions and self-complicating the structure of its educational environment.

The results of both empiric research phases testify that the process of bifurcation or splitting takes place: 1) the specifics of educational environment in rural schools is maintained, its traditional values; 2) the process of searching for innovations and changes in rural schools' educational environment takes place. This reveals the uninterrupted changeability of rural schools' educational environment.

Having assessed the threats of external environment and their own inner potential, rural schools become the educational environment for the whole community thus finding efficient and productive means for the sustainability provision, resources and ways (means) that create a great diversity of models for a school as community's educational environment. This changeability and diversity of rural schools provide opportunities for the solution of the issue of balanced development in the *urban-rural* dimension in Latvia, which facilitates the sustainable development of rural cultural environment in Latvia in general.

On the basis of the results obtained during the research, all models of rural schools' educational environment can be divided into four groups: 1) traditional educational environmental model; 2) educational environmental models of structural reorganization; 3) multi-functional and multi-structural educational environmental model; 4) combined (mixed) educational environmental model.

References

- Agbo, S.A. (2007). Addressing School-Community Relations in a Cross-Cultural Context: A Collaborative Action to Bridge the Gap Between First Nations and the School. *Journal of Research in Rural Education*, 22(8), 1-14.
- Bingler, S., Quinn, L. and Sullivan K. (2003) *Schools as Centers of Community: A Citizen's Guide for Planning and Design*. Washington. [Accessed on 2012.09.20] http://www.edfacilities.org/pubs/scc_publication.pdf
- Budge, K. (2006). Rural leaders, rural places: Problem, privilege, and possibility. *Journal of Research in Rural Education*, 21(13), 1-10.

- Fouilhoux, M. (2004). The Role of NGOS in Advancing Sustainable Development. In *Education for Sustainable future: Commitments and Partnerships*, pp. 43-46. Johannesburg, Spain: UNESCO.
- Fulans, M.G. (1999). *Pārmaiņu spēki: izglītības reformu virzieni* [Change Forces]. Rīga: Zvaigzne ABC. (in Latvian)
- Harmon, H.L. and Schafft, K. (2009) Rural School leadership for collaborative community development. *The Rural Educator*, 30 (3), 4-9.
- Katane, I. (2005). *Lauku skolas kā izglītības vides izvērtēšanas modelis* [The Evaluation Model of the Rural School as Educational Environment]. Prom. d. Daugavpils: Daugavpils Universitāte. (in Latvian)
- Katane, I. (2007). *No ekoloģiskās paradigmas līdz vides modelim izglītības pētniecībā* [From Ecological Paradigm to Environmental Model in Research of Education]. Sērija „Izglītības ekoloģija”. Jelgava: LLU. (in Latvian)
- Katane, I. and Laizāne, A. (2012). The Evaluation of Diversity of Educational Environmental Models of Latvian Rural Schools. In Proceedings of the International Scientific Conference *Society, Integration, Education* (May 25 -26, 2012), pp. 76-85. Rēzekne: RA.
- Katane, I. and Laizane, A. (2011). The Rural School as a Promoter of Community Education for Sustainability of Social-Cultural Environment in Latvian Countryside. *Prospects of Science*, 10 (25), 237 – 239.
- Lawrence, B.K. (1998). *The Importance of Sustainability for Rural Schools*. USA, New York: Buffalo.
- Minzey, J. D. (1976). Community education. In S.E. Goodman (ed.), *Handbook on contemporary education*, pp. 75-78. New York: R.R. Bowker Company.
- Morris, H. (1984). *The Henry Morris Collection*. Cambridge: Cambridge University Press.
- Miller, B.A. (1993). Rural Distress and Survival: The School and the Importance of "Community". *Journal of Research in Rural Education*, 9 (2), 84-103.

ОБРАЗОВАТЕЛЬНАЯ СРЕДА СЕЛЬСКИХ ШКОЛ ДЛЯ ДОЛГОСРОЧНОГО РАЗВИТИЯ КУЛЬТУРНОЙ СРЕДЫ СЕЛА

Резюме

Долгосрочное развитие общества в значительной мере связано с сельским сообществом и долгосрочным развитием его культурной среды. Долговременность культурной среды латвийского села можно обеспечить в первую очередь за счёт сохранения и дальнейшего развития образовательной среды на селе. Сегодня около 30% населения Латвии живёт на селе. Несмотря на то, что это почти треть всего населения, в Латвии по-прежнему сохраняется исторически унаследованная несбалансированность и дисгармония между возможностями образования в двух измерениях:

1) столица и регионы; 2) город и село. Проблема различий предлагаемого образования в измерении *Рига – регионы* решается на уровне высших школ: наряду с высшими школами Риги успешно работают региональные высшие школы, которые своим предложением образования стараются удержать равновесие в образовательной среде. К сожалению, всё более актуальной становится проблема предложения образования в измерении *город – село*. Для того, чтобы сельские школы Латвии могли обеспечить свою жизнеспособность в условиях современных кризисов, происходят перемены в образовательной среде сельских школ не только „сверху”, но также и снизу”. Школы становятся самоорганизующимися, самооценивающимися и саморазвивающимися системами образовательной среды,

которые меняются с целью обеспечить в перспективе долгосрочное развитие – как своё, так и всего местного сельского сообщества и его культурной среды.

Целью данной статьи является обоснование концепции общинной школы и проведение сравнения, анализа и оценки результатов двух эмпирических исследований в контексте долгосрочного развития сельских школ, сельских общин и латвийского села.

С 2000 года в Латвии проводятся теоретические и эмпирические исследования образовательной среды сельских школ. Можно выделить три этапа исследований: 1) теоретические и эмпирические исследования (2000 – 2005 гг.); 2) совершенствование методологической базы исследований (2005 – 2008 гг.); 3) теоретические и эмпирические исследования (2008 – 2012 гг.).

Уже начиная с 70-х годов 20-го столетия и вплоть до сегодняшнего дня значительное место в науке западных стран занимает концепция общинной сельской школы, теоретическое обоснование и дальнейшее развитие которой можно найти в ряде публикаций западных учёных, где подчёркивается значение междисциплинарного подхода к исследованию образовательной среды.

В 21 веке образовательная среда сельских школ Латвии непрерывно меняется с тем, чтобы обеспечить долгосрочное развитие как своё собственное, так и всего сельского сообщества: многие сельские школы Латвии увеличивают предложение образования и свою целевую аудиторию, расширяя её возраст и спектр образовательных программ, беря на себя дополнительные функции и усложняя структуру своей образовательной среды.

Результаты обоих эмпирических исследований свидетельствуют о том, что в образовательной среде сельских школ происходит процесс бифуркации, или разветвления: 1) происходит сохранение специфики образовательной среды сельских школ; 2) происходит процесс инновационных поисков и перемен в образовательной среде сельских школ. Это, в свою очередь, свидетельствует о непрерывных изменениях образовательной среды сельских школ.

Оценивая угрозы внешней среды, а также свой внутренний потенциал развития, сельские школы становятся образовательной средой для всего сообщества, находя, таким образом, эффективные и результативные средства, ресурсы и пути (виды) обеспечения своего долгосрочного развития, что приводит на латвийском селе к большому многообразию школ как моделей образовательной среды сообщества. Такая изменчивость и многообразие образовательной среды сельских школ позволяет решать проблемы сбалансированного развития образовательной среды Латвии в измерении *город – село*, что, в свою очередь, способствует долгосрочному развитию культурной среды села и латвийского села в целом.

Основываясь на результатах исследований, все модели образовательной среды сельских школ можно подразделить на 4 основных группы: 1) традиционная модель образовательной среды сельских школ; 2) модель структурной реорганизации сельских школ; 3) модель мультифункциональной и мультиструктурной сельской школы; 4) комбинированная модель образовательной среды сельских школ.

Irena Katane. Degree: Doctor of Pedagogy. Workplace: Institute of Education and Home Economics at Latvia University of Agriculture. Position: assoc. professor. Research interests: *Ecology of Education*, including the sustainable development of rural educational and cultural environment, distance education, and *Concurrentology* as interdisciplinary trends of research. Author of: 4 monographs; about 100 scientific articles; several study books. Elected expert at the Latvian Council of Science. Participant of various projects and international scientific conferences and member of organizing and scientific committees. Address: J. Čakstes bulv.5, Jelgava, LV-3002, Latvia. Phone: +371 29110582.

Ineta Kristovska. Degree: Doctor of Philology, Doctor of Economics. Workplace (-s): University College of Economics and Culture. Position: Vice-rector. Research interests: adult education, distance learning, human resource management. Publications: more than 20 publications, author of 3 distance learning materials, participated in more than 15 international projects, a lot of worlds, international and republican scientific and practical conferences and the methodological-training camps. Address: Lomonosova Str. 1 build.1, LV-1019 Riga, Latvia. Phone: +371 28451054.