



## Teacher Education for the Sustainability of Rural Cultural Environment in Latvia Skolotāju izglītība lauku kultūrvides ilgtspējībai Latvijā

Irēna Katane, Svetlana Kruglija

Institute of Education and Home Economics, LLU

LLU Izglītības un mājsaimniecības institūts

e-mail: Irena.Katane@inbox.lv

**Abstract.** In order to ensure a balanced and sustainable development of the varied environment of Latvian schools, the prospective teachers should be ready to integrate into the varied cultural environment of Latvian schools. The education of prospective teachers should be based on ecological approach, which ensures the ecological perspective and an opportunity for students to develop their ecological competence. Ecological competence is one of the most important components for the teachers' readiness for their professional activities. In the study year 2008/2009 there was a pilot research performed on a separate case (case study) within a framework of a particular programme "Home Environment and Information Technologies in Education" with the participation of the 4th (final) study-year students of pedagogy studying at the Institute of Education and Home Economics (IMI) at the Latvia University of Agriculture (LLU). The aim of the research was to find out the choice of students as prospective teachers regarding their future workplace in the cultural environment of a rural/urban school, as well as to identify the factors influencing this choice. A questionnaire was developed where the respondents had to answer questions related to the choice of the environment for their future professional activities on the basis of their previously obtained experience. The research showed that LLU IMI's prospective teachers, having acquainted themselves with the cultural environment of urban and rural schools, are ready to work in the cultural environment of any school where a new teacher is welcomed, taking into consideration the specificity of the particular cultural environment.

**Key words:** ecological approach, cultural environment, rural school, sustainable development of Latvian schools, teacher education.

### Introduction

Nowadays the educational environment of schools is characterized by its heterogeneous nature. One of the priority activities carried out by representatives of the Institute of Education and Home Economics of the Latvia University of Agriculture (LLU IMI) is facilitation of sustainable development of rural schools, providing the rural areas with educated specialists in the field of education. In order that a balanced and sustainable development of the varied environment of Latvian schools is ensured, the prospective teachers, when starting their independent professional activities, should be ready to integrate into the environment of any Latvian school. In our case, the environment is considered to be all the conditions and factors which affect the organism, or even a whole organism system throughout its life or existence. The modern concept

of environment encompasses all surrounding reality (Capra, 1996).

Nowadays, under the conditions of crisis, when the problem of the sustainability of rural educational environment has become particularly topical in Latvia, it is important to perform research in the field of professional education of teachers, taking into consideration the future perspective in the educational content (Katane, Kruglija, 2009; Roga, 2008; Salīte, 2002).

Lately it has been possible to observe a decrease in the number of teachers in Latvia, including the number of new teachers, which exposes to danger the sustainability of schools (particularly the sustainability of rural schools). Our observation proves that until now sufficient attention has not been paid to the readiness of the new teachers to integrate into the educational environment of any

school, where a new specialist is welcomed. One of the problems is the provision of rural schools with new specialists: 1) not all young people are ready to live and work in the countryside, integrating into the educational and cultural environment of a rural community and a rural school; 2) the specificity of small rural schools does not allow to provide the new specialists with a full workload (21 classes a week) in their specialty. According to the authors' point of view, the sustainable development of rural schools mostly depends on the readiness of prospective teachers to: 1) work at rural schools, 2) live and work in the rural area of any region of Latvia, 3) become active members of the school staff by participating in the strategic planning, elaboration of the conceptions and programmes for the sustainable development of schools and local society (community), forming their own civic viewpoint and participating in social and cultural activities (Latvijas Statistika ... , 2010). It is very important that a teacher, working at a rural school, is creative, selfless and ready to take upon him/herself additional duties, because the rural schools in Latvia are transforming into multifunctional centres now. The new teachers should be able to show initiative, to take upon themselves the risk of changing something in their lives and to adapt to changes, improving their professional skills on an ongoing basis. They should feel the call and be aware of their mission to facilitate the sustainable development of rural areas.

Students should learn to think in conformity with their new, social role to be acquired during the pedagogical practice – a teacher; they should clearly understand educator's tasks and functions, the range of which has significantly broadened nowadays within the context of sustainable development. The main aims of the students as the prospective teachers' pedagogical practice are: 1) development of systemic ecological thinking, 2) successful integration into the educational environment of a comprehensive school, and 3) formation and development of the competences necessary for the teacher's professional activities. The process of formation and development of competences takes place in the educational environment of a school as an interaction system.

**Ecological approach in teacher education** facilitates formation of a friendly attitude towards a school as an educational environment, including pupils and their parents, teachers, various other specialists, and people employed at school. This friendly attitude, in its turn, promotes mutual understanding, respect and co-operation, including joint actions, the basis of which is the prospective

teacher's psychological readiness and readiness for professional activities. During the pedagogical practice, students should develop reflection skills at the level of meta-cognition in order they could adequately view, develop and evaluate themselves as an integral part of the educational environment of a school, the subject of an interaction system.

In order to facilitate the achievement of these aims, we have a mind to point that it is important to respect the **basic principles of environmental education** (cited in: Disinger, 1993; Palmer, 1998) in **teacher education** (Katane, Krugļija, 2009).

- Education about environment. The students should acquire knowledge about the diverse cultural environment of the schools of Latvia and, at the same time, to be aware that the educational environment of Latvia is an integral part of global multicultural educational environment, but each school in Latvia (both city and rural schools).
- Education in environment. There should be offered opportunities for professional development of prospective teachers in the diverse school environment, acquainting them with peculiarities of the cultural environment of city and rural schools within the context of cultural and historical regions of Latvia (Kurzeme, Latgale, Vidzeme, and Zemgale). This would enable obtaining diverse pedagogical experience already during the study period.
- Education for environment. In relation to the students as prospective teachers there should be facilitated: the formation of an insight into the sustainable development of educational environment and its preconditions, aims and objectives; the development of friendly attitude towards the school environment; the balance of ego-centrism and eco-centrism in the prospective teachers' thinking and pedagogical activities; readiness to integrate into the school environment, where the new specialist is expected, irrespective of the fact, whether the school is situated in Kurzeme, Latgale, Vidzeme or Zemgale, in a city or a rural area, thus ensuring the qualitative performance and sustainable development of the school.

The result of an ecological approach in teacher education is the formed ecological competence of each student. Ecological competence is an interdisciplinary concept and is studied in different fields: ecological competence in biology and environmental science (Weller, Thomashow et al., Pierson, 1992); ecological competence in economics (Dobers, Halme, 2009);

ecological competence in engineering (Beder, 1994); ecological competence in social sciences (DeBerry, Scarr, Weinberg, 1996); ecological competence in pedagogy (Katane, Kruglĳija, 2009; Roga, 2008; Дзятковская, Захлебный, 2008, 2009).

**Ecological competence** in pedagogy provides **teacher's readiness to the professional activity** and **successful integration into varied cultural environments of schools**, considering their specificity.

Therefore the necessity for the integration of environmental education and career education becomes more and more topical for the education of prospective teachers. The psychological and social readiness of prospective teachers depends on their ecological competence and values orientation, which influences the attitude towards rural areas. In the teacher education, including organization of pedagogical practice at Latvian schools, it is important to apply ecological approach, which, during the practice, provides students with an opportunity to obtain knowledge, as well as pedagogical experience in the varied educational and cultural environment of schools, including rural schools. It is important to substantiate scientifically and to show the ecological perspective in teacher education, which has already become an important precondition for the sustainable development of rural educational and cultural environment. Ecological approach should become the imperative in the education of new educators for the ensuring of sustainable development of rural areas.

The aim of the research was to find out the choice of students as prospective teachers regarding their future workplace in the cultural environment of a rural or an urban school, as well as to identify the factors influencing this choice.

The hypothesis of the research: the prospective teachers, studying at LLU IMI, are ready to work in the cultural environment of any school, where a new teacher is welcomed if they have acquainted with the cultural environment of urban and rural schools.

## Materials and Methods

The object of the research: the prospective teacher's readiness for their professional activity in the cultural environment of various schools. The research type: separate cases study.

Methods of data collection: survey, reflection on students' pedagogical experience.

Methods of data mathematical processing: Friedman test, Lambda test, Goodman and Kruskal tau test, and Cramer's V test.

The base of the research: the 4th (final) study-year students as prospective teachers (in total: 15 respondents) at the LLU IMI.

## Results

In the study year 2008/2009, a pilot research on a separate case (case study) was performed within a framework of a particular programme "Home Environment and Information Technologies in Education" at LLU IMI. The programme is unique due to the fact that during the study period students acquire two qualifications – a teacher of household/home economics and a teacher of information technologies. The research allowed diagnosing the readiness of prospective teachers (the 4th year students of pedagogy studying at the LLU) to integrate into the varied environment of Latvian schools.

The authors of the research were interested in the following research problems: What is the specific weight of choices of rural schools being preferred by prospective teachers as their future workplaces? Is there a correlation between: 1) the cultural environment of a school, chosen as a future workplace, and the place of residence in childhood and youth; 2) the cultural environment of a school, chosen as a future workplace, and the cultural environment of a school, where the student has studied in the childhood and youth; 3) the cultural environment of a school, chosen as a future workplace, and the cultural environment of a school/schools, where the student has had the pedagogical practice during the study period?

There was a questionnaire developed for the purposes of survey, where the respondents had to answer questions related to the choice of the environment for their future professional activities on the basis of their previously obtained experience, while living, studying and working in the rural and/or urban cultural environment. It should be added that during the research, the prospective teachers had already obtained their first experience of professional activities during their pedagogical practice (practice of observation, assisting and teaching).

The results of the research performed by the authors shows that 31% of prospective teachers are ready to start their pedagogical activities at rural schools, explaining that with the positive pedagogical and psychological environment at small rural schools, as well as the individual approach to the education of pupils, which is difficult to implement in the forms of the large number of pupils at urban schools. It is our point of view that the important fact is that

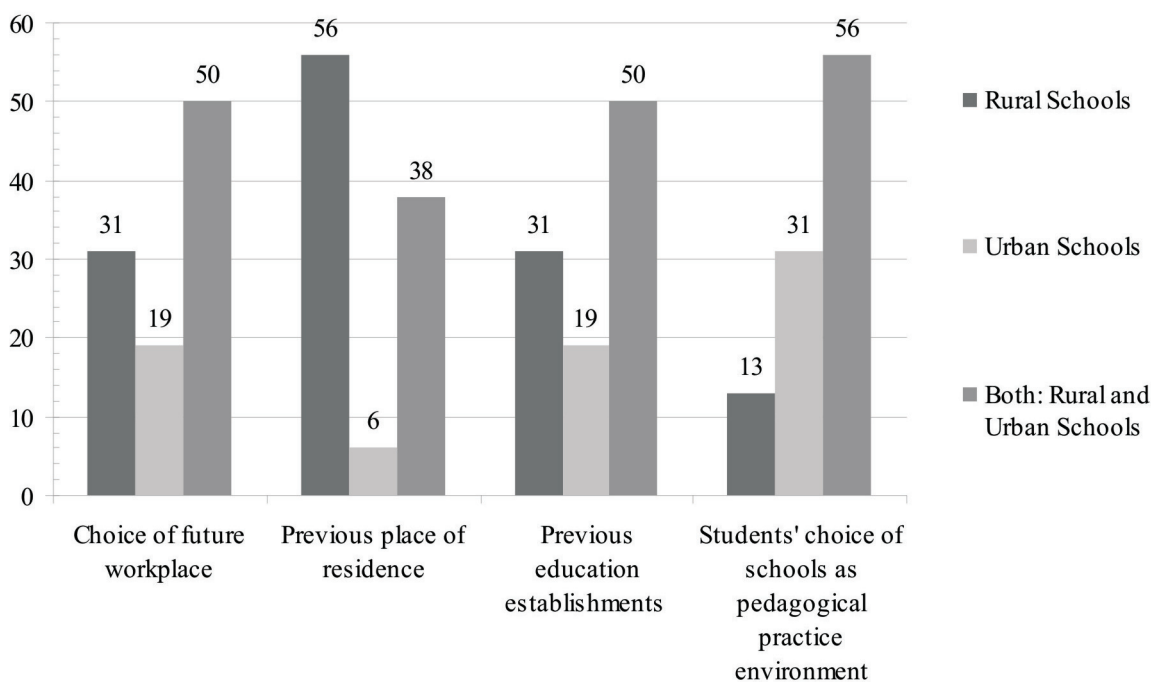


Fig. 1. The prospective teachers' choice of their future workplace and the factors influencing it.

19% of respondents were ready to be very flexible regarding their choice, because they answered that they could similarly integrate into the cultural environment of rural and urban schools. It should be admitted that 50% of respondents from the students of pedagogy at LLU would like to work only at urban schools (Fig. 1):

- 56% of respondents were born and lived in the countryside;
- 31% of respondents had studied only at rural schools;
- at the same time only 13% of respondents chose rural schools as the place for their practice.

But 31% of prospective teachers chose only urban schools as the place for their practice.

A conclusion can be made that the 4th year students of pedagogy at LLU have obtained different experience as prospective teachers. It is the authors' point of view that it is the obtained experience, including knowledge about environment, skills of adaptation to and integration into the environment, and the corresponding attitude towards the rural and/or urban cultural environment, which allow comparing and performing a correct evaluation of the advantages and disadvantages of the specificity of the particular environment and facilitate the development of the prospective teachers' ecological competence. The fact that students of LLU IMI have different experience is proved also by the results obtained during our research (Fig. 1):

- 38% of all respondents in their childhood and youth have lived in the countryside and in a city;
- 50% of respondents, before they entered the higher educational establishment, had studied at both rural and urban schools;
- during their study period, 56% of students had practice at both rural and urban schools.

As it was mentioned above, important aspects for professional development of the prospective teachers are: the insight into the school environment obtained within the lifetime, as well as the insight into the rural and/or urban cultural environment, which is closely related to the students' life and work experience obtained in a particular environment. When answering, whether the students have sufficient knowledge on the specificity of rural and urban cultural environment to perform the choice, based on competences and experience, 38% of respondents recognized their knowledge to be good, 50% of respondents pointed out that they possess more sufficient than insufficient knowledge, but 12% of respondents admitted that their knowledge is insufficient (Fig. 2).

We were also interested in the students' self-assessment of their knowledge on the specificity of rural and urban cultural environment (Fig. 2). Unfortunately, only 12% of the respondents confirmed that their knowledge is good. Majority of respondents – 56% – had doubt and were not so sure, providing the answer that their knowledge is

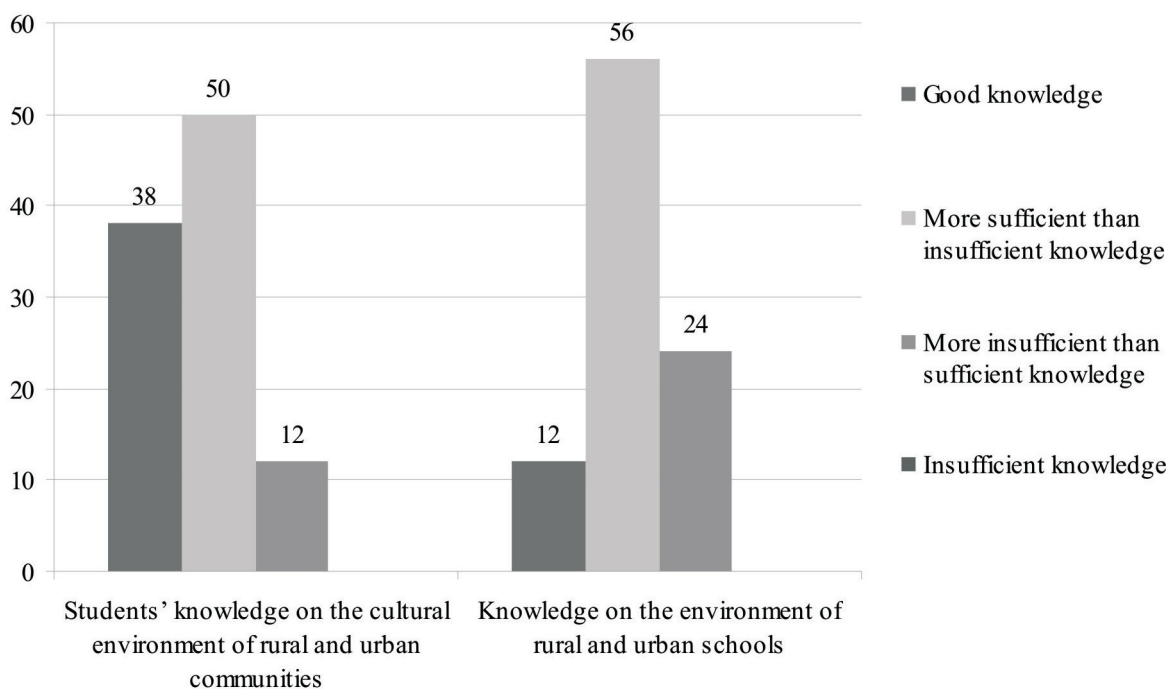


Fig. 2. The students' self-estimation of their knowledge on urban/rural cultural environment's specificity.

rather sufficient (more sufficient than insufficient). Unfortunately, we found out that 24% of students considered their knowledge to be insufficient to make the informed choice regarding their future workplace.

After the primary processing of the data, obtained during the research, secondary processing of data was performed to acquire the concluding statistics.

The research problem was as follows: is there a correlation between the indices of the specific weight indications of the cultural environment of students' chosen future workplace and: 1) those of the cultural environment of the previous place of residence, 2) those of the cultural environment of the previous educational establishment (a school), and 3) those of the cultural environment of the schools of students' pedagogical practice?

For the processing of data, the Friedman test was applied to compare the metric scale (indices of the specific weight indications). The obtained results (Table 1) prove that there is a correlation between the indices of the specific weight indications of the cultural environment of students' chosen future workplace and: 1) those of the cultural environment of the previous place of residence, 2) those of the cultural environment of the previous educational establishment (a school), and 3) those of the cultural environment of the schools of students' pedagogical practice.

The data were processed also by means of other methods. It was necessary to find out whether there is a correlation between the selection of indications of the students' preferable cultural environment of future workplace and: 1) that of the cultural environment of the previous place of residence, 2) that of the cultural environment of the previous school, and 3) that of the cultural environment of the schools chosen for pedagogical practice during the study period.

In order to compare the nominal scales of two related selections of indicators, the following nonparametric methods were applied: Lambda test, Goodman and Kruskal tau test, and Cramer's V test.

The obtained results (Table 2) prove that there is no direct correlation between the selection of indications of the students' preferable cultural environment of future workplace and: 1) that of the cultural environment of the previous place of residence, 2) that of the cultural environment of the previous school, 3) that of the cultural environment of the schools chosen for pedagogical practice during the study period.

There emerges the question, why there are contradictions between the results, obtained by means of different data processing methods. The explanation is as follows.

The results of Table 1 prove only that the indices of the specific weight of students from



Table 1

**Results of the Friedman test**

Selections of indications to be compared	Obtained results
Indices of the specific weight indications of the cultural environment of previous place of residence – Indices of the specific weight indications of the cultural environment of chosen future workplace	p-value=0.564> $\alpha$ =0.05
Indices of the specific weight indications of the cultural environment of previous educational establishments – Indices of the specific weight indications of the cultural environment of chosen future workplace	p-value=1.000> $\alpha$ =0.05
Indices of the specific weight indications of the cultural environment of the schools of pedagogical practice – Indices of the specific weight indications of the cultural environment of chosen future workplace	p-value=0.564> $\alpha$ =0.05

Table 2

**Results of the Lambda test, Goodman and Kruskal tau test, and Cramer's V test**

Selections of indications to be compared	Data processing methods by SPSS	Obtained results
Cultural environment of previous place of residence – Preferable cultural environment of future workplace	Lambda	p-value=0.472> $\alpha$ =0.05
	Goodman and Kruskal tau	p-value=0.173> $\alpha$ =0.05
	Cramer's V	p-value=0.173> $\alpha$ =0.05
Cultural environment of previous educational establishment – Preferable cultural environment of future workplace	Lambda	p-value=0.704> $\alpha$ =0.05
	Goodman and Kruskal tau	p-value=0.445> $\alpha$ =0.05
	Cramer's V	p-value=0.381> $\alpha$ =0.05
Cultural environment of the schools of pedagogical practice – Preferable cultural environment of future workplace	Lambda	p-value=0.404> $\alpha$ =0.05
	Goodman and Kruskal tau	p-value=0.108> $\alpha$ =0.05
	Cramer's V	p-value=0.138> $\alpha$ =0.05

the countryside and/or cities, corresponds to the indices of the specific weight of choices made by students regarding their future workplaces (the indices of the specific weight of the chosen future workplaces – rural and/or urban schools). But it does not indicate that the same students, originally from the countryside, would definitely all return to the countryside. This information is provided by the research results (Table 2). The second example of the result explanation is that not all respondents, who had graduated urban schools, chose urban schools to be their future workplaces, because a part of them would like to work in the countryside. But instead of them, the young people who had studied at both rural and urban schools would return to the urban schools as teachers.

These results allow concluding that the 4th year students have made a free and informed choice based on competences, regarding their future workplace. This choice was facilitated by their experience obtained during the lifetime, school-time, and during the pedagogical practice. The young people, who expressed a desire to work at rural schools, have made their choice being aware of advantages and disadvantages of rural environment and living in the countryside, they have been aware of their inner self-developmental and self-realization potential and the opportunities existing for this purpose in the rural environment, as well as they have been ready to overcome certain difficulties while living in the countryside.

Within the context of their sustainable development, rural schools should consider that, while implementing career education, they should educate their pupils to become the prospective teachers at rural schools. Particular attention should be paid also to the local patriotism and responsibility for the preservation and further sustainable development of region.

## Discussion

The main aims of the students as the prospective teachers' pedagogical practice are: 1) development of systemic ecological thinking, 2) successful integration into the educational environment of a comprehensive school, and 3) formation and development of the competences necessary for the teacher's professional activities. The process of formation and development of competences takes place in the educational environment of a school as an interaction system.

When educating the prospective teachers, the university teaching staff should base this educational process on ecological approach, which allows implementing the principle of balance between ego-centered and eco-centered thinking and activities (Capra, 1996; Vaines, 1990) in the teacher education (Salite, 2002). Our point of view is that taking account of this principle in the teacher education allows balancing individual goals, needs and future career plans of the students, studying at different study programmes of LLU (including the students of pedagogy), with the rural community's developmental goals concerning its cultural environment, the community's needs and the plans concerning the sustainable development of rural cultural environment.

Ecological approach towards education of prospective teachers would facilitate adaptation and integration of the young people, who originally are from cities but are getting ready to become teachers at rural schools, into the environment of rural schools.

Our research proves (Katane, Kruglija, 2009) that readiness of the prospective and new teachers to start their professional activities and to integrate into the diverse environment of schools considerably depends on the ecological competence. Our point of view is that ecological competence is one of the most important components of the teachers' readiness for their professional activities within the cultural environment of a particular school.

If the prospective teacher has developed ecological competence and is motivated to work as a teacher,

it is easier for him/her to adapt to and integrate into the rural cultural environment of a school and local rural community. Ecological competence will help the prospective teacher to form the view that the rural school is an integral part of a particular rural community's cultural environment. Thus there will be developed thinking and the corresponding performance, which would be oriented towards: 1) **I within a rural school**, instead of **I and a rural school**; 2) **I within the rural community**, instead of **I and the rural community**.

## Conclusions

1. The prospective teachers' choice regarding their future workplace is influenced by several factors: 1) experience, obtained in the previous life and educational environment; 2) experience, obtained during the study period, including the professional practice in a (rural and/or urban) school environment; 3) ecological competence, including knowledge on the rural and urban community and school cultural environment, perfected during the study period.
2. There is no close correlation between the above mentioned two groups of factors, but it is indirect or mediated. It is because the previously obtained experience is acquired within the framework of a pupil's and/or a student's social role; besides, each individual possesses a very subjective, positive or negative experience. It is important that the influence of the experience and insight, acquired during the school-time, on the students' view concerning the rural or urban schools had diminished, when they were the 4th year students.
3. The prospective teachers-respondents, during their study period, have acquired good and sufficient knowledge on rural and urban cultural environment and schools. Therefore it was ecological and professional (pedagogical) competence that most considerably influenced the choice of the 4th year students of pedagogy regarding their future workplace, because during the research they started to identify themselves with the teacher's profession and to assess the potential of their professional development, to plan their career and to evaluate its possibilities in a particular cultural environment, to be aware of their mission and to feel their inner call for performing the educator's functions in the rural and/or urban environment, to evaluate

professionally the advantages and disadvantages of a rural and urban school environment.

- The authors find it to be a positive fact that 69% of respondents (the prospective teachers) are ready to work at rural schools in Latvia.

## References

- Beder, S. (1994) The role of technology in sustainable development. The Nature of Sustainable Development: <http://ieeexplore.ieee.org/Xplore/login.jsp?url=http://ieeexplore.ieee.org/iel1/44/7867/00334601.pdf%3Farnumber%3D334601&authDecision=-203> – Accessed on 6 July 2010.
- Capra, F. (1996) *The Web of Life: A New Scientific Understanding of Living Systems*. Anchor Books, Doubleday, New York, 368 pp.
- DeBerry, K.M., Scarr, S., Weinberg, R. (1996) Family Racial Socialization and Ecological Competence: Longitudinal Assessments of African-American Transracial Adoptees. *Child Development*, 67, 2375–2399.
- Disinger, J.F. (1993) Environment in the K-12 Curriculum: An Overview in Environmental Education. *Teacher Resource Handbook*. Ed. Wilke R.J. Arlington, Virginia, 23–43.
- Dobers, P., Halme, M. (2009) Corporate Social Responsibility and Developing Countries. *Corporate Social Responsibility*, Vol. 16, 237–249.
- Katane, I., Krugļija, S. (2009) Ecological perspective on the prospective teachers' education in the context of sustainable education. *Sustainable Development. Culture. Education*. Proceedings of the 7th International JTEFS/BBCC Conference 2009. Daugavpils, Daugavpils University, 75–89.
- Latvijas Statistika: Izglītības un zinātnes statistika. Vispārīzglītojošās skolas. (2010) Centrālās Statistikas Pārvaldes datu bāze: <http://www.csb.gov.lv/csp/content/?cat=2302> – Accessed on 6 July 2010.
- Palmer, J.A. (1998) *Environmental Education in 21st century*. Routledge, London and New-York, UK, USA, 280 pp.
- Roga, V. (2008) *Sociālā pedagoga ekoloģiskās kompetences veidošanās lauku kopienā*. Promocijas darbs sociālajā pedagogijā. Rīga, LU, 232 lpp.
- Salīte, I. (2002) Teachers' Views on the Aim of Education for Sustainable Development. *Journ. of Teach. Educ. and Train.*, 1, 68-80.
- Vaines, E. (1990) Philosophical orientations and home economics: an introduction. *Canad. Journ. of Home Econ.*, 40, 6–11.
- Weller, D.M., Thomashow, L.S., Mazzola, M., Cook, R.J., Pierson, L.S. (1992) Contribution of phenazine antibiotic biosynthesis to the ecological competence of fluorescent pseudomonads in soil habitats. *Appl. Environ. Microbiol.*, 58 (8), 2616–2624.
- Дзятковская, Е.Н., Захлебный, А.Н. (2008) *Экологическая компетенция как новый планируемый результат экологического образования*. Москва, Институт содержания и методов обучения РАО: [http://mosecoobr.narod.ru/d2008/zaxleb\\_dzat.doc](http://mosecoobr.narod.ru/d2008/zaxleb_dzat.doc). – Accessed on 6 July 2010.
- Дзятковская, Е.Н., Захлебный, А.Н. (2009) Культурологический подход к общему экологическому образованию. *Педагогика*, 9, 35–43.

## Anotācija

Lai nodrošinātu Latvijas skolu daudzveidīgās vides līdzsvarotību un ilgtspējīgu attīstību, topošiem skolotājiem ir jābūt gataviem integrēties Latvijas skolu daudzveidīgajā kultūrvidē. Topošo skolotāju izglītībai ir jābalstās uz ekoloģisko pieeju, kas paver ekoloģisko perspektīvu un iespējas studentiem attīstīt un pilnveidot ekoloģisko kompetenci. Ekoloģiskā kompetence ir viens no svarīgākajiem topošo skolotāju gatavības profesionālai darbībai komponentiem daudzveidīgajā skolu kultūrvidē. 2008./2009. studiju gadā tika veikts atsevišķa gadījuma pilotpētījums, kurā piedalījās Latvijas Lauksaimniecības universitātes Izglītības un mājsaimniecības institūta (LLU IMI) 4. kursa pedagogijas studenti. Pētījuma mērķis bija noskaidrot studentu kā topošo skolotāju nākamās darba vietas izvēli, kā arī šo izvēli ietekmējošos faktoros. Tika izstrādāta aptaujas anketa ar jautājumiem, kas bija saistīti ar respondentu profesionālās darbības vides izvēli nākotnē, balstoties uz iepriekš iegūto pieredzi. Pētījums liecināja, ka LLU IMI topošie skolotāji, iepazīnuši gan pilsētas, gan lauku skolu kultūrvidi, ir gatavi strādāt jebkurā skolu kultūrvidē, kur gaida atnākam jaunu skolotāju, ievērojot noteiktās kultūrvides specifiku.