I would like to present you the 4th volume of the Journal of Teacher Education and Training.

On behalf of establishers I express a genuine appreciation to the contributors, Editorial board and printing house for effective cooperation, open-mindedness and thoughtful support to the continuation of this periodical.

And again the appearance of JTET is connected with the International JTET Conference “Sustainable Development. Culture. Education” following the tradition to join the journal publication and international Conference. This time the Conference is taking place in Tallinn Pedagogical University, April 14 – 16, 2004, Tallinn, Estonia. The conference is hosted by nine universities: Tallinn Pedagogical University (Estonia), Daugavpils University (Latvia), Vilnius University (Lithuania), University of Tartu (Estonia), University of Joensuu (Finland), University of Vechta (Germany), Rhodes University (South Africa), York University (Canada), and Charles Darwin University (Australia). The host universities took part in the creation of the fourth volume of JTET both through the membership in the Editorial board and also submitting the articles. Many articles included in the fourth volume of JTET represent the most valuable and original contributions from the Conference participants.

Editorial Board for this issue includes the representatives from twelve countries. The 4th volume contains the articles reflecting the research and practical experience originated in Baltic region and Scandinavian countries: authors from Latvia, Estonia, Lithuania, Finland and Norway are representing their latest conceptual elaborations and research findings in the field of sustainable education and teacher training.

Similarly to all previous volumes of JTET, this edition advances with the main idea of sustainable development in education, while the content of journal covers a wide range of issues in teacher education and training. This issue of JTET opens with the reflection on two important intertwined elements of education for sustainable development: indigenous knowledge and cultural heritage. Lithuanian colleagues show their experience with the Master study programs of teacher education in the context of sustainable development; doctoral students from Daugavpils University present their ethnographic research about teachers attitude toward sustainable orientation in education. Next articles represent the issues of preschool education and transition to school learning followed by researches about the challenges and possibilities of foreign language, art and vocational teachers. The last part of journal traditionally is devoted to the social and psychological contexts of teacher’s work: the authors from Estonia and Latvia tells us about the role of family in the child’s intellectual development and teachers’ competence in children giftedness development.

The website of Institute of Sustainable Education www.dau.lv/ise/ is still available for those who are interested in deeper acquaintance with Journal of Teacher Education and Training and would like to be informed about annual conferences “Sustainable Development. Culture. Education”. The Institute of Sustainable Development invites you to follow the information about the next Conference and submit the articles for this event.

Editor-in-chief: Anita Pipere
Sustainable Development, Indigenous Knowledge Systems and Education in South Africa

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Abstract
This article is based on qualitative research in South Africa and explores the relationship between indigenous world-views and knowledge systems, education and sustainable development in a South African context. The article briefly discusses some characteristic features of Xhosa (and African) world-views and knowledge systems, stressing the lack of distinction between the spiritual and the temporal, so common in European modernity.

The second part of the article analyses the concept of sustainability with particular reference to education and indigenous knowledge systems on the basis of the documents from the World Summit in Johannesburg in 2002. After noticing that the Summit links sustainable development to a modernist knowledge discourse, the article proceeds to look at the relationship between the new South African Curriculum 2005 (C 2005), indigenous knowledge systems and sustainable development.

Given the deep-rooted spirituality in indigenous cultures and knowledge systems the introduction of so-called scientific knowledge as defined in the South African curriculum presents dilemmas that are not easily resolved in a modernist, change-driven curriculum. Does an inclusion of indigenous knowledge systems hinder or facilitate learning among Xhosa children? In what way can the inclusion of indigenous knowledge systems contribute to developing a curriculum, which transcends the borders of modernity and thus signal a foundation for sustainable development? By way of conclusion the article calls for more research into the viability of indigenous knowledge systems as a potential tool in sustainable development.

Key words: sustainable development; indigenous knowledge systems; education; Africa.

World-views and Indigenous Knowledge Systems in an African Context
The global hegemony of the so-called Western educational discourse, world-views and knowledge systems has over the last years been questioned and critiqued by a number of scholars and politicians in both Africa and Asia as well as in the West. Inspired by the African Renaissance in particular,
interest in and focus on world views and indigenous knowledge systems in Africa as a supplement to what some call reductionist science and knowledge systems has led to a comprehensive exploration of “the role of the social and natural sciences in supporting the development of indigenous knowledge systems” (Odora Hoppers, 2002: vii).

Clearly, Odora Hoppers’ book *Indigenous Knowledge and the Integration of Knowledge Systems* (2002) has been influential in this respect in addition to a number of scholars who have done substantial research on indigenous world-views and knowledge systems (Ogunniyu, 1988; Jegede, 1995; Hountondji, 1997). The important contributions of philosophers and theologians like, for example John Mbiti (1969) and E. B. Idowo, have exposed the importance of metaphysics and religion in African epistemology, whereas the Ghanaian philosopher Kwame Gyekye (1997) has analysed African world-views in terms of a tradition-modernity dichotomy.

According to Kearney, a world-view is

* A culturally organized micro-thought: those dynamically interrelated assumptions of a people that determine much of their behaviour and decision making as well as organizing much of their symbolic creations... and ethno-philosophy in general (Kearney, 1984:1).

This is in line with Ogunninyi who defines a world-view as “the product of his/her culture (i.e. knowledge, beliefs, art, morals, laws, customs and practices) in which he/she was reared” (Ogunninyi, 2003).

Crossman and Devisch do not seem to distinguish between indigenous knowledge systems and indigenous world-views, defining indigenous knowledge systems as “a community-, site-, and role-specific epistemology governing the structures and development of the cognitive life, values and practices shared by a particular community (often demarcated by its language) and its members, in relation to a specific life-world” (Crossman & Devisch, 2002:108). (Crossman and Devisch change the term indigenous to endogenous knowledge systems to avoid pejorative connotations.) Key words to characterise indigenous knowledge systems are, according to Crossman and Devisch, holistic and organic, non-dominating, non-manipulative, non-mechanical (social and people-centered) and relational.

While Crossman and Devisch can be criticised for being normative and idealising indigenous knowledge systems, Odora Hoppers and Makhale-Mahlangu, in their definition of indigenous knowledge systems, may seem to tone down the metaphysical aspects of such systems by referring to them as “the combination of knowledge systems encompassing technology, social, economic and philosophical learning, or educational, legal and governance systems. It is knowledge relating to the technological, social, institutional, scientific and developmental, including those used in the liberation struggle” (Odora Hoppers & Makhale-Mahlangu, 1998).

Undoubtedly, world views, I argue, play an extremely important part in defining indigenous knowledge systems, but indigenous knowledge systems can be seen as a broader concept which encompasses world-views, cultural values and practices and knowledge systems derived from these world-views and practices and related to metaphysical, ecological, economic and scientific fields.
Such a definition both accounts for the holistic, metaphysical foundation (world-views) of indigenous knowledge systems and their various ramifications.

African indigenous knowledge systems must be understood in relation to a world-view which is realised in religious ceremonies, rituals and other practices. My field-work among the Xhosa confirms such a view (Breidlid, 2002). Even though there are aspects linked to indigenous, cultural practices other than religion, religion and religious practices are the *sine qua non* of Xhosa epistemology. A very similar picture is painted by both Mbiti and Idowu of other ethnic groups across the African continent (Mbiti, 1969; Idowu, 1982). And as Ogunniyi states: “Their spiritual, moral and social life are inextricably interwoven into a dynamic and powerful umbilical cord with which they interpret and harmonize their experience. It is in this vein that virtually every event has some significance” (Ogunniyi, 2003: 25). Ogunniyi proceeds: “To the Akan the world is metaphysical. Unlike the scientist whose world is impersonal (although this is now being debated), the world of the Akan is personal and metaphysical” (Ogunniyi, 2003: 26).

The holistic nature of the interrelationship between nature, human beings and the supernatural is foundational in the Xhosa knowledge system. As Chabal and Daloz state in an African, if not Xhosa, context: “A crucial feature of African belief systems is the absence of a firm boundary between the religious and the temporary” (Chabal & Daloz, 1999: 65). One difference between a so-called Western, scientific world-view and a traditional one is thus that while modern science tries to explain how nature functions, traditional world-views are concerned about why these things happen.

In Europe, on the other hand, this holism was undermined by the Protestant reformation (Delanty, 2000: 39) which played an important role in the rise of modern science (and the separation between the secular and the spiritual) and thus in the advent of modernity (Breidlid, 2002).

Moreover, in Africa, ancestors play an important role and are guarantors that the social and moral world will not collapse and that the solidarity of the group is still maintained. Clearly, as Idowu states, in particular “the ancestors are factors of cohesion in African society” (Idowu, 1982: 184).

The very fact that indigenous knowledge systems in Africa are related to a holistic, metaphysical world-view has obvious consequences for the way societal challenges are addressed and solved.

P. Pitika Ntuli is therefore correct when claiming that indigenous knowledge systems are a counter-hegemonic discourse in the context of the African renaissance. This discourse is a reaction against a Western, colonial discourse that completely dismissed African indigenous knowledge systems, as they were posited in reductionist terms and relegated to the realm of insignificance. This subjugation and exploitation notwithstanding, indigenous knowledge systems possess potentials for human and social development.

It is in this context that the African Renaissance is important as it seeks, according to Odora Hoppers, to build “a deeper understanding of Africa, its languages and its methods of development” (Odora Hoppers,
Post-colonial Africa has exposed areas in which indigenous knowledge systems are relevant and useful, e.g. in agriculture, forestry and medicine.

Undoubtedly, indigenous knowledge systems can serve as a complement to the so-called modern knowledge systems, and are in certain contexts superior. According to Chambers, the two systems together can achieve what the two cannot achieve independently (Chambers, 1983).

The positive potentials and contributions of indigenous knowledge systems in transforming societies in Africa should not lead to the temptation, however, as Hountondji reminds us, “to overvalue our heritage”, and we should bear in mind that indigenous knowledge “can be said to be less ‘systematic’ than scientific knowledge” (Hountondji, 2002: 25). Moreover, the ancestral belief, which lies at the heart of African indigenous knowledge systems, differs from so-called Western rationality in terms of a pre-modern rationality and understanding of time. As the ancestors are not only in a position to bestow honours on the living descendants, but also to give advice to them, there exists a dependency relationship which can be said to influence daily practices. Referring again to research among the Xhosa, since the ancestors represent a past existence, the relationship to the ancestors may tend, some of our informants claimed, to confirm a status quo mentality where solutions often are to be found in the past. One informant from a rural village asserted: “African traditional religion is not for modern times because it takes me back to the past”. Another informant, a school boy in the rural area of Eastern Cape, commented in the following way: “It makes people to think about dead people and not focus on those who are still living” (Breidlid, 2002; see also Mbiti, 1969).

Seen in this perspective, it is important, as Hountondji states regarding indigenous knowledge systems, to ask how true they are and how valid they are” (Hountondji, 2002: 35).

Sustainable Development and Indigenous Knowledge Systems

It is for our purposes in this article therefore important to explore the relationship between indigenous knowledge systems, so-called modern knowledge systems and sustainable development. Hountondji is right when he asserts: “What is needed...is to help the people and their elite to capitalise and master the existing knowledge, whether indigenous or not, and develop new knowledge in a continual process of uninterrupted creativity, while applying the findings in a systematic and responsible way to improve their quality of life.” (Hountondji, 2002: 36).

‘Sustainable development’ is a key concept in debates on development issues. According to Goldin and Winters, ‘sustainable development’ is often defined as development that meets the needs of present generations without compromising the ability of future generations to meet their needs. “Since the above definition may be elusive and somewhat unclear, Goldin and Winters propose to narrow the definition to” an economy in which future growth is not compromised by that of the present (Goldin & Winters, 1996: 1). Their definition is also problematic, however, in the sense that the issue of limits to growth and poverty and environmental issues are not really accounted for. Our Common Future (1987), the Brundtland report, proposed long-term environmental strategies for achieving sustain-
able development by the year 2000 and beyond. In recent years the intimate connections between poverty and the environment have become central to any discussion of sustainable development (see e.g. Middleton & O’Keefe, 2003). The World Summit of Sustainable Development, held at the end of August 2002 in Johannesburg, South Africa, issued the Johannesburg Declaration on Sustainable Development which once more reaffirmed the importance of eradicating poverty, a fair and just allocation of resources and the removal of “the deep fault line that divides human society between the rich and the poor and the ever-increasing gap between the developed and the developing world (which) pose a major threat to global prosperity and stability” (Declaration, # 12). The Declaration urges “to speedily increase access to basic requirements such as clean water, sanitation, adequate shelter, energy, health care, food security and the protection of biodiversity” (#18). Education is not mentioned as a basic requirement, but referred to later in the same paragraph together with “technology transfer and human resource development”. Threats to sustainable development are listed, among those are “chronic hunger and malnutrition, natural disasters, armed conflicts, organised crime, and corruption, intolerance and incitement to racial, ethnic, religious and other hatreds and communicable and chronic diseases, in particular HIV/AIDS, malaria and tuberculosis” (#19).

It is noteworthy that our concern in this paper, knowledge systems and cultural practices are not included in the list, and that lack of educational opportunities is only referred to in #18, and not mentioned as a threat to sustainability. These importance omissions notwithstanding it is clear that the notion of sustainable development far exceeds a mere economic perspective referred to above.

The Johannesburg Summit underlines, beside the issue of poverty reduction, the importance of environment in sustainable development. It is in this perspective indigenous knowledge systems must be seen. Odora Hoppers is right when she claims that “a major threat to the sustainability of natural resources is the erosion of people’s knowledge, and the basic reason for this erosion is the low value attached to it” (Odora Hoppers, 2002: 7). While modernity and modern knowledge systems can be seen as the ideological foundation of the West and capitalism’s aggressive exploitation of nature, the holistic nature of indigenous knowledge systems (the interrelationship of nature, human beings and the supernatural) has, as noted, major contributions to make to the critical debate on ecology and the preservation of natural resources. The neglect and eradication of such knowledge, also in the developing world, is a major threat to sustainable development.

While education was marginalised in the Declaration from Johannesburg, the other document from Johannesburg, the Development Plan of Implementation (2002) refers to education in a number of paragraphs (paragraphs 116-124). The Plan underlines that

*Education is critical for promoting sustainable development. It is therefore essential to mobilize necessary resources, including financial resources at all levels... to complement the efforts by national governments (#116).*
The Plan also refers to the “Millennium development goal of achieving universal primary education,” where by 2015, “children everywhere, boys and girls alike, will be able to complete a full course of primary schooling” (#116). Moreover the Plan underlines the importance of “sustaining their (the countries’) educational infrastructures and programmes, including those related to environment and public health education” (#117). Both the impact of HIV/AIDS on the education system (#118) and the importance of Education for All (Dakar) in achieving sustainable development (#119) are referred to. The importance of gender equity as stressed by Dakar is also underlined, and the Plan foresees the creation of a gender-sensitive educational system and the creation of a gender-sensitive educational system (#120). Additionally, the Plan suggests to integrate sustainable development into education systems at all levels of education in order to promote education as a key agent for change” (#121) and also emphasizes the importance of lifelong learning in the promotion of sustainable development (#123). Even though all these educational goals may be seen as commendable per se, they are marked by a technical educational discourse, which does not ask the important questions about the relationship between education and sustainable development. Does any kind of educational input promote sustainable development? The present, Western, modernist notion of education remains uncontested even though its basic principles and ideological foundation may be said to be problematic, if not ecologically unsustainable and, although globally competitive, culturally insensitive (see Breidlid, 2003). One can only hope that the recommendation to continue to implement the work programme of the Commission on Sustainable Development on education for sustainable development will widen the understanding and scope of education in such a way that it starts exploring critically how other knowledge systems can address the issue of sustainability in a more holistic way. The recommendation to the United Nations General Assembly to consider adopting a decade of education for sustainable development, starting in 2005 (#124), may also been seen as a step in the right direction.

Sustainability, Indigenous Knowledge Systems and Curriculum 2005 in South Africa

The objectives of the new curriculum in South Africa are stated in the following way:

A prosperous, truly united, democratic and internationally competitive country with literate, creative and critical citizens leading productive, self-fulfilling lives in a country free of violence, discrimination and prejudice (DoE, 1997a: 1).

What are the values underpinning such a statement? Which knowledge systems are to be applied? On whose premises is such a new South Africa going to emerge? The curriculum’s proposition that, “The curriculum be restructured to reflect the values and principles of our new democratic society,” (DoE, 1997a: 1) is – probably intentionally – so vague and ambiguous that one wonders what is included and excluded from the variety of values, world views and knowledge systems in South Africa.
On closer analysis, however, it is clear that it is not indigenous knowledge systems that figure prominently in the curriculum. Even though indigenous knowledge systems are referred to in the revised version (2002), C2005 is modelled on a Western model, depending heavily on different international contexts, especially from New Zealand and Australia (DoE, 1995).

According to C 2005, OBE will “ensure that learners gain the skills, knowledge and values that will allow them to contribute to their own success as well as to the success of their family, community and the nation as a whole” (DoE, 1997a: 10). Concepts like “critical and creative thinking”, “organise and manage themselves … responsibly and effectively”, “critically evaluate information”, “use science and technology effectively”, “problem solving contexts do not exist in isolation” (DoE, 1997a: 10) are well-known to anyone with some knowledge of Western curricula. Moreover, the special outcomes of the curriculum, in the human and social sciences, specify the importance “to demonstrate a critical understanding of how South African society has changed and developed” and “to participate actively in promoting a just, democratic and equitable society” (DoE, 1997a: 56).

Other concepts of modernity like progress and development also figure prominently in the policy documents, and are to a certain extent problematised (DoE, 1997a: 66).

The stress on universalism, rationality and the compartmentalisation of knowledge challenge traditional African values where the focus on the tribal group, the pervasiveness of spirituality and the holistic view of life seem to differ from modern values. The linkage between education, modernity and a “competitive international economy” (DoE, 1997b) is underlined as the prime engine in education policy (see Breidlid, 2003, for a more comprehensive discussion of this issue).

On the other hand, the contribution of traditional cultures in the economic transformation of South Africa is only vaguely referred to: “salvage elements of indigenous culture which are constitutionally aligned and therefore worthy of preservation for prosperity” (DoE, 1997a: 193).

The revised curriculum (2002) touches upon the fact that people move between different world-views and knowledge systems in a day:

... the existence of different world views is important for the Natural Science Curriculum... Several times a week they cross from the culture of home, over the border into the culture of science, and then back again (DoE, 2002, Natural Sciences: 12).

This epistemological movement is confirmed by e.g. Fakudze who states that “the African child finds him/herself having to cross the cultural border between his/her African worldview and that of school science as he/she learns scientific concepts presented to him/her in the science classroom” (Fakudze, 2003b: 132).

As our field-work exposed, many teachers, like the pupils, cross cultural and epistemological borders on the same day, teaching science at school and taking part in traditional practices at home. How do pupils and
even teachers cope with a knowledge system in school, which is alien to their home universe? Fortunately, the revised curriculum senses a critical challenge here by asking:

... Is it a hindrance to teaching or is it an opportunity for more meaningful learning and a curriculum, which tries to understand both the culture of science and the cultures at home? (DoE, 2002, Natural Sciences: 12).

The cultural border crossings have been identified by Bernstein (1971) as a big problem for working class youths in middle class schools in England. These border crossings, however, important and difficult as may be, seem of a much more limited, cultural-linguistic character than what can be observed in South African schools. Among Xhosa children it is not only a matter of code switching, but of a collision of knowledge systems which is of a far more serious and substantial character than class barriers in school in England. The revised curriculum signals that these challenges will be dealt with in curriculum development:

Science curriculum development, which takes account of world-views and indigenous knowledge systems is in its early stages and will be addressed with enthusiasm by many educators. This Revised National Curriculum...is an enabling document rather than a prescriptive one (DoE, 2002, Natural Sciences: 12).

The importance and seriousness of these challenges are underlined by Ogunniyi who states in connection with science teaching: “The concept of world-view is central to science education because it is the knowledge that a learner brings into the science class. Research has shown that such knowledge has a great potential for hindering or enhancing the learning of science” (Ogunniyi, 2003: 27). The crossing of epistemological borders to accommodate the so-called modern, rational world of science means that the pupil, according to Ogunniyi, is “involved in negotiating and navigating a complex array of conflicting mental states. He must synergize these conflicts into a more comprehensive world-view capable of accommodation of the new experience within the framework of intra/intersubjective life worlds, which provide him/her a sense of social identity” (Ogunniyi, 2003: 27-28). The complexities of these negotiations and navigation should not be overlooked. Jegede (1995), for one, claims that the metaphysical, mysterious cultural baggage, which the African child carries to school, is problematic, and if care is not taken “these mysteries, usually tagged as ‘superstitious’, will cause a blockage to any scientific knowledge the learner might acquire as a result of schooling” (Jegede, 1995 in Fakudze, 2003a).

Research on world-views held by three groups of students in grade 4 classes in some high schools in Swaziland confirms the complex picture described above and shows an intriguing mixture of world-views embodying magic and mysticism and a more rational outlook (Fakudze, 2003a: 58). Fakudze concludes her research by stating that the students, “regardless of their gender, age and interest in science, hold varying degrees of traditional as well as scientific notions about selected phenomena, that is, they hold a multiplicity of worldview presuppositions” (Fakudze, 2003a: 58).
Our research confirms such multiplicity of world-views and knowledge systems, but underlines simultaneously that “there is a sense that despite the intertextuality and dialogic exchange between various value systems, the indigenous cultural values are retained, not only as a means of social cohesion, or as a kind of low-key cultural resistance, but as a fundamental element of Xhosa identity construction” (Breidlid, 2002: 43).

It is this mixture of world-views and knowledge systems that the South African schools have to take into account.

So far the revised curriculum is, even though paying lip service to indigenous knowledge systems, firmly grounded in a modern, Western epistemology. Ntuli agrees:

“Our education system seems to move farther and farther away from indigenous knowledge... There is no attempt at any level to examine the indigenous knowledge systems awareness of the essential interrelatedness of all phenomena - physical, biological, psychological, social and cultural (Ntuli, 2002: 64-65).”

While we have seen that some attempts have been made in C2005 (revised version) to include a discussion of indigenous knowledge systems, Ntuli is right in claiming that the influence of indigenous knowledge systems in education is marginal.

Even though sustainability is not a recurring concept in Curriculum 2005 (revised version), clearly education is seen as an important tool in achieving change and sustainable development. The concept of sustainability is only mentioned explicitly in the revised curriculum under the learning area “Economic and Management Sciences”. The inclusion under this learning area may at first glance be seen as a concession to a mere economic understanding of sustainability, which, however, on further scrutiny is not quite justified. Outcome 2 is titled “Understanding of Sustainable Growth and Development”. Here the outcome is for the learner to “demonstrate an understanding of sustainable growth, reconstruction and development and reflect critically on related processes” (DoE, 2002: 27). In grade 7 the learner is to collect “information on the influence of apartheid economic policies on ownership, poverty, wealth and quality”... and identify steps required to redress socio-economic imbalances and poverty (DoE, 2002: 38). In grade 9 the learner is to “discuss how the national budget, regional and international agreements can be used to facilitate sustainable growth and development” and “discuss productivity and its effects on economic prosperity, growth and global competition”(DoE, 2002: 39). The curriculum insists on a critical approach to economic sustainability: “It takes the view that a ‘balanced’ economy is desirable. Here, a ‘balanced’ economy means one, which aims to achieve sustainable growth, reduce poverty and distribute wealth fairly, while still pursuing the principles of an open market and profitability. It promotes respect for the environment, human rights and responsibilities” (DoE, 2002: 5).

In many ways it is difficult to detect any discrepancy between what was decided on the summit in Johannesburg and what is written in the revised version of C2005.”
While the curriculum tries to mitigate the worst excesses of an economic approach and market liberalism, it is worth noting how indigenous culture and indigenous knowledge systems are absolutely absent from the discourse on sustainability.

Sustainability is more or less exclusively linked to a modernist, Western approach with a dash of poverty reduction strategies. The issue of knowledge systems in connection with sustainability is taken as something pre-given, which is not open to debate. There is, in principle, only one knowledge system operating, and indigenous knowledge systems do not belong to this discussion.

This is problematic for many reasons. One is the curricular marginalisation of knowledge systems that operate on a daily basis in many parts of the world. Can these knowledge systems not contribute to sustainable development? Another is the problematic nexus between modernity as understood in the West and sustainable development. The link between modernity, Western development in terms of e.g. unbridled individualism and ecological devastation is well documented and should, one would think, trigger some sort of curiosity for alternative knowledge systems where the sacredness of nature may be an important factor in the prevention of environmental destruction. The concept of ‘balanced’ economy in C 2005 may possibly be perceived by some to be rhetorically progressive, but does not transcend the borders of the imported, Western knowledge system.

It has already been noted how this alien knowledge system creates barriers between the learner and the school. Moreover, if one does not account for indigenous culture and indigenous knowledge systems, one is doomed to fail to communicate with those who are going to be the pillars in transforming the country. As Ntuli states: “For any development to succeed with rural people, and even with many township dwellers in South Africa, the role of divine beings, ancestors, sacred places (like isivivane), sacred people and sacred objects needs to be addressed. To touch on these issues is to compel our Westernised intellectuals to experience severe conceptual violence, and yet many of them secretly subscribe to these beliefs” (Ntuli, 2002: 63). But it does not imply, as already noted, that “to touch on these issues” is a carte blanche acceptance of these knowledge systems in toto as sustainable.

**Medium of Instruction and Sustainability**

The seriousness of the breakdown of communication in education in South Africa is not only related to the alien knowledge systems of the various learning areas. The task of bridging the gap between knowledge systems is also related to the issue of language in the classroom. If one agrees that quality education is an important tool in creating sustainable development, the focus must be both on the negotiations between knowledge systems in class, but also on the question of the language in which these negotiations take place. The importance of the mother tongue in teaching is confirmed in many research findings (Pattanyak, 1986; Brock-Utne, 2000; Heugh, 2000). Already in 1968 UNESCO claimed that it is

*through his(her) mother tongue that every human being first learns to formulate and express his(her) ideas about himself*
(herself) and about the world in which he(she) lives. Every child is born into a cultural environment; the language is both a part of and an expression of, that environment. Thus, acquiring of this language, his(her) mother tongue is part of the process by which a child absorbs the cultural environment; it can, then, be said that this language plays an important part in moulding the child’s early concepts. He (she) will, therefore, find it difficult to grasp any new concept which is so alien to his (her) cultural environment and that it cannot readily find expressions in his (her) mother tongue (690).

In the South African primary schools the mother tongue is supposed to be the medium of instruction during the first three years of schooling. In the later grades the provisions in C 2005 and the Language in Education Policy Document (DoE, 1997c) are unclear and confusing. C 2005 states that the idea is to keep the home language (“is to be sustained”) until “the learner is able to learn effectively in the language of learning and teaching. (Then) the home language should continue alongside the additional language as long as possible” (DoE, 2002: 5). Moreover, the revised curriculum underlines that “the curriculum provides strong support for those learners who will use their first additional language as a language of learning and teaching (DoE, 2002: 4). Such a statement creates an impression that the policy acknowledges that some home languages will not be used as languages of learning and teaching after third grade. Our field work from rural and township schools in Eastern and Western Cape confirms such an impression, the situation being that even in homogenous Xhosa speaking classes the official medium of instruction is English, not Xhosa. Moreover, all textbooks and all exams are in English. This does not mean that teachers use English consistently in their teaching. On the contrary, the teachers make use of code switching or code-mixing (Brock-Utne & Holmarsdottir, 2003: 88) where Xhosa is most often used to explain the content matter in the learning area (in violation of the regulations from the education authorities). Clearly, this is a sensible solution in terms of the pupils’ cognitive development, but causes problems when the same pupils sit at the exam table and are forced to answer in English. The efficiency of learning under such conditions is highly questionable. As Rollnick states on the issue of science learning:

Language is a central factor to all learning. Its importance in the learning of science has often been underestimated, as there is a belief that the student’s meaning will ‘come through’ despite language difficulties. The issue of language cannot be ignored as it impinges on the learning of science in important ways related both to attitude and cognition (Rollnick, 1998: 21).

In our fieldwork we noted that the language barrier (despite code-switching or code-mixing) created huge problems, even for pupils with a talent for maths or science. As one teacher told us: “I have several Xhosa pupils who excel in maths, but who might fail because the exams are in English”. This means that many pupils, who have successfully navigated between various knowledge systems when taught in their mother tongue,
still are classified as failures when the exam results are out due to the language barrier. If one subscribes to the idea previously referred to from the World Summit in Johannesburg that education is a very important tool in sustainable development, the South African school system does not seem conducive to such a development. While not enough space and time is set aside to negotiate the various world views and knowledge systems in class, the curriculum makes these negotiations and navigations even more difficult because the dominant school language is alien to the majority of primary school children in South Africa.

**Teachers and Teacher Training and Indigenous Knowledge Systems**

The authorities have only recently started, through the revised version of Curriculum 2005, to ask questions about alternative world-views and knowledge systems. The training of teachers to cater for indigenous knowledge systems has thus not yet started. The challenges so far for the authorities have been to provide training space for teachers and student teachers to learn the basics of the new methodologies of outcome-based education (OBE) in Curriculum 2005. Since teachers have not been involved in any significant way in the process of producing the new curriculum, they do not feel strong ownership to the changes in the curriculum. As Kruss states: “In general, teachers have received the curriculum ‘blueprint’ as a fait accompli...Their interests, expertise and concerns have not been incorporated into the form and content of OBE in any significant way, despite the official commitment to a participatory policy-making process” (Kruss, 1998: 107-108). The exclusion of teachers from this process also raises serious doubts about the possibility of implementing the curriculum in an efficient way. Moreover, the financial and physical resources to train teachers and teacher trainers in OBE are enormous. And it raises, as Kruss states, “serious doubts about the quality of training offered to teachers and, as a consequence, about the ability of teachers to actualise the promised ‘paradigm shift’ in curriculum and pedagogy” (Kruss, 1998: 108). The inclusion of indigenous knowledge systems in teacher training would in fact mean another paradigm shift which the present government does not seem to have the resources or the will to initiate. The Education White Paper 6 (DoE, 2001) commits the South African government to strengthening education support services in the country, for example by providing integrated support to education institutions to support the development of effective teaching and learning. So far indigenous knowledge systems are not high on their agenda.

Our field-work in South Africa revealed that many indigenous science teachers were modern science teachers at school and traditional practitioners at home. The implication of this seems to be that indigenous teachers have the intuitive knowledge and understanding of both knowledge systems, but that they are applied at different sites or locations. To include indigenous knowledge systems in teacher education and in the school would necessitate a more profound reflection on the possibility of integrating the two knowledge systems in the education system. The authorities acknowledge that not enough research has been done on indigenous knowledge
systems to secure a prominent place for it in the schools. The challenge for the teacher training institutions in South Africa and elsewhere is to engage more systematically and comprehensively in research on indigenous knowledge systems per se, their potentials for sustainable development and the methodological implications of their potential inclusion. Such research is already taking place at various teacher training institutions in South Africa, but the challenges are great. As one of the teacher educators, S. Lazarus states:

The challenge that emerges from this research...is an acknowledgement of the complexity of such a process...We are asking them (people) to change the way they “see and act”. This is no small challenge! If we are sufficiently self-reflective we will soon see how difficult it is to create an openness allowing such an internal transformation to occur. The challenge that this brings to those of us involved in education transformation in South Africa is to revisit our understanding of and strategies for creating opportunities for people to go through such a deeply transformative process (Lazarus, 2004: 71).

Research on indigenous knowledge offers promises in terms of opening up new avenues to learning and knowledge acquisition in the country, but more ground needs to be covered to acquire a more comprehensive understanding as to how useful and sustainable indigenous knowledge really is.

Conclusion

There is an urgent need to address the issue of sustainable development in a South Africa, which still suffers from the legacy of apartheid. Despite the launching of the new curriculum (C2005), which clearly breaks with the racial aspects of apartheid policies, the South African authorities are reluctant to undertake a more radical reorientation in educational policies, which includes innovative educational strategies to meet the needs of the majority of South Africans. There seems to be a fear that such new strategies will leave South Africa out of the process of globalisation (see Crossman & Devisch, 2002: 107). Moreover, the authorities may worry that a more contextualised curriculum might leave the successful school leavers at a disadvantage internationally even though research has clearly shown that the present educational system under the new regime puts the majority of school children at a disadvantage. There is therefore reason to question the sustainability of the present system.

Odora Hoppers’ work (2002), as a response to the South African Parliamentary Portfolio Committee on Arts, Culture, Language, Science and Technology, signals a curiosity or even willingness by the South African authorities to look into the potentials of indigenous knowledge systems. Whether her work and the work of others will influence the next revision of the curriculum remains to be seen and does not only depend on the attitude of the South African government, but even more importantly on the results of further research into the characteristic features of indigenous knowledge systems. While there is no doubt that these potentials have been grossly under-utilised in the past, the problematic aspects of these knowledge systems from a developmental perspective also leave many questions
unanswered. There seems, therefore, presently little reason to elevate indigenous knowledge to more than a complementary role in education and development issues. Extensive, critical exploration into this counter-discursive terrain in the future can possibly assess more precisely the viability of indigenous knowledge as a major vehicle of sustainable development and its proper role in teacher education and in the classroom.

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Holistic Approach to Cultural Heritage: Educational Perspective

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Abstract
The modern age has been characterized by an obsession with technology, economic growth, and domination over nature, together with a persistent economic and military competition between nations. But the global ecological crisis is forcing us to question these primary cultural realities, and our task now is to begin to understand and adopt the concept of an ecologically sustainable culture. Balanced, sustainable development must incorporate cultural factors. The past is a shared heritage that is valued by different people for different reasons - including scientific, aesthetic, spiritual, social and political, commercial and economic, consumptive and non-consumptive, and intrinsic reasons. Heritage education is an active cross-curricular teaching based on learning process of cultural heritage, incorporating a partnership between the fields of education and culture. The World Heritage Education project and The European Heritage Classes are a particular example of this activity.

Heritage education is an essential tool for achieving effective resource management and sustainable development. The spiritual purpose of heritage education is to connect people to their heritage and to their distinct place on Earth.

Key words: culture; sustainable development; cultural heritage; preservation; heritage education.

"Human history becomes more and more a race between education and catastrophe"


The modern age has been characterized by an obsession with technology, economic growth, and domination over nature, together with a persistent economic and military competition between nations. Our world is a world dependent on science and technology. Jürgen Mittelstädt (1992) comments in his book “Leonardo Welt” that we all live in Leonardo world, which is artefact – manufactured by humans through science and technology. Every day, we create a more and more artificial world. The media has also helped to create a hyper-real world. But the global ecological crisis is forcing us to question these primary cultural realities, and our task now is to begin to understand and adopt the concept of an ecologically sustainable culture.
Culture and Sustainability

Culture can be defined in many ways. In this paper, the concept is understood in the same sense as used by UNESCO and by the World Commission on Culture and Development in its report “Our Creative Diversity” (1995): culture is the whole complex of distinctive spiritual, material, intellectual, and emotional features that characterize a society or social group. It includes creative expression (e.g., oral history, language, literature, performing arts, fine arts, and crafts), community practices (e.g., traditional healing methods, traditional natural resource management, celebrations, and patterns of social interaction that contribute to group and individual welfare and identity), and material or built forms such as sites, buildings, historic city centers, landscapes, art, and objects.

It is now widely acknowledged that culture and development are interdependent. Development cannot be successful without understanding and responding to people’s values, traditions, social relationships and preserving the heritage that has meaning for them. It means that culture needs to be understood as an important driver of sustainable development.

Sustainable development is a difficult concept to define. Sustainability has become more of a political issue than a scientifically supported concept and people tend to define sustainability in the ways that suit their particular applications. One of the original descriptions of sustainable development is credited to the Brundtland Commission: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987: 43). This definition forms the baseline that is commonly used by the United Nations and by most international institutions.

Sustainable development is generally thought to have three components: environment, society, and economy. The well being of these three areas is intertwined, not separate. Balanced, sustainable development must incorporate cultural factors. In a rapidly changing world, culture lies at the very heart of economical growth and the coherence of society. Culture and economics can no longer be dissociated. The increased recognition of culture is part of the broader changes that have taken place in thinking in the 1990s generally. The cornerstones of sustainable development are democracy, sustained growth, ecology and culture.

Cultural Heritage

The key international document defining cultural heritage is the 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, which has been signed by most governments. Article 1 defines and classifies material cultural heritage under three categories: monuments, sites and groups of buildings (Convention Concerning, 1972).

The definition of “cultural heritage” itself is varied, and recent decades have seen the concept of heritage – much like that of culture – undergoing a profound change. Culture is a matrix of infinite values. Heritage gives values. The past is a shared heritage that is valued by different people for different reasons – including scientific, aesthetic, spiritual, social and political, commercial and economic, consumptive and non-consump-
tive, and intrinsic reasons. Heritage is a vital component of identity and participation in society. Cultural heritage should include not only buildings, landscapes and museum objects, but also such elements as language, oral traditions, myths, rituals, music, dance, traditional medicine and pharmacopoeia. The role of cultural heritage in societies is expanding.

There is the need to redefine the heritage philosophy. This is partly because the environment of communication, which is the contemporary cultural field, is redefining the relationship of information to artefact. The distinction between data and material has become metaphysical or symbolic, rather than categorical. When an artefact can be so readily reconfigured as data, its materiality becomes a stage, rather than a state, of existence.

The past exists in three ways: artefacts or material culture, physical landscape, narratives and memory. Artefacts exist in two dimensions: the physical dimension and the informational dimension. If the object’s existence in either dimension is damaged, then the other, sooner or later, will be affected too. Hence, artefacts are complicated objects in culture.

Informational content of objects is the result of a historical process. The sum total of the object information concerns:
- The informational content of the object itself (intrinsic information);
- Information handed down through tradition or through documentation (extrinsic information).

Cultural heritage can be considered as a social construct, a historically situated and dynamic process. It is useful to societies in a number of ways. Cultural heritage as a resource is seen as a factor that can increase identity, vertical and horizontal coherence and cultural diversity, as well as influence development and enhance economic growth. Legitimizing and supporting the culture and heritage of cultural groups can bring about profound improvements in self-esteem, energize communities, help them get organized, and assist them in finding new ways to improve their livelihoods.

The Helsinki Declaration set out the role of heritage in sustainable development. This declaration remains an important ideal, but its implementation is partial (Helsinki Declaration, 1996).

**Preservation of Cultural Heritage**

Guaranteeing of memory requires efforts on the level of each individual and even more on the level of the whole society. Preservation is an inseparable component of any information transmission process, be it connected either to oral tradition, printed media, audio-video or digital information. As such, preservation forms an integral part of all activities of the society.

The general developmental tendencies of preservation within the last decades have been the following:

Firstly, preservation problems are universal. Today the amount of damaged objects is growing steadily and faster in every country all over the world. Increasing prices and tense budgets of cultural institutions make preservation more complicated.
Secondly, proceeding from the above-said, a shift of attention from preservation of single objects to the preservation of collections is taking place. In the 1970s to the 1980s much more attention than before was paid to preservation activities, which embrace an entire institution. Until that time the main priority was conservation and restoration of single objects. Today we speak about preservation of cultural heritage of regions, states, cultures and the whole of humankind.

Thirdly, in the 1970s the concept of preventive preservation prescribed the solution of the problems in advance instead of clearing up consequences. Commencing of preventive preservation is directly connected with the shift of attention to preservation of collections. Preventive preservation also means that preservation activities embrace objects in all stages of their life cycle, beginning at the moment of its production. This tendency will grow even stronger with a wider distribution of digital objects.

Fourthly, the formation of preservation management as an independent speciality in the 1980s logically proceeds from the above-mentioned developments. Integration of preservation as a complex subject into everyday work of information institutions has required new managerial and planning methods.

The fifth and maybe the most important development is the vast spread of digital information, which already has significantly changed economics, entertainment, education and culture. Distribution of digital information in the society influences traditional preservation in two ways. Digital objects need to be preserved like all traditional objects but their preservation is more complex due to the variety of circumstances. On the other hand, digital technologies can be used both for managing preservation (different databases, documenting systems, etc.) and reformatting.

Briefly, we can say that preservation management is becoming more and more important due to the increase in the number of objects asking for preservation and still more complex technologies. Precise knowledge of the situation, optimal allocation of resources and right strategic decisions are the only methods that ensure the preservation of cultural heritage for future generations.

Today, the academic world is witnessing strong tendencies toward fragmentation and specialisation. It is no longer enough to be a specialist in preservation. One must become, for instance, efficient in digital 3D modelling of Nasca pottery or Raman spectroscopy of medieval manuscript inks. This is a natural inclination, and may be necessary in many ways. Yet, for those faced by policy-making, planning and management of cultural heritage, the situation is the opposite. Given real-world problem-solving and policy-making situations, interdisciplinary learning and comprehension are sufficient for reaching overall views and visions about highly fragmented, scientific knowledge, and for integrating the views of various stakeholders in a constructive and balanced way. Along with the recognition of the problems, integrative philosophies and approaches that minimize the boundaries between scientists, policy-makers, and stakeholders, have been discussed for years, but development in this field of cultural heritage management is far below the needs.

Preservation of cultural heritage is now recognized as resting within the general field of environmental and cultural development. Sustainable
management strategies for change, which respects cultural heritage, requires the integration of conservation attitudes with contemporary economic and social goals. Cultural heritage preservation is not an isolated issue, but must be considered as integrated in social and cultural development policies and strategies.

Heritage Education

There seems to be wide agreement, that education has an important role to play in motivating and empowering people to participate in heritage preservation. Indeed, education is the greatest resource in this endeavour.

Heritage education is an active cross-curricular teaching based on learning process about cultural heritage, incorporating a partnership between the fields of education and culture. The World Heritage Education project and The European Heritage Classes are a particular example of this activity.

Heritage education, in its broadest sense, encompasses raise of awareness, acquisition of new perspectives, values, knowledge and skills, and both the formal and informal processes that lead to changed behaviour in support of a sustainable development.

Activities, lesson plans, and units of study focus on, but are not limited to, architecture, archaeology, cemeteries, documents, folk ways, objects and artefacts, community and family history, photographs, historic sites, museums, and the urban and rural landscape.

Heritage education promotes interdisciplinary studies and provides excellent opportunities for cooperation among educators, students and heritage agencies and organizations at local, state and international levels. Heritage education programs successfully cross the boundaries of age, race, culture, and learning capabilities to create understanding and tolerance, as well as providing positive opportunities for interaction. Heritage education nourishes a sense of continuity and connectedness with our historical and cultural experience; encourages citizens to consider their historical and cultural experiences in planning for the future; and fosters stewardship towards the legacies of our local, regional, and national heritage.

Principles of heritage education are the following:

- Heritage education must involve everyone;
- Heritage education must be life long;
- Heritage education must be holistic and about connections;
- Heritage education must be practical;
- Heritage education must be in harmony with social and economic goals.

One of the most fundamental characteristics of effective heritage education is that it must lead to actions, which result in better cultural outcomes, not simply the accumulation of inert knowledge or impractical skills.

Effective heritage education must also encourage the pursuit of cultural goals in harmony with other powerful and legitimate social and economic goals – it should not be taught in a vacuum, or simply equip people to pursue an agenda on the margins of society.

Heritage education needs to incorporate this reality by providing people with the knowledge, understanding and capacity to influence main-
stream society in a way which progresses cultural objectives along with other legitimate social and economic objectives.

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Master Study Programs of Teacher Education in Lithuania Regarding Sustainable Development

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Abstract

The contemporary world experiences global changes the influence of which is felt both at macro and at micro levels of society, its economic, cultural and environmental domains.

It should be noted that not all of these changes are viewed as positive, regarding and promoting sustainable development. In this context it is worth mentioning that attitude towards sustainable development largely depends on philosophical viewpoints and thinking paradigms dominating in the society.

Which way of thinking, acting and caring about our living world will an individual of the contemporary society choose? This will depend on one’s personal decision as well as acquired education.

This article aims at a) defining the thinking paradigms that are most suitable for addressing sustainability issues in education (philosophical perspective); b) presenting the results of the analysis of teacher education master study programs from the sustainable development perspective; c) discovering whether a thinking paradigm that is being formed and introduced to master students during the university study process is one oriented to sustainable development.

Key words: education for sustainable development; philosophy of education; thinking paradigms; master study programs.

Introduction

For many decades the well being of society was understood as a result of increasing economic development and industrial growth. But the rapidly increasing exploitation of natural resources accompanied by the pollution of the environment in some countries have reached a dangerous level, causing a lot of ecological problems. Many of them have become global and cannot be solved by a separate country. This is the result of our attitude to nature, which is rooted, as Bonnet (2000) puts it, in certain fundamental concepts that are deeply metaphysical. Our relationship with nature is one of such fundamental concepts.

For many years throughout the modernist epoch, a fundamental motive of Western civilization was to exploit nature and that is reflected in our actions and our dominating forms of knowledge. As we know, all learn-
ing as well as teaching is based on certain assumptions about the nature of truth, knowledge, understanding, morality, human consciousness. The way the world is revealed to us at school influences the way we perceive nature and reality in general. And how do we perceive nature in the modern and post-modern era? The answer is that we think of it as something to be harnessed and managed, turned into a resource, a commodity. Such thinking resulted in a growing number of environmental crises many countries of the world face today.

It was at the UN conference “On human environment” held in Stockholm (Sweden) in 1972 that it was acknowledged that there should be certain limits to the ever increasing economic growth and that the solution of ecological problems cannot be separated from further economic and social development, that the cooperative efforts of the world community are needed to change the threatening situation.

The United Nations Conference on Environment and Development, which was held in Rio de Janeiro in 1992, arrived at a very important agreement on a number of environmental issues that all the participating nations should address. The adopted Agenda 21 (UN, 1992), which was approved by 178 countries, was the response of the world community to global challenges. It has become the strategy of sustainable development (SD), an action plan for the progress, ensuring harmonious, long lasting development of interrelated and interdependent environmental, economic and social systems, where most attention should be given to an individual, guaranteeing him/her the right to a healthy life and well-being in harmony with the environment.

**Lithuanian Context of Education for Sustainable Development**

Important steps forward to implementing the global policy of sustainable development (SD) into the Lithuanian education were inspired by further international and national developments: Baltic 21 (based on Agenda 21) and the Hague Declaration (2000), signed by the Ministers of Education of nine Baltic Sea countries (including Lithuania); the UNESCO Commission for Sustainable Development, which recognized the importance of reorientation of teacher education as a priority in order to implement the SD policy all over the world; “Johannesburg Sustainable Development Implementation Plan” (2002), expressing international commitment to take coordinated actions for solving important world problems; and “The National Strategy of Sustainable Development” (2003), developed and approved by the Lithuanian government.

The concepts of ‘sustainability’ and ‘sustainable development’ have been in public circulation for more than a decade. A number of definitions and interpretations have appeared ever since. The Lithuanian equivalent of it ‘subalansuota plėtra’ (a balanced development) is much criticized but still used as well as the other concept ‘darnus vystymasis’ (a concordant, harmonious development). This discussion shows how important the development of a common international understanding of sustainable development is for its successful implementation.

At first in the concept of ‘sustainable development’ the environmental aspect was emphasized and sustainable development was understood as a
systematic, long-term utilization of natural resources, ensuring their accessibility for future generations. This was seen as the primary aim of environmental education (EE).

Agenda 21 stressed the role of education in promoting SD. The concept was broadened, incorporating the principle of sustainability, which should be applied to economic, social and environmental domains. Thus, in sustainability oriented educational programs more attention should be given to humanitarian and social subjects. Natural sciences alone, though they give important but abstract knowledge about the world, do not foster values and views necessary for SD. The priority traditionally given to natural sciences as well as their usually apolitical context should be outweighed and counterbalanced by introducing humanities and social sciences into the curriculum of study programs. This would help to create a holistic view of the world, to develop the environmental culture and ethics, values and views, skills and behaviors in accordance with the ideas of SD, which are indispensable for effective decision-making.

Integrity is another important feature of contemporary education, mentioned in the documents addressing education for SD. The sustainability education is viewed as a process of developing the integrated view of the world: economy, society, environment and a broad spectrum of interrelated aspects of our life.

Today education for SD:

- Is a future-oriented development, ensuring proper life quality now and in future;
- Is based on a holistic approach to environmental, economic and societal development, which includes issues of democracy, equity and human rights integrated into the curricula of environmental and social sciences;
- Aims for cultural, social, economic and environmental diversity, teaching peaceful ways of conflict resolution;
- Is open to critical thinking, raising action competence;
- Promotes conditions for cooperation and democratic development;
- Is oriented toward community problem solving and solidarity;
- Raises public awareness of the importance of locally made decisions and their impact on regional, national and global situation.

All these aspects should be present both in educational policy and in current programmes of teacher education. Lithuanian experience in this field is insufficient, as we are only beginning to understand the significance of the issues raised in international documents about our present environmental situation and their implications for philosophy of education, which have yet to receive serious reconsideration.

**Contemporary Philosophy about Models of Thinking Regarding Sustainable Development**

The perspectives of SD cannot be discussed without clarifying the philosophical background of our existence in society and analyzing our attitude towards everything that surrounds us. What way of thinking and acting will a person, caring about the living world, choose? It is not only a matter of personal choice or decision; it is mainly a matter of education.
The importance and value of human life and welfare now and in future is emphasized in the concept of SD. The question, however, is whether it is possible to simultaneously project our mind on life now and in the future. It is highly unlikely to reconcile these two aims. Looking at this from a philosophical perspective, we can single out several contemporary schools of thought, which define individuals’ attitudes towards the world and corresponding thinking paradigms in different ways: analytical, existentialistic-phenomenological and postmodern (see Figure 1).

![Diagram](image-url)

**Figure 1. Thinking paradigms oriented toward sustainable development**

The analytical paradigm in the broadest sense is understood as a rationalistic school of thought, which states that the process of human thinking is consistent, dialectically striving to fulfill set tasks (critical philosophy). According to existential and post-modern paradigm, our thinking should be directed not towards a projected goal, but to an existential understanding and authenticity (an existentialistic view) or to the “play” of language without any expectation of a dialectical product (a post-modernistic view).

Since, in our consideration, the latter (post-modern thinking) is the least disposed towards implementation of sustainability, this paper is concerned with analytical and existentialistic-phenomenological paradigms.

As was mentioned above, analytical thinking in the broadest sense is understood as an argumentative, logical mode of thinking, which leads to an anticipated goal. In this sense, critical analysis and reflectivity are those instruments, which are essential for considering important questions of care about the world and essential when trying to find ways of how to make it better. I. Kant in his Critical Philosophy suggests that a rational relationship with the world is based on the assumption, that *a priori* human is able to demonstrate a reasonable and moral acting in the world. This capability distinguishes a human being from other beings, living on this Earth, in that...
she/he has the mental capacity which is essential not only for the ability to adapt to any conditions, but is crucial for his/her ability to reasonably change them. Since the time of Aristotle this opinion is still a dominant one.

One more tradition, rooted in rational thinking, appeared later together with pragmatism and social reconstructionism (see Figure 1). From these perspectives the practical adaptability, the reflection on one’s experience and the prognostication of one’s future are viewed as important for man (Dewey, 1933). The prognostication of results seems to be particularly attractive, when the intention is to change the existing order in the world and foresee sustainable development. But who can guarantee, that foreseeing one way of development, we do not deprecate many other factors, the value and destination of which are at first sight difficult to perceive? Even the most sophisticated scientist, having a vigilant eye, is not always able to predict the amount of damage that can be inflicted upon nature by artificial intervention into our environment. What can be the cause of the misbalance? Even when there is no possibility to achieve the expected results, the ability to predict future, to use critical thinking for evaluating oneself and other phenomena and to reflect on actions performed, are very important for the progress of society. That is why it is important that contemporary education gives enough consideration and attention to the development of critical thinking, rational problem-solving skills necessary for establishing a caring future-oriented relationship with the world. The educational systems of the free world and, recently, in the post-soviet countries have developed within this thinking paradigm.

Another model of thinking – existentialistic-phenomenological – in its essence expresses the care about the world. The perception of surrounding phenomena as unique phenomena, having worth in themselves, implicates the ethic dimension in a person’s relationship with the environment. The discussion, started by Heidegger (1999) about the forgetfulness of Being, was further developed by other philosophers. In Heidegger’s opinion, the trouble is that a person’s relationship with the world has become purely instrumental and consumptive. Heidegger’s *Dasein* describes a situation in which a person is capable of being authentic, naturally inscribed in the world, existentially being responsible for and being with (Heidegger, 1999). This existentialistic thinking, which resulted in our everyday forgetfulness of the world’s worth, can be found in our everyday life.

Phenomenologists Levinas (1998) and Merleu-Ponty (2000) stress the importance of caring about the Other. This impersonal care was enriched by social care of and responsibility for the other. Levinas states, that the relationship established with the other person is responsibility, and responsibility means one’s obligation (Levinas, 1998). Merleu-Ponty sees the manifestations of responsibility for and care of the Other in a person’s bodily expression, when a person reacts to the Other with his/her body. For it is through the body that one’s moral dispositions are manifested (Merleu-Ponty, 2000). According to existentialists and phenomenologists, the attentiveness to the environment and to the Other are motivated not by the critical analysis of performed actions (reflection on action) as Dewey suggests, but by inscribing person into the world, by the unity of the body and consciousness when reacting to the environment, in other words, by a new quality of thinking. Following Heidegger’s tradition, some authors define
such thinking as “existential perception”, but not as reflection (Sodeika, 1995), others call it reflection, but give this word a different meaning, namely, reflection as action (Bleakley, 1999). According to this concept of ‘reflection’, a person’s ethic and aesthetic relationship with the world is intertwined in the most natural way. It is a holistic relationship in which there is no division between the mind and the body, person feels not as the Master of nature but as an organic part of it, inscribed into the harmony of the world. Without logical action projection into the future results are not always tangible. But the generosity, spreading together with a person’s attentiveness to the environment, sooner or later is rewarded (Levinas, 1998), although not always in a way that can be noticed by a human eye. Such reasoning, because of its ambiguity and unpredictability, seems less attractive than an analytical approach. But in this philosophy there is an aspect of a fundamental moral responsibility for everything that surrounds us. It is obvious that it is this type of reflection directed at here and now, that should be taught in institutions of higher education, promoting a careful, natural, caring relationship with the environment and the Other, the way to protect a natural harmony in the world.

Thinking Traditions in Lithuanian Education

Like the other countries of the post-soviet world, Lithuania today gives insufficient consideration to teaching analytical thinking. The research data show, that both students and adults have no skills of discussing new information presented to them, of investigating and analyzing it from several different perspectives and having their own opinions (Duobliene, 2000; Zaleskiene, 2001).

There is an indication that tradition of critical thinking in Lithuania is much weaker than in Western Europe or USA, where it has been taught for half a century. There are a few reasons for that. One of them is very strong religious tradition, i.e. a weaker social secularization in Lithuanian society. Another reason is the tradition of ideologization, which due to inertia has not yet died away. Both of them lead a person’s consciousness in the direction of borrowing certain beliefs and convictions.

This situation has its advantages as well as disadvantages. On the one hand, Lithuanian people still have a need to believe, and that means that they need to look hopefully into the future and think how to create it. On the other hand, such a situation often encourages a lack of civic agency, which is welcomed by people in power who have an interest in maintaining the status quo.

It is obvious, that in the conditions of growing globalization it is necessary to strengthen analytical and rational thinking, the ability to solve problems, to have a strong and clear personal position on social and environmental questions. But alongside with an analytical ability, an ability to existentially conceive different phenomena without being indifferent to the environment and the Other, asking for help is also of great value. In this sense not logical and motivated actions, but the authentic moral responsibility is provoked.

The phenomenological paradigm is rather popular among Lithuanian philosophers, but the idea of using it as a methodology in education of the

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young has not yet been adopted, which is why we can hardly expect any results.

The research on values of Lithuanian youth shows, that some phenomenologically understood relationship with the world and values can be traced. Inner harmony, friendship, responsibility are thought to be rather important for young people (Aramavičiūtė, 2002). These qualities are found as naturally existing, not yet choked by a consumerism and instrumental relationship with the world. Though, very little attention is given to such values as beauty, creativity and imagination. Particularly the need for sensitivity has decreased and, as a result, aesthetic relationships are pushed off by more pragmatic considerations: education and intellectualism. Thus we can hardly expect that natural expression of existentially understood values of young people will be strong enough to survive in a new world full of different technological challenges.

It is evident that for the future of Lithuania both thinking paradigms are important: alongside with the ability to think analytically and critically, there is also a need for an existentially engaged ethic relationship with the environment, the dialog with and care of the Other. From the above described features of thinking traditions and current thinking trends in Lithuania it can be assumed that there is no serious obstacles (except for inertia of thinking) for SD oriented thinking models to be introduced into the Lithuanian education in general and teacher education in particular.

Master Study Programs of Teacher Education Regarding Sustainable Development

In December 2003, there were 417 Master study programs registered in Lithuania. 58 of them award the teacher’s qualification that amount to approximately 14 percent of all Master programs registered. The analysis of syllabi and content components of Master study programs leading to pedagogical qualifications have shown that most of them follow a very conservative model of education in which most of the attention is given to studying fundamental disciplines. They are mainly built around professional areas of interest.

It is obvious, that there is not enough consideration given to the possibility of changing them, making them more flexible to meet the needs of a rapidly developing and changing society.

There is little attention given to the integrity and interdisciplinarity of the structure of these programs as well as their applied aspects. There is still a tradition of observing and trying not to overstep the strict boundaries of the field that are set. It is clear that the development of multidisciplinary programs could offer a broader dimension to the graduate’s experience.

There is a growing understanding in Lithuania that the experience acquired by future teachers during university studies should be characterized by coherence and not be just a collection of unconnected elements. The research analysis shows that in the curricula of the study programs we still strictly follow the requirement to have compulsory, separate blocks of natural, humanitarian, and social sciences.
What kind of educational experience do these programs offer? Evidently the primary aim of these programs is to train a subject teacher not a pedagogue who is skilled in analytical and critical thinking, ready to respond to the challenges of contemporary and future societies. In the programs too little attention is given to a clear definition of the competencies that a study program is to develop.

Thus, a logical question arises: Is a teacher without methodological fundamentals and knowledge about thinking paradigms a good teacher, even if she/he has a good command of the subject she/he teaches? We know that nowadays to be a highly qualified teacher (having a Master degree) it is not enough to be just a good subject teacher. In addition a lot of other competencies are needed: to have a vision of one’s own, be able to communicate and cooperate, be curious (Fullan, 1998). New competencies, particularly the “vision creation”, are developed not only through developing certain abilities; a clear understanding of what and how things should be done now and in future grounds them.

What is the conceptual framework of these Master programs? Are the ideas of sustainable development reflected in the educational aims set in study programs? What educational aims are formulated in terms of developing students’ minds and modes of thinking as future teachers?

The analysis of Master study programs, leading to teacher qualifications, shows that in some of the programs (those of Physical sciences) some traces of sustainability orientation can be found, i.e. the understanding and the importance of SD are emphasized. But none of the programs puts forward as its aim the task to develop the understanding and the importance of SD.

The research shows that in some teacher training programs there are separate modules, addressing issues of sustainability, e.g. in Klaipeda University (KU) Primary School Pedagogy – the module “World Perception in the Primary School” (3 credits); Vilnius Pedagogical University (VPU) Social Pedagogy – the module “Democracy and Education” (3 credits) and “Education in Microsocium” (3 credits), which are included into the course on Civic education. It was developed together with Social Education Center of Indiana University. There are an integrated “Bioethics” course in the curriculum of Master studies of Ethics education in VPU, “Moral Education”, “Education and Society” in Vilnius University (VU).

When investigating, which models of thinking are developed in the analyzed study programs, we must admit that in teacher education programs (as well as in other studies), as a rule, there are the same types of relics found, which are also found in our social lives: beliefs, convictions and ideologies. Soviet slogans have now been replaced by religious values. The formation of non-critical conscience is still taking place in university studies.

Nonetheless there are also study programs, in which some new methodologies and new thinking paradigms are being introduced. The course on critical thinking is offered to students in many universities that have teacher education programs. Unfortunately, very often (for example, in VPU, Faculty of Pedagogy and Psychology, KU, VU) it is an optional, not a compulsory course. Consequently, there are only a small proportion of university Bachelor and Master students who are acquainted with critical
thinking paradigms. Besides, in some universities (for example, in VU) this course has soon disappeared after being introduced into the study programs.

It is interesting to note that the students, who chose this optional course, as well as in-service teachers, who participated in the seminars on critical thinking in 1999, when asked to explain what motivated the choice of this course, said that they were interested in and intrigued by the title (Karpytė & Piliponytė, 1999). Such arguments demonstrate a regrettable lack of information on behalf of our teachers and students about critical thinking.

The course “Dialogical Thinking” is also offered on Master programs (in VPU Ethics Education program it is compulsory). It analyses dialogical thinking as Socratic rationality and Levinas’s phenomenological understanding of the dialogue. Without doubt, those most informed about different thinking paradigms, are students of Ethics and Philosophy, as the curricula of these study programs include such courses.

But the situation in Lithuanian education is quickly changing. It is worth mentioning that Lithuanian universities together with other universities of the Baltic Sea area (Baltic agenda 21) are actively working on implementation of SD into higher education. As a result of this international cooperation, the study course “Sustainable Development” was developed. It is already offered as an optional course in many universities. We hope that in the nearest future it will be a compulsory part of any study program in any part of the world.

**Summary**

It can be hypothetically stated, that when young teachers (Master study graduates) start their teaching careers at the secondary schools of Lithuania, the majority of them are not sufficiently trained to implement the ideas of SD into pedagogical practice and stress the importance of it in the local, regional and global context.

All teacher education programs should be reviewed and re-evaluated in terms of introducing sustainability issues into curricula and developing competencies, which would make it possible to educate the young generation able to live in harmony with the environment.

A responsible approach to the SD of our country requires including the knowledge of the possible alternative models of the person’s relationship with the environment into the curricula of Master study programs. For this purpose, there should be new courses that meet the needs of teaching SD oriented models of thinking.

However, the unfavorable situation in Lithuanian higher education could be viewed as a natural consequence of insufficient experience of being a free country.

A new conception of teacher education, the Bologna Declaration and other international and national documents on SD, which are widely discussed in Lithuania, will influence teacher education, modifying not only the educational policy of the country, but also introducing more flexible models of teacher training. It is hoped that these views allow redirecting teacher education and making university studies more relevant to addressing all-important issues of the sustainable development of the world.
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Toward Sustainable Education: Balancing Teachers’ Attitudes and Actions

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Abstract
Currently global community introduces different understandings about coherence of economic, social, cultural and environmental aspects toward sustainability. Therefore, three various interpretations of sustainability — anthropocentric, egocentric, and ecocentric are found. Teachers observe sustainability in education creating their own understanding within the existent interpretations.

The paper gives an insight into a yearlong ethnographic study of teachers’ individual attitude and a professional activity toward sustainability that was conducted in the framework of Primary School Teacher study program carried out in Daugavpils University. Documents of the study program, participant observation, group work, individual work and reflexivity statements about the most essential issues of sustainable education served as the sources for data collection.

Data of research were received in three stages and described the culture-sharing group of pre-service and in-service teachers. The received data were analyzed and teacher’s attitude toward the sustainability and their professional activity were evaluated. Research allowed conclusion that orientation to sustainability is more characteristic for teachers’ individual attitude than for their professional activity.

Key words: attitude; teacher; sustainability; ethnography; professional activity.

Introduction
The significant political and economic changes in global community that started in the 1980s drafted the beginning of the new thinking. Scientists and practitioners brought in new concepts to education practice highlighting the importance of sustainability. To follow sustainable development principles, significant influence must come from society’s awareness and education. That is why the need for fundamental changes in attitudes and activity appear in education and teachers usually are perceived as active learners that shape their professional growth through critical reflective participation in practice (Clarke & Hollingsworth, 2002; Schon, 1983; Richardson, 2001) and social interaction (Vygotsky, 1978).

This paper describes a qualitative yearlong ethnographic inquiry of correspondence between the teachers’ individual attitude and their profes-
sional activity in relation to sustainability issue. It was conducted in 18 student groups (102 participants) of Daugavpils University program “Primary School Teacher”. The research presented in this article was carried out during the practical classes of the subject “Social Science and its Teaching Methodology”. The authors of paper were participant observers in the classroom and documented the activities of students. In the process of data collection the following were used: conceptual regulations of education system in Latvia, participant observation principles, group work, artefacts, reflexivity, essays and nomination of categories showing the leading statements about the most essential issues of education for sustainability.

The research questions:
1. What is the individual attitude of pre-service and in-service teachers about the world and the current processes in it?
2. What attitudes are expressed in the professional activity of participants?
3. How does the professional activity of teachers correspond with the formation of their individual attitude toward sustainability?

Ethnography as a Tool for Enquiring about Teachers’ Individual and Professional Attitude toward Sustainability

In order to clarify how does the professional activity of teachers correspond with the formation of their individual attitude toward sustainability, there is a need to study the phenomena in teachers’ natural setting – educational institution – by building a complex, holistic picture that would show diversity and complexity of an issue. The qualitative research, by its definition (Denzin & Lincoln, 1994; Creswell, 1994), can help to look into the essence of a problem. The qualitative research allows us to view the different aspects of this research question in the context of values, social situation, sustainable education and other issues within the teaching of Social Sciences as well.

Out of a number of traditional choices that are used in qualitative research we have chosen the ethnographic approach (Creswell, 1998) that seeks to understand how people within a given culture categorize and prioritize their experience (Jurasek, 1995). Ethnography provides the possibility of studying the subjects in their natural setting, describing their culture in a defined social system based on detailed observations, unstructured interviews and the analysis of documents and artefacts.

Principal tools used for this research are:

- The review and studies of documents that influence the natural setting of participants: Chapter 36 of AGENDA 21, UNESCO report “Education in XXI Century”, “Conception of Education Development 2002-2005”, Guidelines of Primary School Subjects, Primary Education Standard Project in Social Sciences, Primary School Teacher study program of Education and Management Faculty (United Nations, 1992; UNESCO, 1998; IZM, 2002; ISEC, 2003);
- The observation in a natural setting, including the following steps: to observe the phenomenon, to predict an explanation for the phenomenon, to predict a logical consequence of the prediction, to test for the prediction, and to review for any mistakes;
• Collection of participants’ artefacts: essays, presentation of world’s mind maps;
• The review of documents created by participants: statements of individual philosophy of education, categories of themes regarding the attitudes.

According to tradition of ethnography (Wolcott, 1994), the data of research were used:
• To describe the culture-sharing group on a basis of participants’ activity records;
• To analyze the culture-sharing group reviewing the data and segmenting them into sets of common themes;
• To interpret individual experiences and theoretical perspectives of the culture-sharing group.

Description of the Culture-sharing Group

102 third year students (18 groups) of study program Primary School Teacher in Daugavpils University were involved in the research, 73 of them were in-service teachers (IT) and 27 were pre-service teachers (PT) studying in a pre-school education program. Pre-service teachers took part in culture-sharing group research once a week for 90 minutes and in-service teachers were engaged in the research once in three weeks for 180 minutes. The yearlong research was conducted during the classes of integrative study course Social Sciences and Its Teaching Methodology in academic year 2002/2003.

This integrative course is offered by recommendation of practitioners and experts whose conclusion in assessing Latvian educational system was, that several changes is needed in the curriculum of social studies in primary, middle and high schools. In order to ensure succession and systemic in social studies, the curriculum was expanded to a nine year cycle beginning from the first grade. The transformation influenced the whole curriculum of primary school and compelled to look for new approaches to social studies curriculum. The program “Person in the Society” (1999) resulted in the project of National Standards for Social Studies. This program suggested changes promoting extension and integration of curricula and syllabi. The program can help participants to create a critical individual attitude towards the world. These innovations regarding the attitude formation needed to be included in pedagogical activity.

A culture-sharing group (pre-service and in-service preschool teachers) is equally exposed to changes in society. It is a challenge for teachers, who have to meet demands of a society and a particular region, to implement strategic and normative education documents mentioned in previous paragraph. These documents reflect an urge to develop an educational environment that helps individual to incorporate into the ecosphere, to promote a human’s development as an ecosphere’s spiritual dimension, to implement individual abilities and, hopefully, create a revolution of consciousness and reorientation towards sustainability (Whitehead, 1967; Salite, 2002). This process is based on the four pillars of 21st century education: learning to know, learning to do, learning to live together, learning to be (UNESCO, 1998) that directs the teacher’s competence in implementation
of education for sustainability. The creation of new educational environment offer a possibility to develop teachers’ abilities and to learn to fulfill their potential in responsible and biotic interaction with the world and processes within it.

Concerning a human’s attitude towards the world, it is possible to discern several distinct views (Naess, 2001; Berry, 1999; O’Sullivan, 1999; Roszak, 2002; Salóte, 2002) that help to explain individual attitude, values and activity. These views are:

- Anthropocentrism, which claims upon conviction of a human’s ability to understand and control all current processes and their development in favor of the human being. An anthropocentric attitude exaggerates the significance of a human in the biosphere.
- Ecocentrism, which searches for a way to integrate human life with the maintenance of living ecosystems in a complementary way.
- Egocentrism, which expresses an inability or unwillingness to consider others’ points of view, a refusal to accept ideas or facts that would prevent individual from getting what he/she wants.

Evaluating current global and local tendencies and processes in education, the following statements can be made:

- The goal of education in the context of anthropocentrism is to promote orientation towards competition, introduce new technologies and scientific discoveries and cultivate the belief that all processes of the world can be controlled by humans.
- Education in the context of ecocentrism should take care of needs of human beings as a species among species, which means that psychological reconciliation with ecosystems become a primary factor for existence of all kind of life, including human.
- Education does not promote egocentrism (UNESCO, 1998; IZM, 2002; ISEC, 2003).

The above-mentioned attitudes if accepted and introduced in instructional practice can determine the professional activity of a teacher. The culture-sharing group expressed these attitudes explaining their understanding of the world, a personal mission and goal of teacher’s education as well as their professional development.

Data Analysis and Findings

Stage 1

A research question asked in the first stage was - what is the individual attitude of pre-service and in-service teachers towards the world and processes in it?

Participants were asked to complete two assignments: individual essays and mind maps. In essays they explained their understanding and attitude towards the world in its entirety and towards particular objects of world – nature, society, culture, economics, state, and values. Working in groups (4-7 persons in a group), participants presented each other their individual attitudes, rated main categories and agreed on priorities designing a common system. Groups reflected their attitude towards the world in
mind maps on a basis of individual experience, data received in discussions and nominated categories.

Analyzing the received data, we found out that the majority of groups (nine groups) used the anthropocentric attitude as a basis; only two groups preferred ecocentric approach; in seven cases these two attitudes were integrated forming anthropocentric/ecocentric attitude. Further we will call these groups: anthropocentric, ecocentric and anthropocentric/ecocentric groups.

**Anthropocentrism** focuses on humans’ energetic bonds with their environment on a level of resource utilization. Groups of participants (in-service teachers (IT) and pre-service teachers (PT)) as a priority have nominated following categories of attitudes:

- **sustainability** (1 PT group) – mutual bonds; seeing and predicting actual issues; a link with a family; application of experience, traditions, values of previous generations and their transfer to next generations; ability to take responsibility;
- **caring, protecting** (1 IT group) – the world as a value; ethical acts; an individual who saves and applies an ancestral experience and traditions;
- **standards, restrictions** (2 IT groups) – state; limitations created by society; norms; exclusion of multiplicity; values are acquired and perfection of knowledge determined by a culture;
- **individually centered development** (2 IT groups) – systemic; existentialism; experience; traditions and information in correspondence with needs; optimism; a tolerant individual directed to congruity;
- **entirety** (2 IT groups) – the world as an entirety; relevance to Universe; spirituality; God – primary source;
- **technocracy** (1 IT group) – necessity to create and maintain various individual and cultural relationships (individual/group, group/groups, different groups/global society); doubts; pragmatism; individual as a consumer.

The attitudes of anthropocentric/ecocentric groups were summarized in following categories:

- **coherent life and relationships** (1 IT group) – mutual interconnection between things; emotional attitude; interaction of the world and humans; awareness of current processes, needs and values in society; civil responsibility;
- **preservation of identity, culture, and environment** (1 PT and 2 IT groups) – integrity; Latvian life essence; spirituality through mythology; national identity; environmentally friendly management; empathy; compassion;
- **liability, co-evolutionary nature** (1 IT group) – active life position; relation between species that are influenced by space and time; self-inquiry; analysis; synthesis;
- **sense of home and place** (2 PT groups) – sense of human created places; variety of opinions and aspects.
Ecocentrism assesses a quality of human focusing on psychological connections with ecosphere. The participants of ecocentric groups as a priority nominated following categories of attitude:

- **life as a value** (1 PT group) – incorporation into a unitary system of life; sense of duty; sense of affiliation to ecosphere;
- **coherence with environment** (1 PT group) – empathy; interaction with environment; humans as species among species; awareness of historical roots; variety; spirituality; operation from previous experience.

The findings from the first stage of research provided detailed information about wide range of teachers’ attitudes toward world and indicated the similarities with findings of previous research (Salite, Salitis, Klepere, 2002) in Daugavpils University within the framework of UNESCO/UNITWIN project “Reorienting Teacher Education Toward Sustainability”. It created information and experience base for the next stage of research.

**Stage 2**

In the second stage of research the artifacts that provide answers to the research question – what attitudes are expressed in the professional activity of participants – were studied.

To clarify the content of artefacts – essays, presentation of world’s mind maps – created by culture-sharing group, participants of research were engaged in several practical activities:

- Participants chose one particular issue and, using contextual approach (Clark, 1997), discovered the actuality of the chosen issue and presented its deeper analysis. The analysis was supplemented by notions that reflect the character of the issue and by descriptions of activities used during the study process;
- Artefacts of participants were presented in small groups (4-7 persons in a group), then the groups made their choice of an issue. Using pedagogical experience of participants, the group created a common lesson plan devoted to given issue. Afterwards, the main categories of issues were fixed.

Analyzing data received in inquiry, we can conclude that in a majority of cases (10 groups), an anthropocentric attitude was used as a basis of artefacts, 8 groups have chosen an anthropocentric/ecocentric attitude and there were no groups, which would choose an ecocentric attitude as a basis of artefacts.

In **anthropocentric group** participants’ artefacts were classified according to particular categories of attitude:

- **sustainability** (1 PT and 2 IT groups);
- **standards, restrictions** (1 IT group);
- **individual centered development** (1 PT and 1 IT group);
- **technocratism** (1 PT and 2 IT groups).
These categories were observed also in the first stage of research and only one new category was nominated.

**transformation** (1 IT group) – tendency to transform; adaptation skills; positive life experience.

For **anthropocentric/ecocentric** group we nominated particular categories of attitude according to the priorities of the group:

- **coherent life and relationships** (1 PT group);
- **preservation of identity, culture, and environment** (1 IT group);
- **liability, co-evolutionary nature** (1 PT group).

These categories were observed also in the first stage of research and two new categories were nominated.

- **inquiry into the world** (1 PT and 2 IT groups) – awareness of human’s place in the world; healthy lifestyle; coherence of the world and understanding of consequences if harmony is misbalanced; practical activities;
- **awareness of sustainable development** (2 IT groups) – accordance to demand; variety; operation with experience and handing it to future generations; respect of rights of all beings; trust to the future.

The second stage of research showed that there is a little coherence between participants’ individual attitude and their practical instructional activities. We recognized teachers’ fear to experiment and doubts to introduce ecocentrism as one of basic principles in education for sustainability.

*Stage 3*

In order to clarify the correspondence of teachers’ individual attitudes with their professional activity third stage of research was organized. The question was: *how does the professional activity of teachers correspond with the formation of their individual attitude toward sustainability?*

Observing participants and comprising the data received in previous stages, we found the several tendencies.

Ecocentrism is not valued in professional activity – two groups of teachers, whose individual attitude was presented through the ecocentric categories, changed their priorities to ecocentric/anthropocentric categories because, in their view, education system does not allow realization of ecocentrism. Majority of groups (10) are not likely to change their individual attitude during the professional activity – mostly these are the groups whose priority was anthropocentric categories (seven groups), regarding the ecocentric attitude – three groups. Three groups were found which did not change their attitude.

In organizing professional activity, new categories appeared: for example, inquiry into a world that includes awareness of sustainable development (ecocentric/anthropocentric), which is also significantly influenced by ecocentrism. There were cases when a more active position was cre-
ated in the professional field. This position ranged from normative, restrictive to transformative view.

Majority of groups (8 groups) transformed their attitude. The individual and professional attitude was transformed mostly from anthropocentrism to anthropocentrism/ecocentrism (5 groups). Data of research shows that preservation of identity, culture, and environment, sense of home and place, and entirety decreases in professional activity of a culture-sharing group or only the particular categories as sustainability, technocracy, inquiry into a world and awareness of sustainable development were emphasized. There were no marked differences between the different subgroups of the culture-sharing group (IT/PT), though the world-view of some groups is more optimistic and open to changes and new tendencies.

Conclusion
Ethnographic research has shown that:

- In order to facilitate the correspondence of individual attitude and professional activity, more attention should be paid to development of teachers’ professional skills to see various contexts of learning, to choose own goals and various approaches and to elaborate the corresponding models of pedagogical activity for students’ development.
- Anthropocentrism has lost its original definition and now includes new qualities and spectrum, which is connected with changes in the educational system. These changes include innovations in programs and their content, as well as mechanisms of programs’ initiation and implementation.
- It is characteristic for this particular culture-sharing group that individual attitudes can be more diverse, more open to changes. At the beginning of one’s professional activity there is a tendency to choose proven (traditional) methods, approaches. Traditional teaching methods that are oriented towards acquisition of knowledge create consuming attitude and limit the discovery of real world and requirements for changes, thereby they do not further education for sustainable development.

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Helsinki Study: Learning in the Modern Preschool Settings for Six-year-old Children

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Abstract

In Helsinki teaching and learning at the preschool settings was studied in 2001/2003. In spring 2003, a representative sample of 6-year-old children were evaluated by their preschool teachers in the city of Helsinki. The teachers rated the development and learning of these children in following areas: (a) Learning to learn skills, (b) Social skills, (c) Language and interaction, (d) Mathematics, (e) Ethics, (f) Science and the environment, (g) Health, (h) Physical and motor development, and (i) Art and culture. The results showed systematic differences between target learning areas. The ratings for health, psycho-motor skills, and mathematics were among the highest, while those for science and the environment as well as for ethics were among the lowest. The results showed also systematic differences in learning between administrative areas, boys and girls, and age levels of children. Highest and lowest learning results among the learning targets, respectively, were also identified. Explanations for the variations in children’s learning are discussed.

Key words: preschool education; learning targets; learning outcomes; gender differences; site background.

Background

An important pedagogical tool for the new Finnish preschool education for six-year-old children is the core curriculum established in 2000 (Core curriculum for pre-school education in Finland, 2000). In the core curriculum the following general objectives are specified for national preschool education:

- Promote favourable growth, development and learning opportunities for children;
- Support and monitor children’s physical, psychological, social, cognitive and emotional development and prevent any difficulties that may rise;
- Strengthen a healthy sense of self-esteem with the aid of positive learning experiences and provide opportunities for diverse interaction with other children and adults;
- Take into account the special needs of girls and boys;
- Guarantee equal opportunities for children to learn and to start school;
- Strengthen children’s positive self-concept and their ability to learn skills;
• Learn the basic skills of and knowledge from different areas of learning;
• Learn to understand the significance of a peer group in learning;
• Learn the joy and enthusiasm of learning and to face new learning challenges with courage and creativity;
• Learn how to reflect on what is right and wrong;
• Strengthen and develop children’s linguistic and cultural identity and their ability to express themselves;
• Promote children’s interest in nature and an idea of their own independence and responsibility for both nature and the human-made environment.

The core curriculum points out that knowledge cannot be directly transferred to children through teaching. Instead, children should themselves generate new ideas on the basis of their own previous knowledge and experience. The central concept in the pedagogical approach stresses the importance of a child-centred approach in which children should be active learners and adults are simply guides. To support the children’s learning process and to guide children toward becoming conscious about their own learning process is important in everyday practice. Learning should also be based on playful and imaginative activities including drama, fairy tales, stories, etc. By using these activities the preschool experience should also promote children’s linguistic development.

An important pedagogical principle of the core curriculum is integration. In regard to this, it is important to recognise that the need for integrated teaching and learning has had a long tradition in Finnish early childhood education (Ojala, 2002a). According to the core curriculum, integrated preschool education is to be based on themes related to the children’s life in the community as well as to curriculum contents, which expand and analyse the children’s view of the world. The selection and specification of integrated themes should be negotiated with the children. Taking into account different branches of knowledge, the processing of experience, interaction between adults and children, and a diverse use of working methods is important when working with themes.

Even as the importance of “theme” learning is recognised, the subjects for learning and teaching are also specified in the core curriculum. The core subjects are:
• Language and interaction;
• Mathematics;
• Ethics and philosophy;
• Environmental and nature studies;
• Health;
• Physical and motor development;
• Art and culture.

The nature and procedures of assessment are also recognised in the core curriculum (Core curriculum for pre-school education in Finland, 2000). On the one hand, assessment is based on the achievement of the core subject objectives. On the other hand, the assessment should be based on the objectives of individual growth set in the children’s educational plans. Im-
important to assessment is that teachers promote the children’s capability of self-assessment by supporting the development of the children’s self-concept and the analysis of their own learning. In general, more emphasis in assessment is placed on the progress of growth and learning than the achievement of objectives.

A new idea in the core curriculum is the suggestion that the educational plan can be made in co-operation with parents on an individual or group basis. In this plan the factors essential to individual development, such as objectives for the child’s growth and development as well as assessment of the child’s strengths and weaknesses, are identified. Children in need of special support are then identified in the core curriculum. Other special preschool groups are children within extended compulsory education or those for whom a decision has been made to start the basic education one year later.

It is important to recognise that the core curriculum produces the pedagogical guidelines for modern Finnish preschools. Based on the guidelines in the national core curriculum, preschool settings around Finland must prepare a detailed curriculum in order to organise provision based on local circumstances and profiles. For this reason the city of Helsinki has produced a detailed curriculum for the education of 6-year-old children. Almost all preschool settings in the city of Helsinki are operating in day care centres, of which a large majority are public.

**Previous Research Findings**

Before the year 2000, preschool education for six-year-old children has been developing since the 70s. The feedbacks from these experiments have usually been positive (e.g. Ruoppila & Korkia kangas, 1975; Tiihonen, 1978, 1987; Ojala, 1993; Ojala & Siekkinen, 1998, 16-20). The year in preschool has supported children’s overall development, especially in the social-emotional area. The teaching has changed, focusing more on planning and guided lessons. In typical lessons and activities teachers used play and games, movement, music, exercises in practical work, fairy tales, the observation of pictures, the observation of nature, trips, and celebrations.

Cross-cultural comparative studies can be important tools for understanding the Finnish approach to preschool education. Within the IEA Pre-school Study, Ojala (1999, 2000, 2002b) has compared differences between Finnish day care centres and Irish nursery classes using a context-process-outcome model. In this comparison children were studied and followed between the ages of four (the preschool year) and seven. When comparing what expectations the teachers held for children’s learning and development, the most characteristic for Finnish preschool culture were expectations for social skills with peers and skills for self-sufficiency. When observing the teacher activities in preschool settings, teachers were especially found to support children’s social and personal skills. The pedagogical processes in Finnish preschool settings were in many ways based on child-initiated activities. One example for this was the great number of children’s physical-motor daily activities for developing cross- and fine motor skills. In addition, Finnish children had many opportunities to take part in free activities. Additionally, the social context in the setting sup-
ported the development of personal-social skills: the children frequently worked independently in small groups (2-6 children), alone and with another child daily. When comparing learning outcomes at the age of four, the Irish children achieved higher scores in most cognitive and social measurements, especially in pre-academic skills (early learning in reading, writing, mathematics and science). The developmental and learning outcomes showed that Finnish preschool children were strong in social skills and understanding spatial relations.

The most relevant research findings for understanding the context and mechanism of learning during the preschool year can be found in a research project from the University of Helsinki. The first results showed that teachers did realise the aims of preschool education with certain preferences (Hytönen & Krokfors, 2002). Aims related to altruism and the acceptance of differences, socialisation, ethical education, and movement were seen as the most important. It was observed that the least important aims for the teachers related to health education, motor and manual skills, art and music, and religious education valuating different opinions about the world and religions. Between these two extreme groups aims were seen for learning and thinking, the environment and science, the mathematics as well as language and interaction.

Aims of Research
In the City of Helsinki the teaching and learning during of the preschool year were studied in 2002/2003. In the spring 2003, a representative sample of 6-year-old children in preschool settings was evaluated by their preschool teachers. This study aims to find answers to the following five research questions:

1. How have children learned in the nine target learning areas?
The target learning areas are: (a) Learning to learn skills, (b) Social skills, (c) Language and interaction, (d) Mathematics, (e) Ethics, (f) Science and environment, (g) Health, (h) Physical and motor development, and (i) Art and culture.

2. Can we identify gender differences in children’s learning?

3. Is children’s learning connected with the age of children?
There were two age levels under examination: children who were aged 6 years and 9 months or younger and children who were 6 years and 10 months old or older.

4. Do the sites where preschools are located influence children’s learning?
The site background is based on the seven geographical units of administrative structure for organising preschool service in the city of Helsinki.

5. Among all learning targets examined, what are those acquired best or correspondingly worse during the preschool year?

Method
Sampling
The population of 6-year-old children in preschool settings in the city of Helsinki included about 4860 children in the spring of 2003. The total
amount of preschool settings was 420. Almost all settings were day care centres, with only four settings located at schools. The sample of 420 children (about 9% of the population) and 105 settings (one setting at a school) was selected randomly. The sample was stratified according to the seven administrative districts in the city of Helsinki. The sampling was proportional to the number of children and the settings in each district. When collecting the data, the researcher received evaluation data of 263 children, which covers 63 % of the original sample (N=420).

Instrument

The children’s learning progress was evaluated by their teachers during the preschool year (spring of 2003). The rating was done using a questionnaire which consisted of two parts. The first part was reserved for background information about the teacher, the setting, achieved training, and the children under evaluation (50 items in all). In the second part of the instrument, teachers were asked to evaluate the learning in nine target areas:

(a) Learning to learn skills (15 items)
(b) Social skills (12 items)
(c) Language and interaction (25 items)
(d) Mathematics (27 items)
(e) Ethics (8 items)
(f) Science and the environment (8 items)
(g) Healthy (8 items)
(h) Physical and motor development (8 items)
(i) Art and culture (20 items)

The nine areas were rated on a scale from one to five (1 = very low level, 3 = medium level, 5 = excellent level) for each item. While the number of items differed among the nine learning areas, the statistical analyses across areas were based on corresponding values (the total sum of scores was divided by the number of items). The reliability for rating the children’s learning was calculated by an Alpha-coefficient. The result showed a very high reliability for the teacher’s rating (Alpha = .95). Depending on the area of learning, the Alpha-reliability ranged from .82 (Physical and motor) to .96 (Mathematics).

Results

Learning in different target learning areas

The results show the differences between learning areas (Figure 1). The goals in health, psycho-motor skills, and mathematics had a high achievement rate while goals in science and environment as well as ethics had low achievement rates. A pair comparison of means between areas could show that learning to learn differed significantly from other areas except for social skills and language. Furthermore, the mean of the area of mathematics was different in relation to all other areas except physical and motor skills. All other paired comparisons were significant.
Comparing learning of boys and girls we can observe that the results of learning for girls was higher in most areas of development (Figure 2). The significance of the differences was tested by using MANOVA. The result shows differences in the following areas:

- Learning to learn skills (F= 8.07, p= .005)
- Social skills (F= 6.82, p= .010)
- Ethics (F= 4.26, p=.040)
- Health education (F= 5.48, p=.020)
- Physical and motor skills (F= 14.70, p=.000)
- Art and culture (F= 14.87, p=.000)

The F-values show that the differences were the strongest in physical and motor skills as well as in art and culture. However, even in each of these two areas gender can explain only about 6% of the total variation in learning scores (R Squared values). The only area in which the results of learning for boys were slightly higher comparing with girls was mathematics. However, this difference was not statistically significant (F= 1.22, p=.270).

[Figure 1. Children’s learning at the end of the preschool year by areas of learning (N=218)]

[Figure 2. Gender differences of learning comparing means (Boys = 104; Girls = 110)]
Learning at different age levels

Teachers and parents as well as developmental psychologists usually agree that age may influence the learning, especially in early learning. To gain more information, the children in this study were divided into two age groups as presented in Figure 3.

When comparing the learning outcome between the youngest and oldest preschool children, we can find systematic differences across the nine learning areas. In all areas the learning results was higher for older children. MANOVA testing shows that the difference is statistically significant in following areas:

- Learning to learn \(F=4.45, p=.036\)
- Language \(F=8.03, p=.005\)
- Mathematics \(F=9.77, p=.002\)
- Health \(F=4.89, p=.028\), and
- Physical and motor skills \(F=5.47, p=.020\)

Correspondently, age did not have a significant influence on learning about social skills, science and the environment, ethics, and art and culture. In fact, the only area in which younger and older children achieved almost equally was art and culture. However, calculation of the R Squared values can show that the age level in each area did explain less than five percent of the total variation of learning (e.g. five percent in mathematics).

Learning at different sites

The City of Helsinki organizes the preschool activity in seven administrative areas. Each area has a network of preschools located in different sites.
of the city. The administrative areas differ according to the number of preschools, setting characteristics, teacher characteristics, etc. Areas in different parts of the city also have connections to the home background variables of children (educational level, employment status, economic status, etc.). All these factors make it possible for the described areas to impact the learning progress of children during their preschool year.

To answer if the administrative areas and factors associated with them impact learning outcomes we first compared the total means of learning across the units (the total sum of the nine learning areas). The results show that there are variations in levels of learning (Figure 4). We can roughly identify three clusters. Children having preschool experiences in areas 1, 2, and 6 seem to have the highest learning outcomes. Then, we can identify areas 3-5 as having moderate learning outcomes. Comparing with all other administrative areas, area seven has children with the lowest outcomes. The ANOVA testing shows that differences in children’s learning across seven areas were significant (F= 3.75, p < .001) explaining about ten percent of the total variation (R Squared – value).

To provide a deeper analysis about the role of the setting in children’s learning ANOVA testing was done on the effects of each of the nine areas of learning. The testing confirmed that the learning outcomes were different across the seven areas in almost all areas of learning. The strongest differences across the areas were found in art and culture, health and mathematics. The only area having no discriminating power was children’s physical and motor learning.

Figure 4. Learning in administrative areas (N=215; 1=26; 2=48; 3=14; 4=23; 5=49; 6=19; 7=36)

**Highest and lowest learning results among the learning targets**

By calculating the means of all the 130 items in the teacher’s evaluation and arranging them in descending order we can identify the skills 6-year-old children have learned best and worst during their preschool year. The best learned skills were e.g.:

- The child recognizes the numbers 1-10
- The child can count from 1 to 10
The child can manage basic hygiene with the help of an adult
The child can dress independently
The child knows the concepts: the biggest, the smallest, the middle
The child understands the concepts: similar-different, similar-similar
The child understands the concepts: more, less, and as many as
The child eats and behaves during meal times
The child knows the right way to hold a pen
The child listens to stories and fairy tales
The child understands the concepts: locations and directions (up-down, front-behind, ahead/forward-back/backward)
The child recognizes basic shapes

Correspondently, the learning results were lowest e.g. among the following learning targets:

- The child reads words
- The child writes words
- The child measures different objects and locations
- The child can use tools of measurement
- The child understands the principle of lasting development
- The child expresses her/himself in drama
- The child can tie his/her shoes
- The child can provide the missing words from a sentence
- The child listens to different kind of music and discusses them
- The child produces different rhythms
- The child can recognise basic shapes and other shapes
- The child can produce rhymes

Conclusion

The present study within the Helsinki study is the most comprehensive analysis of children’s learning in modern preschool settings in Finland. The previous findings indicate that there are always variations in learning. In this study the variations emerge in relation to seven learning areas, gender, the age levels of children, and the administrative areas of settings. In addition, learning varies depending on content of learning targets in that the learning outcomes are for some learning targets very high but is much lower for others.

The findings confirm that health, psycho-motor skills, and mathematics were areas in which children’s learning were evaluated as the highest. Learning in science and the environment as well as in ethics was at the lowest level. Does this relate to how teachers evaluate the importance of learning goals (see Hytönen & Krokfors, 2002)? Generally, they do not relate very well. When examining teacher preferences, aims related to altruism and the acceptance of differences, socialisation, ethical education, and movement were seen as the most important. On the contrary, teachers expressed that the least important aims related to health education, motor and manual skills, art and music, and religious education valuating different opinions about the world and religion. It seems that we cannot predict well children’s learning from teachers’ preferences and intentions. One explanation can be that the modern Finnish pre-schooling culture is based in many ways on a child-centred pedagogy in which children are encour-
aged to take a self-initiated and active role in learning. Within this kind of culture integration of goal-based teaching and the teacher’s own pedagogical thinking can be difficult. The other possible explanation is that goals selected in the core curriculum are organised and expressed using abstract terminology making them difficult for teachers to understand and implement in their teaching practice.

The gender variations that were found are important. Now we can better understand why girls in schools and afterwards usually achieve their learning goals in a more careful way in Finland. This study shows that this type of differentiation probably starts early and perhaps before the school years. A mediating factor supporting this tendency during the preschool years is the fact that almost all teachers are women. They might understand better how to teach girls and how the girls are learning.

The age differences that were found are not easy to transform into a pedagogical framework. During the preschool years learning is probably based in many ways on maturation, although psychological theories focusing on maturation are not popular in the field. Whether the teachers in their pedagogical practice should try to balance the age difference or to offer support for individual learning is important to resolve.

Modern Finnish education and teaching alongside economical, educational and social progress has one emerging problem. Along with an increasing aid from the government we notice an increasing number of youngsters and adults dropping out of education and learning. The reasons for this dropout are closely connected to environmental and societal factors and children’s family background. On the other side, we confront this phenomenon inside an educational system in which schools are becoming more different. The difference between high quality and low quality schools is increasing. The study results showed that one potential agent for starting or increasing the differentiation can be preschool education. Some preschool units present more opportunities for progressive learning comparing with other units. An important but difficult task is to find a societal and pedagogical solution for this problem.

Learning also has a cultural context. The nature and content of the preschool curriculum reflects important cultural codes for the purpose of teaching and learning. The item based analysis of children’s learning can tell something about these codes. According to the findings, children have learned targets of counting and numbers, concepts used in comparison, and self-helping skills more deeply. Compared to these, the status of learning was lower in reading and writing skills, science and environmental targets, and art-related targets. Is this type of focus correct or should we try to change it?

One last important conclusion is worth expressing. Even as we were able to identify factors causing variations in children’s learning, the study findings also indicate that any single source of variation is not dramatic. We see that the main effect of each factor examined in relation to children’s learning explained a total variation of learning outcome of about 10% or less. This means that in general modern Finnish preschool education is still working to provide equal opportunities for high quality teaching and learning.
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Developmental Transition to School Learning: Challenges and Possibilities

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Abstract

Readiness for and transition to school learning is an actual problem all over the world. In Scandinavian and Baltic countries the general problem is often formulated as the problem of developing testing methods for measuring the readiness. Accordingly, the main task of day care and pre-school institutions is to develop the basic set of skills and knowledge. Finnish pre-school class does not aim at serious developmental changes. The main goal is adaptation to school life. A new theoretical concept of ‘transitional activity system’ is introduced to explain the developmental transition from play to school learning. Transitional activity system is based on narrative learning and aims at supporting qualitative changes in developmental crisis situation. A new pedagogical approach and didactic tools are developed in our research project on developmental pre-school education in vertically integrated groups of 4 – 8 years old children. In five experimental groups instructional interventions are focused on three problems: 1) Development of educational communities, 2) Construction of pedagogical tools of narrative learning, and 3) Organization of narrative learning environment for children’s creative activities.

Key words: school readiness; narrative learning; child development; Transitional activity system; play.

Introduction

Readiness for and transition to school learning is an actual problem all over the world.1 In Scandinavian and Baltic countries pre-school education is a new challenge to educational systems. Finland has introduced a new pre-school class for six years old children as a preparatory step before school start. In the on-going curriculum reform a unitary curriculum model has been accepted starting from pre-school education.

The Finnish system allows organisation of pre-school class either at kindergarten or at elementary school as a zero grade. So, the work of pre-school is connected with day care or school system. Thus, different pre-school subcultures are created in which methods and work styles are different.

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1 The first issue of the Themed Monograph Series of the European Early Childhood Education Research Journal in 2003 is on transitions
One of the main tasks of pre-school system is the preparation for the next step of learning. Flexible transition from day care to school is often used term in this context. This is in clear contradiction with the ethos of educational systems oriented toward child’s development and preparation for lifelong learning. From this point of view we should talk about more general learning potential and not just school readiness as the ability to study in the first grade. Elementary teacher’s needs are the main source of defining the content of school readiness.

If we look at school transition taking into account developmental perspective, we should have in mind the whole developmental trajectory from pre-school with lifelong learning perspective as a general framework. There are many capital changes in psychological functioning in a pre-school child’s life, which have essential effects on later development, e.g. mastery of language and symbolic presentation, creative imagination, emotional regulation of behaviour, goal orientation and motivation, etc.

School readiness is tested by screening and dividing children into two categories: those ready to start school and those not yet ready. Tests do not reveal the most essential characteristics of the child, learning potential or next step in development. Tests reveal what the child can do alone in a test situation, but not what he or she is able to learn with the help of teacher or other children. This kind of assessment, aiming at detecting the zone of proximal development is called dynamic assessment (Sternberg et al., 2002; Tzuriel, 2001).

How should we organise pre-school educational practice to develop learning potential? What activities promote the developmental transition from play to school learning best? What kind of assessment can replace testing at transitions? At first we have to look at transitions as developmental phenomenon.

Developmental Crisis at 6 – 7 Years

In the Scandinavian educational tradition child development has always been an important background factor, but this system does not actively aim at developmental results. School readiness is based mainly on the knowledge about stages in three domains (cognitive, social, emotional) at transitions. Pre-school delivers elementary knowledge to a child, without any broader developmental perspective.

A child’s life at 6-7 years has some general traits that have implications to educational methods and approaches. One of the most promising approaches is the idea of qualitative reorganisation of a child’s life at transitions from one stage to another. Development is not a smooth growth of competencies: rather, there are rapid periods of radical changes, which could even be called developmental crises. One of these crisis periods, according to L. Vygotsky, coincides with the transitions at pre-school age. We should ask: how pre-school education takes as a starting point this developmental crisis?

An essential psychological change at the onset of the crisis is the disappearance of the child’s spontaneity. A certain natural attitude towards phenomena in environment disappears and the child becomes more capricious. Behind these negative changes there is a positive one, the develop-
ment of child’s own will. The child starts to form independent opinions and own position towards phenomena irrespective of outside pressure or situations.

The crisis can be characterised by the following features:
1. Between willing and doing appears consideration on the meaning of doing for the child and what doing brings for the child;
2. The child is able to reveal some side of himself/herself, but can hide another;
3. The symptoms of “bitter candy”, in other words, the child tries to hide disappointment and emotional experience connected to it from others.

The crisis brings emotionally mediated evaluation of the sense and meaning of doing. The orientation towards the evaluation of the sense and meaning of doing is a sign of transition to a new developmental period.

The period of crisis leads to a new type of generalisation. The child is able to take into account non-present factors and foresee possible turns and consequences. The way of experiencing becomes more complicated and multi-layered. The child is able to make choices according to his/her internal orientation, to keep emotions, imagination and possibility for inner actions. Internal world and external reality become differentiated and the child starts better understand their differences.

The ability to carry out internal action is a turning point in psychological development. The conscious division of internal and external opens the genuine world of emotions for the child instead of situational emotional reactions. The child starts to recognise himself/herself as the source of emotional states and can guide his/her own mental processes. A small child is at the mercy of situational emotional reactions. The new emotional world frees the child from the power of emotional reactions and helps to master experiences and “perezhivanie”.

Before the crisis child does not experience the contradiction between purposes and actions. Thinking, imagination and emotions are intertwined with external actions. Active doing replaces thorough contemplation and elimination of the causes of negative experience soon enhance the mood of the child according to principle “out of sight, out of mind”. Even after the period of crisis the child’s general orientation is active one, although he/she is able in certain situations to contemplate and emotionally experience the situation.

Narrative Learning as Transitional Activity System

The beginning of school is a big challenge for a child. He or she is expected to manage independently many new situations and meet new challenges. The whole life changes qualitatively. Pre-school class at six brings the challenge a year earlier. The pre-school year creates a transitional period between day care and school. The child is not any more day care kid and not yet a pupil. This new period has special developmental tasks, which are different from day care and school.

In the Scandinavian research tradition there are arguments explicating that the transition from play to learning activity should take place through an intermediate Transitional activity system. Pramling (1994) has
proposed a new “developmental education” based on the development of children’s reflection on their own learning and thinking, which should build a Transitional activity system between play and school learning.

The Transitional activity system proposed by Broström (1999) is “a frame play”, which is an enriched play that combines instructional elements and play. The task of adults is to organise for children new real life experiences where knowledge content is acquired during a play. For example, children visit fire brigade, get acquainted with the work of firemen, and try out their equipment. Afterwards, “Fire brigade” play is organised in which the adults encourage children to use their experience from the visit.

Van Oers (1996) has combined play and instruction in a special way. The play “Shoe store” was organized by adults, but carried out by children. The adults have in mind and try to promote children’s semiotic activity carefully avoiding intervening in play process. Only when children have semiotic problems, the adults put questions: Are you sure? For example, a semiotic problem arose when children had a high row of shoeboxes and they should know what kind of shoes are in the box without opening it. Written marks on the box should tell what is inside. At this point children were asked: Are you sure?

The prototype of narrative learning is a story. J. Dewey understood the power of story: “Much assistance in the selection of appropriate material may be derived by considering the eagerness and closeness of observation that attend the following of a story or drama. Alertness of observation is at height whenever there is plot interest. Why? The balanced combination of the old and new, of the familiar and the unexpected…alternatives are suggested, but are left ambiguous, so that our whole being questions: What happened next? Which way did things turn out?” (Dewey, 1933: 253).

The logic of story as the basic model of curriculum does not mean that teaching turns into story telling. The whole movement of problem-based learning is based on the logic of a story. This logic fits better the character of learning and action than linear explanation of facts. Narrative logic breaks the traditional didactic principle of proceeding from simple things to complicated. Good stories always have a multi-layered structure, which makes them fascinating. The same feature should be included in the structure of curriculum.

Egan (1986: 41) has proposed “the story form model” for curriculum design. A starting point of any story is a contradiction or opposition. The story of “Cinderella” is about tension between good and bad, and all turns and features of the persons of the story are related to it.

The proposed story model of curriculum presupposes new skills of the teacher, which even may look controversial. The teacher should be flexible and creative, but at the same time analytic and reflective. A role metaphor could be a play writer searching for solution in transforming the script into children’s living action and an artistic director having a developmental meta-task in mind when guiding children’s activities.

An attempt to explain the developmental transitions from play to learning activity in line with Vygotskian tradition was made by Davydov (1996). Play develops the child’s imagination and symbolic function. Thus, the child is able to act in imagined situations and replace the real things with sym-
bolic actions and meanings. Play lacks real contents and real mastery. The child has the need for mastering in reality that which is possible for him or her in play only. Vygotsky (1984) listed four higher mental functions developing in play: thinking, imagination, intention, and generalized emotions.

If we accept V.Davydov’s explanation on the nature of transition, Transitional activity should emphasize and demonstrate the contradiction between the products of play and demands of real actions and activities. The most effective method of demonstrating this contradiction is to construct activity environments, which combine the requirements of mastering reality and imaginary situations at the same time (Давыдов & Кудрявцев, в. т., 1997).

An advanced educational technology for constructing narrative learning processes is behind the model of “play worlds” developed by Lindqvist (1995). Play world is partly based on Vygotsky’s (2004) analysis of children’s creativity and imagination. He emphasized the syncretistic nature of children’s creativity and aesthetic activity. Play is the prototype of all aesthetic activity. He wrote: “This syncretism points to the common root that unites all different branches of children’s art. This common root is the child’s play, which serves as the preparatory stage for his/her artistic creation.”

By taking aesthetic and syncretistic nature of play as a point of departure it has been possible to construct joint play world of children and adults continuing for months. A theme of play world can combine written stories, storytelling, music, dramatization, visual elements, the use of roles (teacher in role), imaginative play, construction of activity environments, etc. A long-term evolving play world is a developmental super-task (Stanislavski in Toporkov, 2001) or it is based on developmental needs of the group of children (e.g. fears, acceptance of differences, lying, etc.). The choice of themes should be based on children’s real problems and combine problem orientation with narrative activities. The basic problem (developmental super-task) is dealt with each time from different aspects.

The problem solving connected with themes of play worlds are not ordinary well-defined problems. Play worlds often offers problems as the riddles of sense, which presuppose creative extra-ordinary solutions. Each time there is a possibility to raise specific problems in the frame of the general theme. Adventure and the classical story line of folktales in which the hero meets different challenges and problems is a natural element of each session. The realism of the problems included in the story line can be varied as well as children’s participation in their solution.

A good candidate for the model of Transitional activity system is narrative learning in which the sense created by a story or play is combined with multi-level problem solving. Narrative learning is based on the products of play activity, but problem solving is not any more taking place in an imaginary situation. We can suppose that narrative problem solving is no more imaginary activity, but also not yet realistic one. Realism and imagination live side by side in the child’s activity.

We are focusing on narrative learning as a social and cultural phenomenon on the collective activity level. Each activity system has parallel collective and individual levels as Engeström (1987) shows in his basic
activity model. We can suppose that primary developmental transitions take place in activity systems, and individual transitions depend on the individual child’s participation. Adults organize play world activities, but adults’ participation should follow the aesthetic logic of play activity.

We can describe narrative learning by using the basic model of an activity system in the following way (see Figure 1):

The object of narrative learning is the tension between meaning and sense of cultural phenomena focused on by the community. The object of narrative learning is not factual contents met in the narrative material or problem solving in the traditional sense. Cultural meanings, which in narrative environment are intertwined with the story lines, are essential. Problems met in the narrative environment are not well defined. Problems have several levels and can be interpreted in different ways. One of the typical challenges of narrative learning is the interpretation of the problem.

The tension between meaning and sense as the object of narrative learning asks for specific tools of activity, which at least partly are products of pretend role-play. The central tool is the mastery of symbolism in stories and thinking. This is connected with the breakthrough of “emotional self” and emotional identification with the narrative heroes. This is why children’s narrative problem solving is not identical with the realistic problem solving mastered by adults. Problems are not outside “in the reality” as adults conceive them, but children are “inside the problems” due to imagination and emotional identification. Children “live through” the prob-
lems, and the sense of problem solving differs from adult problem solving and it opens the possibility for creative experimentation.

At the stage of pretend play there are successive transitions from play to negotiations on to pretending and back to play. We can suppose that similar transitions take place in a narrative environment, and narrative problem solving is confronted with “reality testing”. Solving a problem on a narrative level creates a new problem: can this problem be solved in this way in reality? The solution makes sense in a narrative environment, but does it have a general meaning? This problem can be solved with dialogical tools.

Dialogue is also needed in revealing the sense of narratives, because every story includes something more than just the evolving story line. As a result, several interpretations are possible. Comparison of individual interpretations and experimentation with sense is necessary for understanding. A typical form of training with interpretations is play with rules and games, which require discussions on the rules and continuous checking of them.

The subject of narrative learning is a problem-solving hero. As a result of emotional identification, the children adopt the role of heroes and attack problems in the role as well as their own problems. The use of roles is not visible in role actions; the level of imagination is sufficient.

Narrative learning is carried out in narrative learning communities. In “play worlds” adults and children jointly construct the community in each theme. All children are not present at the same time in all gatherings, e.g. reading happens daily in small groups. The community and its learning process is not a phenomenon starting at a certain point and leading to learning results defined in advance. The learning of the community is an open process in which individuals take part in a different way.

The division of work in a narrative learning community has two levels: between adults and children, and between individual children. The adults are responsible for the continuity of a theme and for bringing new material into the themes during successive sessions. Adults are also responsible for planning, but they have to obey the aesthetic form of play in contacts with the children. The adults have to raise problems on the plots of stories and themes at the level of children’s role relations.

We can suppose that narrative learning and problem solving is connected with preceding pretend role-play and transition to school learning or the proper learning of activity. As a transitional activity system narrative learning is not a pure role-play, but it is not yet systematic school learning either.

Construction of Transitional Activity in Vertically Integrated Education

The model of Transitional activity has resulted in a new pedagogical approach and didactic system supporting children’s developmental transition to school learning (Hakkarainen, 2002a, b). Didactic principles aim at qualitative changes in children’s psychological development. They are not limited to giving advice how to arrange instruction at pre-school stage. We are trying to construct genetic experiments in Vygotskian sense.

In 2004, there are five integrated groups of children between the age of 4 and 8 years in Hyvinkää and Kainuu district. The aim of the study is
to construct child-centred integrated approach to transitions at the beginning of school life. This general aim is divided into three domains each having specific goals and objectives. These are:

- **Goals for developing learning environments:**
  - Creation of educational community for each group and support of professional development of each educator;
  - Improvement of didactic methods, activity forms and environments in developmentally appropriate way;
  - Support of peer learning, cooperation, and communication.

- **Goals for developmental teaching:**
  - Teaching is oriented to children’s sense making and it should give space for children’s experimentation and shaping of self-concept;
  - Teaching is oriented to children’s personality development and overcoming developmental crisis at 6 – 7 years;
  - Orientation to developmental transitions in emotional experience, generalizations, and will.

- **Goals for developing individual learning potential:**
  - Development of creative imagination, reflection and sense making;
  - Taking and sharing responsibility with others;
  - Developing the need and motivation for changing oneself;
  - Forming personal relation to phenomena and seeing alternative points of view.

The prime challenge of vertical integration is the clash of different organisational cultures in new teams (primary teacher, kindergarten teacher and nurse). A new model of cooperative work is needed. Subject oriented curriculum and teaching does not work with small children and care oriented work with small children does not work with school children. New integrated forms are used and children in age-mixed groups work together 70-80% of the time.

New educational practices and methods are developed in monthly seminars. The seminars are forums of exchanging work experience in each group and introducing new ideas and possibilities for organizing developmental practices. Each team is responsible for the results of their work and practical solutions of every day work. Intervention takes place on a more general level, e.g. by introducing methods of pedagogical documentation, presenting examples of narrative projects, approaches to theoretical generalizations, etc.

Results can be divided into three main domains according to the types of goals presented in the beginning. The project integrates three usually separate levels of educational system into joint age-mixed activity. Three separate curricula are united into one developmental curriculum for joint education and teaching. A new learning environment cannot be based on subject matter teaching designed for school children.

Narrative learning environments were introduced as tools of vertical integration and peer learning. Narratives are used for introducing a new version of play world, project or research theme. Introductory stories are
often self-made, but fairy tales or children’s books are used as well. Self-made stories have an integrative function in the form of general problem orientation covering several school subjects, e.g. “Alien R2” integrated play, different types of construction, writing and reading, carrying out research in “space laboratory”, modelling the connection between solar system and time, developing “space language”, etc. (Hakkarainen, 2002a).

Parent’s active participation and construction of joint educational communities was supported with the following methods: participation in morning circles and other group activities, joint preparation of learning tasks for children, visits of group mascots to families, joint charting and discussion of children’s life problems. For finding out children’s actual problems a teacher constructed a set of projective pictures with animal figures pondering emotionally charged situation. The material was followed by a set of opening questions for parents and instructions how to use it in discussions with children at bedtime. Parents wrote diaries on discussions for joint educational planning with teachers. One of the aims of this method is to chart the symptoms of developmental crisis of the transition period.

Development of individual learning potentials in experimental group was evaluated by comparing the level of creative imagination with the matched control group. All the children visiting the group for four years were tested at the age of eight years. There were eight such children. Statistical comparison between the groups is not appropriate, but gross sum of creative solutions of each item indicates the direction of differences. The test battery of creative imagination developed by Kudryavtsev (1999) was used. The sum of creative solutions is shown in the Table 1:

<table>
<thead>
<tr>
<th>Groups</th>
<th>Combined test items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Realism</td>
</tr>
<tr>
<td>Experimental</td>
<td>84</td>
</tr>
<tr>
<td>Control</td>
<td>75</td>
</tr>
</tbody>
</table>

Children in the experimental group have more creative solutions as a group, but those differences are not very big. More essential difference between the groups is revealed in qualitative analysis of original solutions in test situations. Experimental group produced 17 original solutions, but control group did 5. Group differences have to be taken carefully, because results are collected in individual test situations. On the other side, the members of the experimental group have solved joint problems in dialogues during the four years. We can suppose that joint problem solving would have revealed other traits of creative imagination, but tests are constructed for individual situations.

**Conclusion**

The general logic of constructing a preparatory step between day care and first grade in school should indicate serious involvement in supporting child development and promoting learning potential. Transitions in practice do
not follow this logic and the Finnish pre-school classes do not aim at serious developmental changes. The main goal is adaptation to school life.

Developmental preschool education is possible by organizing Transitional activity system between play and school learning. This task has three levels: organization of developmental educational communities, construction of pedagogical tools of narrative learning, and organizing narrative learning environments for children’s creative activities.

Our proposal for Transitional system is “narrative learning” which prepares children for learning activity proper. As a Transitional activity system it combines play and learning in a specific way in which learning is embedded in the play frame. Narrative learning is based on psychological products of developed role-play, but learning takes place in a space between imagined and real situations. Narrative learning flexibly combines the narrative frame of children’s activity with complicated problem solving.

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The Present-day Challenges and Opportunities for Foreign Language Teachers

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Abstract
In recent years, the notions of foreign language teaching and learning have been the subject of much discussion. Foreign languages as an essential element of education have their solid place in the curriculum. The role of foreign language teachers, however, has changed worldwide. Teachers are actively involved in the teaching-learning process. They have become facilitators of learning, instructors, mediators, not only the sources of information and knowledge.

Freeman and Richards (1996:1) maintain that in order to better understand language teaching, we need to know more about language teachers: what they do, how they think, what they know, and how they learn. Specifically, we need to understand more about how language teachers perceive what they do: what they know about language teaching, what they think about their classroom practice, and how that knowledge and those thinking processes are learned through formal teacher education and informal experience on the job.

Key words: foreign language teachers; intercultural communicative competence; in-service training.

Introduction
There has been considerable debate on the rapidly changing role of teachers. Teachers have been subjected to numerous changes in the last ten years. Substantial reforms have taken place in the society. The social changes of last decade have left their traces in teachers’ profession, teacher-student relationships and education system as a whole.

In the keynote address at British Columbia Teachers’ Federation Quality Teaching Conference in 1998 Kit Krieger identified four contextual influences on the work of teachers (Krieger, 1998):

- The growing diversity of the student population;
- The tensions between the needs of the student and the needs of system;
- The conflict between professional and bureaucratic cultures in schools;
- And the intensification of teachers’ work.

This intensification is the consequence of many factors:

- The rapid pace of curriculum change;
- The advent of new technologies;
- Increased reporting expectations;
- The integration of special needs students and the resulting proliferation of other adult workers in our schools;
- The evolution of school-based management;
- The increased value placed on collaboration;
- And the need for teachers to address an array of social issues.

The above-mentioned factors are universal and refer to the changing role and constant intensification of the work of teachers. For younger teachers the changes in the society and their working habits are not so difficult to overcome. But for elderly teachers, this kind of changes may seem rather challenging. How should they go on in their teaching? Are there enough possibilities for in-service training? Will the authorities of the school support them in their new roles? In order to make further decisions, the answers on these questions are of crucial importance.

It is interesting that despite all these urgent demands upon teachers, a recent British Columbia Teachers' Federation survey of members indicates that 98% of their members are proud to be teachers, and 88% of the members are satisfied with their jobs (ibid.).

In Estonia, however, such surveys have not been carried out, but the articles by the teachers show that teachers’ profession is not recognised. The most stressful seems to be the continuous intensification of their job and low salaries. The new certification system that would account for new factors of teaching should be urgently worked out.

The Changing Role of Teachers

The table given below provides a summary of some of the changing roles of teachers:

<table>
<thead>
<tr>
<th>The Teacher Was/Iz</th>
<th>The Teacher’s Role is Becoming More</th>
</tr>
</thead>
<tbody>
<tr>
<td>A deliverer of information.</td>
<td>A facilitator of learning.</td>
</tr>
<tr>
<td>A teacher of the textbook.</td>
<td>A teacher whose lessons are driven by reality and up-to-date information resources.</td>
</tr>
<tr>
<td>A coordinator of group work.</td>
<td>An information manager, building collaborative teams.</td>
</tr>
<tr>
<td>A ruler in a benevolent dictatorship.</td>
<td>A knowledge navigator, celebrating and developing patterns for life-long learning.</td>
</tr>
<tr>
<td>An educational island.</td>
<td>A member of a learning community composed of technology assistant, media specialist, teachers, administrators, parents, on-line experts and students.</td>
</tr>
</tbody>
</table>

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Without doubt, information technology (IT) provides new opportunities and challenges for teachers. The teachers should be well acquainted with
the latest achievements of technology and are expected to be even computer managers. Therefore in-service professional development programmes should provide technical opportunities and support. Teacher training should include a basic course in IT covering word processing, presentation software, database, Internet use and on-line teaching programmes. A major disadvantage for teachers in multimedia age is that they must devote twice as much time to lesson preparation as in the past.

Sirkka Hirsjärvi (1996: 70) claims that in future the traditional teaching job will be divided into parts. Teachers may work part time and sell the services themselves.

Some of the new jobs may be:

- Learning diagnosticians;
- Information gatherer for software programs;
- Courseware writer;
- Curriculum designer;
- Evaluator of learning performances;
- Evaluator of social skills;
- Small/large-group learning facilitator;
- Home-based instruction designer/monitor

(Cetron, Soriano, Gayle, quoted from Hirsjärvi 1996:70).

The above-mentioned view is tied to the financial support of local authorities and the overall principles of educational policy in the country. Teacher education must shift to lifelong professional development.

The Changing Role of Foreign Language Teachers

The role of foreign language teachers has changed worldwide. The opportunities for language learners have widened due to increased cross-cultural interaction through tourism.

The demands of the learners have also increased. They are more responsible for their learning decisions. The specific needs of students have grown.

Learners are encouraged to study independently. Very often the tasks are given via the Internet and teachers communicate with their students through e-mails. Therefore, relations between teachers and learners have changed.

Another important issue and the most time-consuming task for the teachers is how to teach heterogeneous or mixed ability classes. The students have different linguistic abilities, and their language environment at home and ethnic background is different. Teachers find children with mental and other disabilities in their classrooms. They foster and encourage cooperation among the students and provide positive learning environment.

The teachers have to prepare more additional worksheets for different needs, which in turn require more time to prepare. There should always be something ready to occupy those students who finish earlier. Teachers have to be flexible and supportive towards all their students. The ability to adjust techniques to take into account the demands of different classroom contexts presupposes knowledge of more general pedagogic principles (Widdowson, 1991:194).
Teachers should be ready to apply a wide range of didactic approaches and encourage learner autonomy and an awareness of important issues in the society. However, these tasks should be accompanied by didactic and methodological sets of approaches.

Teachers find all the above mentioned changes challenging, often resulting in frustration.

Teachers are actively involved in the teaching-learning process as facilitators of learning, instructors or coaches – not only as the sources of information and knowledge. Their primary duty is to facilitate the communication and only then comes the correction of mistakes. A teacher is someone who creates the conditions for learning and organises the learning process. Our aim is to develop the students’ self-esteem and confidence through positive feedback and with a concern for their individual abilities. For, learning depends on the students’ feeling of well-being and self-esteem (Maley & Duff, 1982: 37).

In the ECML (European Centre of Modern Languages) survey in 2002, the language teachers described their professional role either as that of a creator, providing and carrying out new ideas, critic, pointing out difficulties and raising important issues, co-operator, helping group cohesion and collaboration, mentor, helping less experienced colleagues or teachers in training, organiser, contributing to the organisation of the work in their institution, consultant, especially on curriculum, methodology and training issues, coordinator or facilitator (Leban, 2003: 73).

The emphasis on collaborative learning requires from teachers to be able to fulfil the above-mentioned new professional roles.

**Teachers and Textbooks: Teaching Intercultural Communicative Competence**

The development of cultural awareness among students is an indispensable part of teaching a language. The teaching of intercultural communicative competence should also be reflected in textbooks. However, it is still insufficiently presented in EFL textbooks, which are important tools for teachers and should suit the teachers and students in different teaching and learning situations.

A Common European Framework of Reference (1998) defines the competencies in the field of language teaching and recognizes “intercultural skills” as one of the general competencies.

Textbooks are mainly chosen in order to fulfil the requirements of the national curriculum and examinations. The choices which textbooks to use are made by national authorities and very often they are rather accidental, i.e. which publishers happen to be in the market at the moment of choice. The selection is made first of all to suit the syllabus, not so much the students and the teachers. The schools use the textbooks for a certain amount of time (in Estonia seven years) after which the ministry has to approve the new list or extend the old one.

Textbooks generally do not provide enough material for teaching intercultural communicative competence and are not cross-culturally oriented. Very few textbook writers state that the presentation of cultural
information has also been their goal. Cultural items are not sufficiently covered and the cultural material needs further supplementation in order to meet the students’ needs effectively and appropriately.

In schools, students learn basic historical and geographical facts, places of interest by reading culturally authentic texts, but they do not learn the socio-cultural values of the country, differences in nonverbal communication (patterns of behaviour, gestures, facial expression, posture, eye contact, proxemics) or how members of the society use or perceive these cultural elements. The work of teachers would be greatly assisted if they did not have to spend their valuable time on finding supplementary authentic material to introduce the culture of the target language, to develop awareness and respect for differences.

Video and computers should be used much more in raising awareness of culturally appropriate behaviour. Some textbooks have optional video materials, but there are no references to computer programmes providing knowledge that enable students to communicate with each other and reflect on similarities and differences between their own and other cultures. The most preferable teaching techniques utilise the videos, picture material, magazines and language camps. However, questionnaire data revealed that students most commonly practised learning activities were lectures (29%), presentations (28%), pictures (24%), research papers (19%) and videos (18%). Cultural information in general is obtained from the following sources: other subjects (31%), the media (29%), English classes (22%), books (15%) and 3% from the Internet (Liiv, 2002: 164).

Textbooks are very often written to be used worldwide. Therefore, it is difficult to use them appropriately in each local situation. One of the solutions pointed out at the discussion stage is to publish joint textbooks with local authors, i.e. the textbook should take into consideration global as well as local interests and values (the term “glocal textbook” stands for global + local), or write textbooks specifically for certain regions.

And finally, textbooks could include units produced by the learners themselves allowing a bit more space for learner-initiated content.

The increasing awareness in foreign language teaching that language and culture are inter-connected and language teaching should promote intercultural understanding, thus developing awareness, respect and tolerance for differences is, perhaps, the driving force that will improve the cultural content of our textbooks. Textbooks as one of the basic tools for teachers should consider the changing role of teachers and offer varieties of texts and exercises to motivate teachers’ interactive decisions during a lesson.

**The Qualities of a Good Foreign Language Teacher**

English as a foreign language advisor Costas N. Kalaitzidis produced a list of the qualities a foreign language teacher should possess (Kalaitzidis, 2001):

**A. Background Knowledge**

- is aware of target language and culture
- is aware of teaching methodology
- knows the social and cultural background of the learners
S. Liiv

- is aware of the educational system and the philosophy of education
- is aware of the psychology of learning and language learning and how to motivate learners

B. Professional Skills
- has command of the target language
- can modify the language to match learner needs and competence
- is aware of teaching techniques: how to set objectives, how to involve pupils in activities, how to evaluate
- knows how to elicit and accept learner contributions
- knows how to give feedback
- has classroom management skills
- has organizational skills
- can cope with parallel focussing: language teaching/group management
- can adopt appropriate roles at appropriate times
- is aware of syllabus design

C. Personal Qualities
- is patient and kind
- is flexible and resourceful
- is tolerant and open-minded
- has good sense of humour
- is enthusiastic and enjoys teaching
- is honest
- is imaginative and creative
- is efficient
- is self-disciplined
- is able to assume authority when required
- is helpful
- is humble and modest

As seen from the above listed qualities, command of the target language and knowledge of the culture are integral elements both of background knowledge and professional skills. Thus, learning a foreign language becomes a kind of acculturation, where one acquires new cultural frames of reference and a new world view, reflecting those of the target language culture and its speakers (Alptekin, 2002: 58).

As to the list of personal skills, the following qualities could be added:
- Openness to his/her learning – life-long learning;
- Challenging and dynamic;
- Intercultural mediator.

Taking account of the changing role of foreign language teachers, the implementation of cultural awareness into foreign language curricula in schools as well as teacher training programmes becomes more and more topical. The overall trend is towards a multicultural and cross-disciplinary construction of the subjects.

The importance of intercultural learning should be stressed in the whole curriculum, not only in foreign language learning syllabi and more integrated cultural materials should become available.
Conclusion

The everyday work of foreign language teachers involves lots of new challenges and opportunities. Teachers have become facilitators of learning, coordinators, co-operators, instructors, guides, mentors and consultants, not only the sources of information and learning. All these factors make teaching of foreign languages challenging and increases the need for professional development. Therefore, the identification of these new roles and exploration of the possibilities for the planning of crucially changed pedagogical activities, is of utmost importance.

In the past ten years the keyword for teachers have been: promoting intercultural awareness, introducing technological developments, allowing more autonomous learning. The new challenge – life-long learning has caused debates about “professional standards” for teachers. New challenges have intensified the focus on such terms as knowledge, professionalism, collaboration, instruction and authority.

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Art Teacher’s Activity: Lithuanian Context

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Abstract
The article identifies and defines different art teacher’s activities, which comprise art teacher’s professional activity. An art teacher must be prepared for such activities. The analysis of activity field is performed paying attention to the specific character of the art teacher’s pedagogical activity, and elements teacher has to carry out in pedagogical activity. The elements of art teacher’s activity field are substantiated on the basis of empirical research. These elements are: effective technologies, extra-curriculum activities (self-education), management of teaching/learning process, planning of curriculum, creation of strategies (vision of individual development); co-operation with partners of pedagogical interaction; continuous professional development; management of art projects; creation of visual environment. This is a variety of activities that art teacher undertakes. Both literature analysis and empirical research would enable authors to suggest a possible model for initial education of future art teachers.

Key words: teacher’s activity; art teacher; field of activities.

Introduction
In transition to the postindustrial society, it becomes clear that balance between two existential fundamentals of the society, i.e. the relationship between materialistic and spiritual worlds (Grigas, 1995), is disturbed. The adoration of technologies controls all fields of life-world and moulds the technological elite; so, technologies become the final aim, which often does not possess any moral foundation (Webster, 1995; Bell, 1973). In this situation, according to R. Grigas (1995), humanitarian culture becomes the basis for performing even those roles, which are imposed on the individual by a contemporary life-world. Attention to humanistic ideologies and an individual’s moral culture, underlines the holistic approach to individual’s development, and emphasizes the importance of the basic developmental strategies of the 21st century (Delors, 1996). Aesthetic and artistic education enables to implement these strategies into our life-world (Goodlad, 1998; Matonis, 2000).

Therefore, at the interface of the 20th and 21st century, the approach to the mission of aesthetic and artistic education as well as to the activity of art teacher changes: integral aesthetic and artistic development must substitute more specialized art teaching in a secondary school. Yet, though
more attention should be paid to art and poetry in schools than earlier, these subjects are often taught as being utilitarian without reference to culture (Delors, 1996).

The analysis above enables to identify an object, which is at focus in this article: namely, changes of the art teacher’s activities.

It creates the basis for the research problem that can be expressed as follows: What activities are characteristic for a contemporary art teacher?

The aim of this article is both to discern and substantiate elements of the model of the field of art teacher’s activities.

Literature, documents analysis and qualitative research (5 items ranking type questionnaire) were employed in development of ideas of this paper.

Field of Art Teacher’s Activities

In theory (Fullan, 1998; Hoyle, 1998; Gage & Berliner, 1994) the role of teacher is defined as being the most important both for changing educational paradigm and in implementing the changes in educational practice. Young people should be both confident and responsible, and be able to meet the challenges of the future.

According to philosophers, sociologists, teachers and psychologists, activity is the basis for an individual’s, society’s, and nation’s existence. Moreover, prosperity of a society depends on activity.

Individual’s activity is related to physical, psychological, intellectual or mechanical means and materials. Therefore, activity is divided into two spheres: inner - psychological and mental, and outer - physical, mechanical, spheres (Šernas, 1995; Jacikevičius, 1996). Moreover, activity can be defined in a hierarchical order: 1) productive and commercial; 2) social service, charity; 3) cultural; 4) scientific; 5) managerial; 6) political. This hierarchy enables us perceive the social meaning of the activity and a person’s place in the distribution of duties.

Pedagogical activity differs from other activities; it is a very diverse, purposefully organized practical activity, characterized by curriculum and time (Voveris, 1990). Jakavičius (1998) gives the most general definition of a teacher’s activity. He distinguishes three sectors of the activity: constructive, organizational and communicative. Hargreaves (1999) assumes that teacher’s activity consists of various activities, which are performed by a teacher. Therefore, it is useful to employ a concept of ‘field’, which denotes an idea of an increasing number of activities.

Moreover, the ‘field’ of pedagogical activity expands: it becomes related to an organization (school). A teacher must accomplish different activities, which becomes more related to community and society.

It is identified that one of the elements of the field of teacher’s activities is utilization of effective technologies (assessment of the achievements, teaching methods, aids); another element is extra-curriculum activities (self-education). Also, the third element can be identified, namely, managing of teaching/learning process; the fourth element of the field is planning of curriculum. Next, creation of strategies (vision of individual development), co-operation with partners of pedagogical interaction, and continuous professional development are identified as essential parts of the field.
Jovaiša and Vaitkevičius (1987) emphasize that creative construction of teaching means also indicates a creative nature of teaching. Jovaiša (1993) defines the materials of teaching – verbal, graphic, photographic, natural and technical – as the structural elements of teaching process. Therefore, creation and application of teaching/learning materials in order to make teaching/learning more effective is an element of the field of teacher’s activities.

Savickytė (1998) notes that art teacher organizes extra-curriculum activities, which foster positive socialisation, characterised by stimulation of unique individual qualities.

According to Rajeckas (1996), the management of the teaching/learning process or the cognitive activity of the teacher and the students is a pedagogical process when students, under the guidance of their teacher, acquire certain knowledge, abilities and skills; students’ cognitive power and intelligence develop in this process, they form their attitudes and values as well. According to Želvys (1999), planning is a continuous process during which the goals are set and means to achieve the goals are foreseen considering the changes taking place inside an organization, i.e. school, and in a community. Teachers create strategic/operational plans. Operational plans help to implement strategic plans in everyday activity (Želvys, 1999). Teacher should be able to manage the teaching/learning process in order to introduce a student to culture and culture into school, considering individual needs, available teaching/learning methods and aids, and the overall pedagogical aim, namely, development of holistic personality.

Since, there is an abundance of knowledge in a contemporary society, it is hard to select the contents for curriculum. Curriculum reflects knowledge, skills, and competencies that every individual student should acquire, therefore one of the key activities that contemporary teacher performs is systematic planning of curriculum (Pukelis, 1998; Butkienė & Kepalaitė, 1996; Jovaiša, 1997). Moreover, art teacher should be able to design curriculum that introduces arts into a school culture to a significant extent.

Teachers, apart teaching subject, must guide a group of students and work with colleagues and parents (Arends, 1998). Therefore, in recent years more attention has been paid to diverse roles that teachers perform at schools and in communities. These are meetings of personnel, parents’ meetings and correction of students’ works at home. Hargreaves (1999) broadens the concept of cooperation with colleagues. The author highlights importance of common planning, mutual assistance, mentoring of a younger colleagues, taking part in assemblies and committees of professional development. The concept ‘parents’ meetings’ has also changed. Communication with parents takes place both during meetings and in a process of continuing counseling with parents; parents are regularly consulted and they are informed in a written form or by phone. This is also one of the fields of teacher’s activity. Moreover, an art teacher has exceptionally good possibilities for organizing authentic interactions among teachers, students and parents, as various art projects can be implemented; in these projects all members of school community can be actively involved.

The teacher’s professional growth, his/her constant development as well as perception of life-long learning and activity in this sphere is an essential condition for school improvement (Stoll & Fink, 1998). There-
fore, constant and permanent development of one’s own competence is the field of teacher’s activity. According to Hargreaves (1999), the popular image of teacher’s work is teacher’s work with students: teachers ask questions, give some advice, tasks, maintain order, provide learning materials, evaluate their students or correct their mistakes. Those activities and preparation for them are also one of the teacher’s activity fields.

As arts teacher has specific goals, two more elements of the field of teachers’ activities should be identified, namely: management of arts projects and creation of visual environment.

The above analysis enables authors of this article to present a model of the field of arts teacher’s activities, which is reflected in Figure 1.

Figure 1. Model of the field of art teacher’s activities

Art Teachers about Their Field of Activities

A survey (experts’ evaluation) has been completed in order to find out what are the art teachers’ opinions about this model in order to suggest it as the background for educating future art teachers.

Members of the Lithuanian Art Educators Society were invited as the experts. Society has more than 120 members, 114 were engaged in the survey in 2003.

Socio-demographic characteristics of the respondents

In the sample of respondents 12.3% are men and 87.7% are women. So, female teachers prevail in research. Ages of respondents are as follows:

- 33.9% of respondents: from 30 to 39;
- 29.4% of respondents: from 40 to 49;
- 23.9% of respondents: from 20 to 29;
- 11% of respondents: from 51 to 60;
- 1.8% of respondents: from 60 and older.

The majority of art teachers are middle aged and works in secondary and vocational training schools.

The survey shows that 27.7% of respondents have work experience ranging from 6 up to 10 years, 23.6% - from 11 up to 20 years, 19.8% of the respondents work from 21 up to 25 years. 3.8% of the respondents
have teaching experience from 12 months up to 5 years. The pedagogical qualification of respondents also varies: 8.1% of respondents are teachers-experts; 27.1% – master teachers-supervisors, 29% senior teachers, 19% – teachers and 9.7% of respondents are junior teachers.

Data analysis of expert evaluation on art teachers’ activity

The research data were processed applying Statistical Package for Social Sciences (SPSS) software. The activity of an art teacher is complex and many-sided, covering school, community and society (analysis above). Respondents were asked to identify the basic activities and tasks undertaken at school, in community and society.

According to respondents (60.2%), the most important activities at school are related to management of teaching and learning processes. The second position according to the importance was given to activities related to creation and application of effective educational technologies and teaching/learning materials (14.5% of respondents). The third position was given to the creation of visual environment, including exposition of art works. Respondents pointed out that the most significant activity in community is related with creation of visual environment (35.4% of the respondents), continuous development of professional competence (25.8%), cooperation with teachers, students’ parents and community members (25.8%), management of educational projects (11.3% of respondents). The first position of the activity in society was given to creation of visual environment emphasizing exposition of art works. The second position was given to regular professional development (26%), the third position was given to management of educational projects, and the fourth position was given to organization of educational strategies and anticipation of individual development (14%). Figure 2 illustrates comparison of art teachers’ main activities in three different environments: school, community, and society.

Figure 2. Main activities of art teacher at school, in a community and society
Figure 3 shows the main fields of art teacher’s activities ranked according to priority, with nine being the most important. Survey shows the same activities, such as creation of visual environment and management of educational projects, as they were identified above. The conclusion might be drawn that the more active art teachers are in creating visual environment, the more reluctant they are to participate in community and school life. In addition, art teachers do not distinguish curriculum planning and systemizing. Too much importance is given to didactics instead of aesthetical and artistic education.

The most important elements of the field of art teacher’s activities were two: management of extra-curriculum activities and management of educational projects. The third position was given to creation of visual environment. The least important activity was continuous development of professional competence. It is possible to claim that priority is given to those activities that are closely related to school, community and society.

![Graph showing the ranking of main fields of art teacher's activities]

Figure 3. Main fields of art teacher’s activities (ranked according to priority, with 9 being the most important).

Rating the elements of the field of art teacher’s activity according to priority is presented in Table 1. Based on the respondents’ answers, the list is started with the activity fields having the highest means, and ended up with the lowest means.
Table 1. Rating of art teacher’s activity fields according to the priority

<table>
<thead>
<tr>
<th>Rating number</th>
<th>Activity fields</th>
<th>%</th>
<th>N</th>
<th>M</th>
<th>Mo</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Continuous development of professional competence (47)</td>
<td>0</td>
<td>1.8</td>
<td>21.4</td>
<td>76.8</td>
<td>112</td>
</tr>
<tr>
<td>2</td>
<td>Creation of educational strategies and anticipation of personality development (41)</td>
<td>0</td>
<td>5.3</td>
<td>40.7</td>
<td>54</td>
<td>113</td>
</tr>
<tr>
<td>3</td>
<td>Management of learning/teaching process (43)</td>
<td>0.9</td>
<td>0.9</td>
<td>48.7</td>
<td>49.6</td>
<td>113</td>
</tr>
<tr>
<td>4</td>
<td>Planning and systemizing educational curriculum (42)</td>
<td>0</td>
<td>7.1</td>
<td>46</td>
<td>46.9</td>
<td>113</td>
</tr>
<tr>
<td>5</td>
<td>Creation and utilization of effective educational technologies and teaching/learning materials (46)</td>
<td>0</td>
<td>7.2</td>
<td>55</td>
<td>37.8</td>
<td>111</td>
</tr>
<tr>
<td>6</td>
<td>Creation of visual environment (48)</td>
<td>0</td>
<td>12.4</td>
<td>48.7</td>
<td>38.9</td>
<td>113</td>
</tr>
<tr>
<td>7</td>
<td>Cooperation with teachers, students’ parents and community members (45)</td>
<td>0</td>
<td>7.2</td>
<td>61.3</td>
<td>31.5</td>
<td>111</td>
</tr>
<tr>
<td>8</td>
<td>Management of extra-curricular activities (44)</td>
<td>0.9</td>
<td>17.9</td>
<td>49.1</td>
<td>32.1</td>
<td>112</td>
</tr>
<tr>
<td>9</td>
<td>Management of educational projects (49)</td>
<td>2.7</td>
<td>17.9</td>
<td>60.7</td>
<td>18.8</td>
<td>112</td>
</tr>
</tbody>
</table>

Another objective of the survey was to find out degree of importance of elements of the field of activities (extremely important – important – not very important – unimportant). The results of the survey show that all elements of the field are important and respondents’ points of view are homogeneous. Continuous development of professional competence was ranked as the most important element of field of activity (76.8% of the respondents). Creation of educational strategies and anticipation of personality development was not ranked as very important: 18.8% of the respondents assume this activity element as very important, 60.7% - important and 20.6% - not very important or not important.

It is necessary to point out, that respondents, ranking each element of field of activity, singled out management of educational projects as the least important; however, this element of field of activity was ranked as the most important in the activity within community. These results might have been affected by the fact, that art teachers are not familiar with principles of project work and cannot manage educational projects. We might assume that art teachers lack this modern competence.

The last objective of the survey was to find out what activities are carried out by art teachers in secondary schools. Teachers were asked to rank activities (all 9 elements of the field in the model; that is, 9 groups of activities) they perform at school. 68.4% of the respondents pointed out, that most common activity is creation of visual environment. 65.8% of respondents pointed out, that another common activity is planning and
systemizing of curriculum, creation of programs. Although, when respondents were asked what activities they carried out in school this activity was not mentioned at all. 22.8% of respondents mentioned that less frequent activity at school is management of educational projects, 24.6% mentioned anticipation/strategies of personality development. Finally, we come to the conclusion that art teachers devote most of their time to creation of visual environment. Moreover, 79% of head masters treat art teachers as creators of visual environment; meanwhile 67% of school-masters treat teachers as organizers of teaching/learning process, which should be the primary function of teacher.

**Factor analysis**

To achieve more profound generalization, a factor analysis was carried out. Factor analysis was based on evaluation of structure of art teachers’ competence. Applying the method of principal components and rotation of VARIMAX, three factors in the activity field of an art teacher were distinguished. Factor analysis enables to reduce initial undefined numbers and start analyzing factors. Results show that Factor 1 covers dimensions of management of educational process (cooperation with teachers, students’ parents, community members; management of teaching/learning process; creation and utilization of effective educational technologies and teaching/learning materials, management of extra-curricular activities). **Factor 1 was entitled as management of educational projects.** Factor 2 covers the dimensions of creation of educational strategies, curriculum planning and development of professional competence (creation of educational strategies, development of professional competence, planning and systematic organization of curriculum). This **factor was entitled as a factor of professional development.** Factor 3 covers dimensions of creation of visual environment, so, it was called “management of educational – artistic projects”.

**Conclusion**

In conclusion we can claim that data obtained and processed during the empirical research might be grouped into the strongest and weakest elements of the activities’ field according to their importance for the art teacher’s pedagogical activity.

The strongest elements of the field of art teacher’s activities are: continuous development of professional competence; management of teaching/learning process; creation of educational strategies and anticipation of personality development.

The weakest elements of the field of art teacher’s activities are: management of educational projects; management of extra-curricular activities; creation of visual environment.

Authors of this article can conclude that the model of the field of teacher’s activities is comprised of nine elements:

- effective technologies;
- extra-curricular activities (self-education);
- management of teaching/learning process;
- planning of curriculum;
• creation of strategies (vision of personality’s development);
• co-operation with partners of pedagogical interaction;
• continuous professional development;
• management of art projects and creation of visual environment.

Empirical survey and data analysis enable the identification of the most important activities of art teacher’s activity field:
– continuous development of professional competence;
– management of teaching/learning process;
– management of educational-artistic projects.

Results of survey (expert’s evaluation) support an idea that theoretical model, according to art teacher’s opinions is reasonable; therefore, it can be applied in pre-service education of future art teachers.

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Mentor’s Role in the Sustainable Vocational Teacher Development

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Abstract

In the European Union the attention to educational issues is a priority area next to the economic interests. The European Union countries can be characterised by equal attention to educational processes and educational background. Integration into the European Union facilitates a new approach to various educational issues including vocational teacher training organisation in Lithuania.

This context provides a new impact and meaning to the development of vocational teacher training. Taking into consideration that initial vocational teacher training is experiencing a transfer from academic to competence model, based on school practice, a fundamental question arises: are participants of Lithuanian vocational teacher training system, especially mentors, prepared for practical implementation of this model? The purpose of this article is to evaluate mentor-training program with regard to content-competence aspect and define guidelines for its development. Scientific literature and document analysis as well as survey methods were applied in the research.

The article analyses the changes in vocational teacher training paradigms in Lithuania, emphasising the importance of learning in the workplace, discusses the role of mentor as vocational teacher trainer, analyses the mentor-training program and formulates guidelines for its improvement.

Key words: vocational teacher education; mentor; mentor-training program; teaching/learning competencies; skills.

New Model of Vocational Teacher Training in Lithuania

Vocational teacher training in Lithuania as well as in other European countries has to accept huge challenges. This topicality is determined by constantly growing importance of vocational training for the economy and social life change, and also for the aspirations of Lithuania to integrate into the European Union. Spanish philosopher F. Savater (1997) speaking about teacher profession expressed himself this way: heroes of globalisation are not businessmen, software developers, information technology founders, rock stars or actors. Real heroes of globalisation are teachers. They are the doors through which the entire knowledge accumulated by the mankind reaches the new generation. They are the lifelines saving humanity from its own short-sighted ideas fostering its blind enthusiasm. Teachers teach children and youngsters to stand up before starting to walk. They
do not provide them with free will; they equip them with the conditions necessary for free will. He stresses that teachers are the main, most courageous and most influential group in the society, exerting most impact upon the development of civilization and democracy processes. These ideas reinforce the statement that the vocational teacher is the most important agent of vocational training and his/her qualification highly determines vocational education and training quality.

As stated in *Vocational teacher/lecturer training conception in Lithuania* (2002: 105), a consecutive vocational teacher training model best suits educational traditions in Lithuania, the specificity of vocational training and labour market interaction, compatibility with vocational training in other countries and vocational teacher/lecturer training tendencies. The model consists of three sequential stages: in the first stage higher education and vocational qualification is acquired; in the second stage – three-year work experience in vocational qualification area; in the third stage the prospective vocational teacher starts to work at vocational school and during the first two years acquires pedagogical (vocational teacher) qualification. In this stage a very important role is played by vocational teacher’s initial pedagogical training curriculum.

In the year 2002, the Centre for Vocational Education and Training Studies at Vytautas Magnus University (VMU) started the implementation of vocational teacher initial pedagogical training program. The program was prepared within PHARE program in cooperation between VMU scientists and scientists from Sheffield University. It is the first program of this kind in Lithuania. The scope of the program is 40 credits; the duration of studies is 1.5 years. The studies are based on module learning principles. The characteristics of this vocational teacher initial pedagogical training program are as follows: students of the program have different vocational qualification and teach different subjects; the program consists of study modules; content of every module is oriented to the acquisition of particular pedagogical competences; every module is realised in three-day sessions at the university and independent prospective teacher activity in the workplace under mentor supervision; curriculum is organized by “uprising spiral” principle emphasising pedagogical activity aspects studied in a more complicated order; studies focus on reflective thinking and self-analysis of practical experience; vocational training institutions – prospective teacher workplaces – are actively participating in the study process.

Study modules are studied in cycles. During every cycle prospective teachers acquire the content of one module. The content of every module is described in detail in the learner manual. In the manual, module aims are formulated, expected study results, as well as evaluation criteria and methods are revealed; the main learning material and tasks are presented. After every session, teaching and learning evaluation is carried out to obtain feedback and improve module content. All the achievements are collected in the student’s portfolio. Here, module teachers and mentors present their comments and evaluation. The final evaluation is also based on the portfolio.

An essential feature of this program is integration of the workplace into the learning process. Thus, coherent alternation of the theory studied at university and practice in the workplace has become an important fac-
acquisition of pedagogical competences is focused on the relationship between an individual and his/her pedagogical activity. The expected competences are understood as a dynamic factor evolving out of potential prospective teacher skills and pedagogical activity requirements. Such competences can be acquired and developed only through pedagogical activity.

Transfer from university (academic) training model to “competence-based model”, based on school practice, raises a fundamental question: are the agents of Lithuanian vocational teacher training system, especially vocational schools, prepared for practical implementation of this model?

Prospective Vocational Teacher Learning in the Workplace

K. Pukelis (2002) emphasises that practical pedagogical studies create a precondition for education of pedagogical thinking as they activate prospective teacher pedagogical “conscience” when he/she is faced with real pedagogical problems. When a pedagogical problem interacts with the existing knowledge in the area, new experience and skills are gained that determine vocational teacher actions and competence. Learning in the workplace creates conditions for a more favourable prospective teacher adaptation in the school community.


Prospective vocational teacher training in the workplace raises a number of questions. First of all, it is not a mechanical acquisition of certain teaching methods. E. Severing (1997: 314) stated that such methods of learning in the workplace, which reduce vocational education to practical application of skills and abilities, seem very attractive, but this way the whole work and learning potential is devalued. Consequently, the activity of prospective teacher needs to be organized on the scientific grounds, i.e. applying and using teaching and learning strategies and methods that are based on theoretical knowledge and increasingly acquire different forms.

In this context, readiness of vocational school to participate in vocational teacher training becomes a top priority. Thus, another important factor ensuring the efficiency of learning in the workplace is evaluation of school capacities. Such thorough analysis of vocational school readiness to participate in vocational teacher training allows evaluation of existing conditions and possibilities and foresees the use of them in an optimal way.

Thus, readiness of vocational school to become an institution of vocational teacher training is a precondition of learning efficiency in the workplace.

Mentor’s Role in Vocational Teacher Training

Thus, mentor’s role is of utmost importance in supporting vocational teacher efforts to acquire proper elements of pedagogical work in the institutions of vocational education.
A mentor in vocational teacher training context is a vocational teacher able to reflect upon his/her special vocational knowledge and adequately prepared for vocational pedagogical activity. Consequently, only a vocational teacher with long pedagogical work experience can perform a role of mentor.

The profound essence of mentoring is to ensure the efficiency of interaction between theory and practice. Mentors help the people who are seeking to acquire vocational teacher qualification to develop teaching skills in the real teaching/learning process; they also support prospective teacher integration into specific school environment, developing pedagogical ethics-based relationships with colleagues, school administration, learners, their parents and social partners. The mentor helps prospective teachers to orient themselves better in a multifaceted pedagogical activity in their learning workplace. Therefore, mentors have to be good facilitators of the cognitive processes, specialists in planning the learning process, implementing, evaluating, counselling, motivating, choosing and applying teaching technologies, applying pedagogical innovations and team work, they also have to constantly upgrade their own qualification.

The key mentoring task is to model and monitor various teaching and learning situations which enhance learner independent learning based on new technologies, direct prospective teacher learning towards the acquisition of appropriate competences, observe the prospective teacher, reflect and evaluate.

**Working Guidance as an Essential Mentor’s Function**

Defining vocational teacher training activity K. Pukelis (2002: 30) emphasises that essential mentor activity is working guidance for prospective teacher practical pedagogical studies. In this article we will define the working guidance concept in the context of mentor activity. The major purpose of working guidance is to improve work quality and career development. The role of working guidance depends on its context. Changes in social relationships at schools are based on professionalism and mutual respect. These relationships have changed the teacher’s autonomy into collegial, non-hierarchical support seeking to evaluate and develop the quality of vocational education and training. It determines the guidance style of mentor as experienced teacher. The purpose of ethical attitudes in clinical guidance is to exert impact upon emotions and general psychological state of a prospective teacher; in some cases it equals therapy.

Empowering (optimising) guidance style we need to develop and optimise prospective teacher skills. The characteristics of this style: it emphasises task accomplishment, work quality, giving feedback, enhancing reflection and self-reflection aiming at forming a clear picture of vocational activity and ability to analyse activities and other aspects.

**Mentor-Training Program and its Realisation**

A mentor-training program creates preconditions for experienced vocational teachers to accept part of their responsibility for prospective teacher preparation and empower them to carry out working guidance functions in a professional way. The program consists of three theoretical study cy-
cles of different duration (5 days, 3 days and 2 days) and two cycles of pedagogical practice. Mentor program participants can all be vocational teachers who have pedagogical education and teacher-methodologist qualification category.

Major mentoring areas determine the content of the program. Priorities depend on prospective teacher learning needs, mentor skills and abilities. Thus, the program consists of the following 8 modules. Further, descriptions of major parameters of separate modules are presented:

1. Mentor’s role and functions in professional teacher training
The purpose of the module is to acquire professional teacher training assessment competence.

Expected results:
- Skills to determine and assess mentor functions;
- Skills to define mentor’s role and responsibility in vocational teacher training.

2. Observation of prospective teacher activity and giving feedback
The purpose of the module is to acquire observation and feedback giving competence.

Expected results:
- Skills to carry out an objective observation and assessment of prospective teacher pedagogical activity;
- Skills to give efficient feedback.

3. Prospective teacher counselling
The purpose of the module is to acquire counselling competence.

Expected results:
- Knowledge in counselling types and skills in applying counselling methods;
- Skills in applying ethical principles of counselling.

4. Teaching and career planning
The purpose of the module is to acquire teaching and learning as well as professional career planning competence.

Expected results:
- Skills in planning a teaching process by evaluating learning needs;
- Individual learning and career planning skills.

5. Didactic and methodical help provided to prospective teachers (teaching and learning strategies, methods, teaching styles)
The purpose of the module is to acquire a competence in application of teaching and learning methods (didactic).

Expected results:
- Skills to define teaching and learning methods;
- Skills to assess teaching and learning strategies;
- Skills to ground the teaching and learning methods didactically.

6. Communication and cooperation. Mentor professional ethics
The purpose of the module is to acquire contact initiation and effective cooperation competence.

Expected results:
- Skills in partnership and cooperation;
Effective cooperation skills;
Skills in applying ethical principles in mentoring;
Skills in selecting efficient verbal and non-verbal communication forms;
Teamwork skills.

7. Introducing prospective teacher with the school culture
The purpose of the module is to acquire competence to introduce the prospective teacher with the school culture.
Expected results:
• Skills to design the activities, make the self-analysis, and provide the activity quality assurance for school as organization.

8. Assessment of teaching and learning processes. Portfolio as a means of efficient assessment
The purpose of the module is to acquire prospective teacher achievements and his/her professional development assessment and evaluation competence.
Expected results:
• Skills to determine evaluation and assessment criteria;
• Portfolio preparation skills;
• Skills to evaluate qualification requirements and envisage teaching strategy.

In this program, the attention is focused on well-defined mentor functions oriented to the development of prospective teacher pedagogical competences. During the studies at the university, prospective mentors learn how to observe and analyse their own and prospective teacher activity, cooperation and communication, how to evaluate ethical aspects, i.e. to perform self-analysis. Mentor training process focuses on acquisition of individual and vocational development skills.

Assessment of Mentor-Training Program
In 2002, the first group of mentors was prepared at the Centre for Vocational Education and Training at Vytautas Magnus University. Research was carried out to assess the efficiency of mentor training program in content-competence. Research participants were 61 mentors who completed the mentor study program and prospective vocational teachers.

Research findings
• 50% of the respondents emphasised the skills acquired during the program in applying active teaching and learning methods;
• 77.7% stressed the acquired teamwork experience;
• The following acquired skills were mentioned as very important: cooperation with prospective teacher and colleagues (61.1%), acquired experience in reflecting (33.3%), activity observation and analysis (27.7%), giving feedback (22.2%), active listening skills (16.6%);
• 71.4% of the respondents, participants in the mentor program, started the self-inquiry seeking the self-development and provision of better support for their colleagues;
• 42.8% of the respondents are thoroughly acquainted with professional teacher training program;
• 57.2% are aware about the program but not thoroughly;
Prospective teachers need most help and support in the following areas: lesson planning (57.1%), determining appropriate teaching and learning methods (42.8%), development of teaching aids (28.5%);

Respondents distinguished the following mentor functions as most efficient in professional teacher training: observation and feedback giving, counselling, activity and professional development assessment (57.2%) and learning and professional career planning (42.8%);

61.2% of the respondents state that mentor-training studies are too short. They requested to have studies twice as long.

The presented data show that the prepared mentor program, in principle, corresponds to mentor needs. On the basis of W. Klafki (1994), mentor training curriculum perspective scheme has been developed. According to this scheme, the following components should be taken into consideration while renewing the mentor preparation curriculum:

- Analysis of learning needs (to evaluate formal professional teacher/lecturer competences formulated in professional standard and real competences that prospective teachers, teachers-methodologists possess);
- The importance of curriculum for prospective vocational teacher learning in the workplace;
- The importance of curriculum for the current situation of prospective vocational teacher training;
- The importance of curriculum for the future;
- Curriculum structure;
- Curriculum reliability and verifiability;
- Study process structure;
- The significance of teaching and learning methods.

Mentor training curriculum, based on these components, will help the mentor to acquire change-oriented competence. It will create preconditions to balance between theoretical/analytical and experience based intuitive competence or even to synthesise both of them depending on the context.

It is reasonable to state that mentoring in vocational teacher training will require more attention in the future as a practice and as a research area.

Conclusion

In the transfer from university to competence-based vocational teacher training model, cooperation between the university and vocational school is of utmost importance.

The essential mentor activity is the direct working guidance for prospective professional teacher learning in the workplace.

Aiming to ensure vocational teacher learning in the workplace, i.e. to enable them to acquire practical pedagogical activity skills, mentor training plays a very important role.

The main purpose of the mentor-training program is to empower an experienced professional teacher to carry out working guidance functions in a professional way.
The research on mentor-training program revealed the main problems in the following areas:

- Relationship with vocation (different subject preparedness areas of mentor and prospective vocational teacher);
- Mentor training curriculum compatibility with vocational teacher-methodologist competences defined in vocational teacher/lecturer professional standard;
- Problems with a flexibility of mentor training curriculum and its openness at the micro-level;
- Formal legitimisation of mentor training in Lithuania.

The obtained research results ensure mentor training curriculum renewal and optimisation.

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Family’s Influence on Child’s Intelligence: Intellectual, Social and Financial Factors

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Abstract
The first environment of a child is a family. Family plays an important part throughout childhood and prepare a child for life. Experiences gained at home influence the decisions teens make about their social and academic lives. Child’s academic success is one of the parents’ main concerns. One of the factors influencing child’s academic success is intelligence. The main aim of the research was to generate a survey of the within-family factors that have an influence on the development of child’s intelligence. The results have revealed that the strongest influence on the child’s intelligence has a structure of family (family size and birth order). It was discovered that several social activities (style of parenting, parents’ values, occurrence of quarrels, shared activities) that could develop child’s intelligence have small impact on it as very little attention is paid to their development.

Keywords: intelligence, family, parenting, academic success.

The new keyword in education – lifelong learning – has brought many changes into educational sciences. Learning to learn has become the main aim of educational action on all levels. Since these changes, more attention has been paid to learning ability as one of the factors that determine people’s management in today’s world. Learning ability is greatly influenced by person’s intelligence and rising the level of intelligence helps to improve person’s learning ability. The intelligence is the most variable at an early age (Sanson, 2001; Veisson, 2000) and, as the family is the first environment the child is connected to, it is important to know the family factors that may have an impact on child’s intelligence in order to direct child’s development.

The Nature of Intelligence
Intelligence has been studied for a hundred years already, but it is still a term that has always been difficult to define. There are a lot of concepts of intelligence known in the world today that differ greatly from each other. Intelligence has been understood as the mixture of different mental abilities such as abstract thinking, problem solving and decision-making. It has also been identified as a learning ability (Ebel & Frisbie, 1991; Krull, 2000; Wortman, Loftus & Marshall, 1992). Recent studies have brought out a new trait of intelligence – adaptation. Nowadays it is thought that intelli-
gent behaviour involves either adapting to one’s present environment, selecting a more optimal environment, or reshaping one’s current environment (Sternberg, 1997). Therefore, intelligence is not just reactive to the environment but also active in forming it. The environment around us changes all the time and adequate adaptation, selection and shaping involves a process of lifelong learning. To shape the environment or, if found necessary, select the new one, a person has at first learn how to adapt to the environment. Only then he or she is able to decide which features of the environment to accept and which to reject. In this view intelligence is, as R. Sternberg (1997) has said – a key to lifelong learning.

The role of intelligence in a child’s academic success and in the prediction of his/her future job performance has been studied a lot and the results reveal a strong positive correlation between these variables (Brody, 1997; Sternberg, 1997; Wagner, 1997). The prediction range varies from 25 % to even 60 % (Detterman & Thompson, 1997). Intelligence has a direct influence on the years of schooling – the people of higher intelligence tend to learn longer than less intelligent people (Brody, 1997). The years of schooling in turn influence both job success and income range (Ceci & Williams, 1997). That explains strong correlations between intelligence and the level of education and socio-economic status.

Although intelligence sometimes is considered to be a fixed and unchangeable genetically determined phenomena, several studies (Brody, 1997; Perkins & Grotzer, 1997; Veisson, 2000) have indicated that it may be vice versa. Different ways how to raise the level of intelligence have been brought out in these studies. Great success has been achieved by so called early educational intervention projects (Detterman & Thompson, 1997; Veisson, 2000). The earlier we support child’s development the stronger is its positive influence on his/her future academic success.

The first environment the child is connected to is a family. Therefore, it is important to know the within-family factors that may have an impact on the development of children’s intellectual ability, so the influences could be taken into consideration and the development of children could be directed as a result. Family plays an important part throughout childhood and early adolescence, and it lays the basis to a child’s later life as experiences gained within the home during these periods influence the decisions teens make about their social and academic lives (Garnier, Stein & Jacobs, 1997). These decisions will lead them in the way they are going to walk on through their entire adult life.

The within-family factors having an effect on the development of a child’s intelligence are many. In the present study they are divided according to James Coleman’s (1994) components of environment: intellectual, social and financial. The intellectual factor embraces the parents’ level of intelligence and their education. The social factor is represented by the characteristics of family structure (family size, birth order and children’s age spacing) and the style of parenting as well as the parents’ values, the role of shared activities, the individual time with the child and the relationships in family. The financial factor includes the socio-economic status of parents, their occupation and also the dwelling conditions (such as living in a private house or in a block-of-flats; whether a child has his or her own room or has to share it with his or her sibling).
Research Methods and Sample
In this study the level of intelligence of both children and their parents were measured. The style of parenting was studied using a questionnaire to parents. The data analysis was based on quantitative methods including f- and T-tests and factor analysis for extracting different styles of parenting. The school achievement of children was assessed by average marks in humanities and science.

The research was carried out in 2003. The siblings and parents from 112 families were tested (311 people in all) and 107 parents answered the questionnaire. The sample consisted of three groups: 1) the main group: 8th grade students (aged 13-15); 2) the siblings of main group students; 3) the parents of main group students.

The main aim of the research was to conduct a survey of the within-family factors that have an influence on the development of child’s intellectual ability. We hypothesized that child’s intelligence was related to the following within-family factors:

- Child’s birth order (first-born siblings have higher intelligence);
- Child’s age spacing with the next oldest sibling (closely spaced children have lower intelligence than the children with greater distance from their next oldest sibling);
- The family size or the number of children in family (the higher number of children in family is connected with the lower intelligence of children).

We expected that the intelligence of children depends on the level of education and socio-economic status of their parents – children whose parents have higher levels of education are more intelligent and parents with higher social-economic status have more intelligent children. We also assumed that the style of parenting has an influence on their children’s intelligence: moderate style of parenting has a positive correlation with child’s intelligence; the extreme styles of parenting have a negative influence on the development of child’s intelligence.

The Factors Influencing the Development of Child’s Intelligence
School achievement is closely related to child’s intellectual ability. In current research the correlation between the grade average and child’s intelligence was moderate (r= .433). The correlation between the grade average in humanities and intelligence was quite the same (r= .436); between science and intelligence (r= .395; p=.001). The stronger correlation between humanities and intelligence could be explained by the factor analyses of intelligence where the verbal factor had the biggest share in formation of higher intelligence.

Although in general the accordance of the level of child’s intelligence and his/her school achievement was observed in most cases there were some abnormalities in the groups of low and high school achievement. The research revealed that 36.5% of children with low school achievement have the average level of intelligence (95≤IQ≤105) which mean that they
could learn better than they do now. And, in the group of higher level of school achievement the number of students of average intelligence was surprisingly high — 51% (comparing to 13.8% of students of higher intelligence (IQ≥115)). The tendency shows that school achievement depends on the level of child’s intelligence as well as on some other behavioural or personal traits of the child (such as diligence, conscientiousness, etc).

The intellectual factors
Different within-family variables — parents’ intelligence (both the level and factor-composition), parents’ level of education — were studied to find out their relations with children’s intelligence.

Comparing parents’ intelligence to that of their children the statistically significant connection was found (r= .483, p= .002). The difference was drawn out in means and standard deviation: the mean of children’s intelligence (and standard deviation as well) was lower than of parents’ while the ranges were quite the same. That means the parents’ intelligence (within their subgroup) differ more than children’s where the difference from the mean is less and the parents’ intelligence is generally higher than the children’s intelligence. The increase of intelligence with age was followed in all subgroups (mothers, fathers, children). According to the theory of Cattell (Feldman, 1990) it is caused by the constant increase of gc-factor — crystallized intelligence (this is the knowledge, experience and skill obtained during the lifetime). Although the gf (heritable ability to acquire and process the information) starts to decrease in the thirties or forties because of the neurological changes, the rise of the level of gc compensates the fall of gf.

Comparing the dispersion, variation and means of intelligence by F and t-test the trends described above were proved to be statistically significant: F-test: p= .014 and t-test: p= .002. In other subgroups (boys/girls; town people/country people) the greatest difference appeared between the country and town people. The test revealed that these groups have equal dispersion and variance but non-equal means. The values of means showed that people from country regions tend to have lower intelligence. It may be due to the lack of the possibilities supporting the intellectual development in the regions. The differences between boys and girls or fathers and mothers were not found.

The factor-profile of family members showed that the most remarkable difference between parents and children is in P-factor or the speed and accuracy of perception (children had higher level of P-factor) (Figure 1). Quite a big difference was also in S-factor or spatial ability. The smallest difference was in verbal factor (V). These findings can be explained by the research results of J. Gorn (Дружинин, 1999) who found that verbal ability is determined mostly by heredity, the other factors depend on both heredity and environmental influences.
One of the factors influencing the development of child’s intelligence is the parents’ education. Different studies have revealed strong correlations between the level of education and intelligence (Suzuki & Valencia, 1997:1107) and some researches have brought out the positive correlation between parents’ education and child’s intelligence, especially between mother and child (Brody, 1997). In current research the level of mother’s education had a moderate (but statistically significant: p = .000) positive correlation with children’s intelligence (r = .376), the level of father’s education had a bit stronger correlation with child’s intelligence (r = .418; p = .000). The correlation between the levels of mother and father’s education was even stronger (r = .596) which may be the result of selective mating (Detterman & Thompson, 1997) where the husband or wife is selected mostly with the same level of education and from the same socio-economic class.

The social factors

1. The characteristics of family structures

There are different characteristics of family structures that have been found having an influence on the development of child’s intelligence. The studies have brought out three of them as having the strongest influence: the number of children or family size, the child’s birth order, the age-spacing of siblings (Marjoribanks & Mboya, 1997; Rodgers, 2001; Zajonc, 2001; Travis & Kohli, 1995).

Family size or the number of children in a family is the variable that has not shown strong correlations with a child’s intelligence but the direction of their connection has always been negative (Downey, 2001; Lukk, 2001; Löhmus, 1998; Zajonc, 2001; Tork, 1940). In this study the correlation between these two variables was also moderate and negative. The direction of the connection shows the trend that the children from larger families tend to have lower intelligence. J. Blake’s and D. B Downey’s dilution model could serve as an explanation here (Downey, 2001). This model emphasizes the unequal allocation of resources among children. There is a certain amount of resources (both social and financial) in every family and, as the number of children increases, the proportion of parental resources accrued by single child decreases.
The effect of birth order on intelligence has caused many arguments recently, but the research indicates that there is a relationship between these two variables. In the present study, the correlation between them was negative and weak but statistically significant ($r = -0.148; p = .014$). In general the first-born children have a higher intelligence comparing to their siblings (Figure 2). Children from single child families do not usually achieve the highest scores. In the present research the highest intelligence was found for the first-born children of two-child families.

![Figure 2. Comparison of siblings’ intelligence](image)

These results support the Zajonc and Markus’ confluence model (Zajonc, 2001). According to that model, the first-born has a double advantage over those coming after: the first-born experiences greater interaction with parents than the later children experience at the same age and, as the family expands, the first-born serves as a mentor to younger children.

The effects of family size and birth order do not necessarily mean that the first-born should achieve more in their lives than those born later. The intelligence is just one part of the numerous factors influencing success in our lives and, as these factors interact very strongly, they cannot be dealt with separately. For example, the research about the relationship between birth order and character has revealed that the first-born is trained within the family to prefer the parent surrogate role and to assume a task-oriented leadership position both with younger siblings and outside the family. He/she gains the experience in organizing and controlling the behaviour of others, because he/she is able to dominate younger siblings. So, the position of first-born really seems advantageous. But the first-born children have never had to fight for the first place, as they are the first all the time. But it is a normal struggle for existence for later children. That is why the research shows that later children (especially, when they are closely spaced and generally tend to be less intelligent) are stronger and self-sufficient, more sober and serious and more relaxed about protocol (they are more dedicated to sociability and peer relations). They are usually more interested in getting a job and more ambitious occupationally than the first-borns. That explains why those born later may have greater success in their lives than the first-borns (Nuttall & Nuttall, 1979; Rosenberg & Hyde, 1993; Travis & Kohli, 1995).

In conclusion we may say that the characteristics of family structure having the strongest influence on the intellectual development of children
are the number of siblings and the birth order. The age spacing between siblings does not have an independent influence. It is rather a co-factor of other factors. Most of these characteristics of family structure influence family members through the intellectual environment of family or so-called family intellectual climate. The term – family intellectual climate – was first used by an American researcher R. B. Zajonc who defined it as a parameter characterizing the level of intellectual co-influence among family members (Дружинин, 1999). The family members influence the formation of family intellectual climate and the climate influences the family members in turn – so they have a bi-directional relationship. All these characteristics of family structure make up a complex influence that depends on the relationships between these characteristics and that is why their direct influence on child’s intellectual development cannot be brought out. This explains quite moderate correlations between these factors and the level of children’s intelligence. Nevertheless, exploration of these factors helps both parents and educators to understand the trends within the family and direct child’s development accordingly.

2. Styles of parenting

The effects of parenting style extend to the number of different dimensions of child’s development and reach into the adolescent years. The styles of parenting can be identified according to the extent to which parents set limits on the child’s behaviour (control) and the level of nurturance and responsiveness they provide (Figure 3).

![Figure 3. Styles of parenting (Bukatko & Daehler, 1998)](image)

The most positive influence on family environment and child’s development has an authoritative style of parenting (Bukatko & Daehler, 1998; Sanson, 2001). On the one hand, it provides the necessary extent of nurturance and care needed for the emotional development of children, and on the other hand, it sets the limits that help the child to sort out the social world.

In the current research the questionnaire based on the styles named above was used to find out the styles of parenting that are characteristic to our society today. To distinguish the main styles of parenting the factor analyses was used and three factors that describe the styles of parenting were extracted.
The first style (the majority of parents) can be called: Guiding-Caring style. These are the parents who try to dominate child’s life. They take an active part in forming the child’s environment, they help their child discover the world, they do not let the child meet the difficulties in their life, they seek a very close relationship with their child communicating with him or her from the friend-level. These parents try to help their child even when the child does not ask for it. These parents choose the hobbies for their child and they control the child’s friendships. This style is very close to the authoritative style (Figure 3) – the level of control is very high and the level of nurturance seems to be high as well, but, actually, the care these parents provide is more parent-centred than child-centred. Parent’s interests dominate, the child cannot decide much on his/her own. So, this style is somewhere between authoritative and authoritarian style of parenting.

The second largest group were the parents whose style may be called: Guiding-Authoritarian style (the level of control is high, but the level of nurturance is low). This style describes the parents who try to make distance between them and their child, communicating with him or her from the adult-level and avoiding strong emotional relationships. These parents also try to gain a strong control over child and his or her activities. They do not respect the child’s own choice of hobbies (they usually choose them for child). They control child’s studies and his or her friendships. They usually do not praise the child for success, as they do not want to spoil their child.

A little smaller was the group of parents with the third style – Observer – that describes the family where the children are quite independent of their parents. The parents give them much more freedom and leave them to discover the world on their own. These parents do not try to help their children with everything, instead they let them meet and experience difficulties, so they would be prepared for the future life. These parents are not absolutely uninvolved. Rather, they are somewhere between permissive and uninvolved style of parenting.

The correlations between the styles of parenting and child’s intelligence did not show a statistically significant connection between the first and the third style and child’s intelligence. The Guiding-Authoritarian style had a moderate negative statistically significant correlation with the level of child’s intelligence. So, it may be said that too strict and controlling style with the low level of nurturance has a negative effect on child’s intellectual development.

Family lifestyle and values are related to the probability of dropping out (Garnier et al, 1997) and they also have an effect on child’s mental development. That is why some other aspects of home environment were studied in current research, these were: the shared activities in family, the rate of occurrence of quarrels, the satisfaction with the relationships in family, the evaluation of emotional atmosphere in family, and the parents’ values.

The analysis revealed that most of the time when the family members are together they spend on watching television or everybody does something on their own – the activities that are practically not the shared-activities at all. All the other activities where the family members could liter-
ally do something together, such as going to the theatre, trips to the nature, eating out, etc., had very low indices. That is a very annoying result as the families are losing the moments that could be used for so-called quality time that is essential for creating a good home environment (Bukatko & Daehler, 1998). The occurrence of quarrels in families was average (they happen sometimes) and satisfaction with the relationships in family and the emotional atmosphere was evaluated as being good. The correlation analyses of these variables and the level of intelligence of children in family brought out two relations that were statistically significant: the moderate negative correlation between the occurrence of quarrels and child’s intelligence and the weak positive correlation between the satisfaction with the relationships in family and child’s intelligence which shows that the support and feeling of safety family members can get from good relationships have the positive effect on intellectual development of children.

The values of parents describe the ideals they have set for themselves and they show the social trends families in Estonia are striving for. In the research the parents were given a list of 10 most common aspects of our lives and they had to rank them starting from the one they considered to be the most important for them. The results showed that good relationships in family are the aspect which parents value the most (its index was 7.6 on a 10-point scale) (Figure 4). Quite the same level had dealing with children (7.5), after that came economic welfare (6.4) followed by mental self-improvement or self-development (5.8) – which was quite surprising since it was put even before job success and entertainments. This may be considered as a sign of the trend towards learning society.

![Figure 4. The rank of parents’ values](image)

**The financial factors**

The analysis of financial factors did not reveal the statistically significant correlations with the intelligence of children. Some tendencies were observed in relations between parents’ socio-economic status and the dwelling conditions of family and child’s intelligence. In the dwelling conditions two factors had some positive relations with child’s intelligence. These were: living in a private house and having one’s own room. Most of the children of higher intelligence (IQ>115) who lived in a private house (80% of them)
had their own room (they did not have to share it with other siblings), but that tendency was not observed among the children living in a block-of-flats. That may be due to the fact that an own room in a block-of-flats does not guarantee such kind of privacy than it does in a private house.

The socio-economic status (SES) of parents had a weak positive correlation with child’s intelligence. The SES influence on children’s intelligence has been from weak to moderate in different studies (Tork, 1940; Veisson, 2000). The effect of SES is exerted through financial capital, for example the number of and access to toys, better opportunities to attend different hobby-groups, better nutrition (Bradley & Corwyn, 2002). At the same time, the higher SES does not guarantee directly the occurrence of favourable factors (for example, the parent has to understand first the necessity of toys as the stimulating aids for child’s development and the parent has to obtain them). So, the SES does not have a direct influence on child’s development. It depends on several other factors forming a complex with them that together make up a basis for financial capital of family.

Conclusion

Family has an important role in formation of the foundation for child’s later life. Its influence reaches from the childhood and early adolescence to the years of teens and adulthood. The experiences in childhood within the family influence child’s decisions he/she makes being a teenager. The intelligence as one of the main factors that determine school achievement, and, therefore, a possible influence to dropping out of basic school, is the most variable at an early age (Sanson, 2001; Veisson, 2000). The range of child’s intellectual abilities is determined by genetic factors and the changes within that range can be achieved only by environmental influences. But the environmental factors have the strongest influence on intellectual development at pre-school and primary school age (Berstein et al, 1994), later their role in intellectual development diminishes and the genetic factors start dominate. The borderline between these two stages is considered to be 11±2 years (Zajonc, 2001). Until then, this is the family that has the most important part in child’s life and the within-family factors have a remarkable influence on child’s development.

The strongest influence on the development of child’s intelligence has the model of family structures (involving the family size and birth order). The relation between intelligence and social factors (such as style of parenting, parents’ values, occurrence of quarrels, shared activities) was weaker, but it does not diminish their importance. The weak correlation results from the fact that the family – as a jointly functioning social unit – did not exist in most of the cases. The results of the present research reveal that the family members spend most of their spare time separately or, if they are together, they either watch TV or everybody does something on their own. The analysis of parents’ values showed that the most important things for the parents are the relationships in family and being with children, but in most cases it meant to help them to study or speaking about school. The amount of intellectual activities that could develop a child’s intelligence was very low which means that much of the resources that may have a possible positive effect on the development of child’s intelli-
gence are left unused. But these are the only social factors through which the child can access the complex of cognitive knowledge-skills-abilities of adults (Heinla, 2002). When the child lacks these social factors it may diminish the positive effect of the factors having usually strong influence on child's intellectual development. That is why more attention should be paid on family-studies.

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The Competence of Latvian Teachers in Giftedness Development

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Abstract
Article reflects on the possibilities of giftedness development in Latvian schools. In the light of dominating theoretical conceptions of giftedness, authors examine the problems in the area of giftedness development essential for Latvian education. The research presents an analysis of Latvian teachers’ views on giftedness, the most typical methods used by Latvian teachers to develop the giftedness as well as the impact of teachers’ self-actualization on their work with gifted children. The authors have selectively inquired 340 Latvian school teachers about their attitude towards gifted children in the schools of general education and readiness for work with gifted children.

Key words: giftedness; giftedness development; teacher; teacher training; teachers’ activity in giftedness development.

Vision of Giftedness Development

The years of education reform in Latvia have been marked by the search for the effective teaching methods and forms of work with gifted children. An intensive work is done in USA, Spain, Great Britain and many other countries introducing different curricula and teaching methods for gifted children as well as providing the systematic analysis of the research data in the research associations of gifted children and on the level of different educational institutions and departments.

In order to draw the society’s attention to the problem of gifted children and to urge teachers to focus on this issue, The Association for Promotion of the Development of Gifted Children was established in Latvia in 1996. However, the real situation in Latvian schools of general education raises strong doubts about serious intentions to deal with this question.

Today the researches of giftedness on international level are focused on the specific curricula development for gifted children, which are based on enrichment and acceleration of development (Torrance, 1988; Heller, 1999; Renzulli & Reis, 2000; Cropley & Urban, 2000; Gardner, 2000; Moon & Rosselli, 2000). These authors use the teaching strategies such as “absorption strategy”, “problem strategy”, “acceleration”, and “intensification”. According to the principles of curriculum summarized by American psychologist H. Passow, curriculum for gifted children needs to include the research of multidimensional problems, which integrate knowledge with the structures of thinking, the development of productive think-
ing, as well as the use of necessary skills, which give the opportunity to adopt to changing conditions, new information and to develop need for obtaining new knowledge. This curriculum allows a free use of the sources of information, fosters the initiative and independence of students, and stimulates the development of their self-confidence. It orientates towards the cooperation with other people and culture (Райгородский, 1999).

If comparing the curriculum for gifted children with the traditional curriculum, we need to note that the former will include:

- The learning material, which is not included in standards;
- The detailed studies of the theme;
- Learning process organized around the needs of children, not according to a strict schedule;
- Activities that require the use of abstract terms;
- Flexibility of thinking with regard to time and resources;
- Higher requirements for independency and purposefulness in problem solving;
- More opportunities to develop organizational skills;
- Ability to make an analysis of behaviour and feelings of other people and own.

It is evident that such complicated curricula can be designed only by teachers with special training (Tannenbaum, 1983; Heller, 1991; Mönks, 1992; Eyre, 1997; Clark & Callow, 1998; Freeman, 1998, 2000; Савенков, 2000; Goodnough, 2001).

Though the teacher training for work with gifted children is considered to be very important in many countries, in Latvia this issue has not received the sufficient attention. The curricula in pedagogical faculties of universities include small amount of information about the peculiarities of gifted children, methods and strategies that could be used working with gifted children.

The researches done in different countries (and also in Latvia) prove that teachers who are not prepared for work with gifted children can be characterized as follows:

- They are unable to identify gifted children, as they are not familiar with their peculiarities;
- They are unable to understand the problems of gifted children and are ignorant about them;
- Their attitude towards gifted children sometimes is hostile because gifted children are different from others and disturb the lesson;
- If they do differentiate gifted children, they increase the quantity not the quality of tasks (Torrance, 1962; Gilbuch, 1991; Hamilton, 1999; Kokina, 2000; Mönks, Heller & Passow, 2000; Persson, Balogh & Joswig, 2000).

According to the educational strategy of Latvia where the care for intellectual and creative potential of society is marked as one of the main priorities, the authors indicate three basic directions of research about giftedness development:

- To analyse and critically evaluate the research done in different countries about the giftedness; to choose the most appropriate teaching methods for work with gifted children in Latvia;
To analyse the situation in schools of Latvia in regard the work with gifted children focusing on the competence of teachers dealing with gifted children;

To foster the development of giftedness introducing new curricula, teaching methods and forms, adopting new conceptual models and preparing teachers for work with gifted children.

The present research is connected with the second direction.

The aim of the research is to study the competence of teachers dealing with gifted children and to make a critical evaluation of work being done in Latvia in the field of giftedness.

The following research questions are advanced in current research:

- What are the views of Latvian teachers about the development of giftedness?
- What are the most typical methods that teachers use for the development of giftedness?
- Does the self-actualisation of teachers have any impact on their work with gifted children?

Research Methods and Participants

In this study we use two research methods: questionnaire for teachers particularly designed for the purposes of this research and Personal Orientation Inventory (POI) by E. Shostrom.

To gain better and more complete insight in Latvian teachers’ views about giftedness, the authors of the article offered a questionnaire consisting of 14 questions. The questions were formulated with the consideration of the latest research findings (Clark, C. & Callow, R., 1998; Hamilton, L., 1999; Mönks, F.J., Heller, A. & Passow, A.H., 2000).

To answer the third research question, Personal Orientation Inventory by E. Shostrom designed in line with a self-actualisation theory of A. Maslow was employed. The test consists of 11 scales, which determine the qualities like self-respect, spontaneity, etc. It was assumed that these qualities could serve as the indicators of teachers’ readiness of work with gifted children.

340 teachers participated in the research (305 women and 25 men). The teaching experience of the sample: 50 teachers - 3 years, 195 teachers - from 3 to 10 years, 95 teachers - more than 10 years. The participants of the research represented both country regions and towns of Latvia (1:1) as well as different regions of Latvia: Latgale, Vidzeme, and Kurzeme. There was considerable difference among teachers: 102 teachers were attending study courses during their Master and Doctoral studies and 238 teachers were not attending any courses after the graduation from university.

Results of the Research

A. Teachers’ views about gifted children

To obtain the answer on the first research question – what are the views of Latvian teachers about the development of giftedness – teachers (N=340) filled out the questionnaire consisting of 14 questions.
On the question “Do you know the problems of gifted children?” about a half of respondents (53.7%) gave a positive answer. When the question was put differently: “How would you describe a gifted child?” 83.5% of the teachers mentioned the intellectual (cognitive) abilities of gifted children paying less attention to creative solutions of non-standard tasks. A small percentage of teachers (28%) recognized the giftedness in music and art. The answers on a question “How would you explain what the psycho-social analysis of a gifted child means?” indicate that teachers are not aware of psychological and social problems of gifted children. Apart from the difficulties of communication (42%) and non-conformism (19%), teachers indicated that gifted children have difficulties accepting the reality (39%).

Answering the question “How could you characterise the gifted children?” teachers claimed that gifted students:
- See unusual and different links;
- Offer original ideas and solutions;
- Think abstractly;
- Foresee consequences and conclusions;
- Can use knowledge in a new situation.

Responding to the question “What are the typical problems of gifted children?” our respondents conveyed the problems (see Figure 1) disclosed also in the findings of researchers (Mönks, F.J., 1992; Eyre, D., 1997; Freeman, J., 1998; Clark, C. & Callow, R., 1998).

Figure 1. The most frequent problems of teachers working with gifted children (N=340)
Latvian teachers also mentioned the subsequent problems, which can be traced in the behaviour of gifted children (see Figure 1 – last three bars):
- They are dissatisfied with teacher’s work, as the teachers ignore the need of gifted children to think non-traditionally;
- Gifted children have many complaints about other children and teachers;
- The development of gifted children can be characterized by leaps.

These data indicate that there is an urgent need to improve the teacher training for work with gifted children. In many countries this is a reality, while Latvian teachers are not yet ready for this kind of work. Besides, the requirements for teacher to work with gifted children in various countries show differences: in some countries teacher has to have a Master’s degree, in others – the certification from specific courses is required, and there are places where the participation in conferences on the issue of giftedness is highly evaluated.

B. Methods for giftedness development

We were most interested in the methods for giftedness development presented by teachers involved in Master or Doctoral studies, as these are the teachers having the highest motivation and also knowledge and skills to engage in advanced and innovative instructional practice.

The questionnaire data showed that teachers who are involved in postgraduate studies working with gifted children tend to implement the long-term pedagogical models:
- Information collection for portfolio;
- Clarification of students’ learning styles and application of this information to optimise different activities;
- Search for other talents of children beside their sphere of special abilities;
- Collection of the data obtained from questionnaires for gifted children’s parents;
- Utilization of evaluation scales to evaluate students’ behaviour.

Percentage of utilization of these five models in teachers’ work is reflected in Figure 2.
Teachers who underwent some training about giftedness in Master and Doctor degree studies, indicated these pedagogical criteria:

- High level of cognitive skills with a special emphasis on abstract thinking, creative thinking, and the ability to make conclusions and see regularities;
- Ability to solve non-standard tasks.

As the research on giftedness in Latvia shows, such teacher training is not practiced here yet, with the exception of separate courses offered to the teachers. For instance, Daugavpils University fosters a tradition to inform students about giftedness in Master and Doctor degree studies.

To obtain the answer on the third research question, POI by E. Shostrom was applied. In this case the comparison was made between the two groups of teachers: those who didn’t attend courses and teachers who where engaged in Master and Doctoral programs in Daugavpils University.

Figure 3. Differences in self-actualisation between two groups of teachers
If we compare teachers who did not attend courses with those who were engaged in Master and Doctoral programs, the latter gave the higher priority to such criteria as orientation in time, attitude towards a person, and the recognition of creativity. The teachers who didn’t attend courses evaluated the criteria of spontaneity much lower. But as we know, spontaneity determines a person’s belief of oneself, the world, and his/her self-esteem. The spontaneity of the interviewed teachers can be explained also by the high requirements towards teachers’ work and frustration due to low wages, therefore, such values as freedom, openness to new ideas are not realized yet.

Concluding Remarks

Therefore, there is a need for research on different levels in pedagogy and psychology, involving also the philosophers, sociologists and politicians. Besides, there is a trend in teacher training to include some courses on giftedness in Bachelor studies, as well as in Master and Doctoral programs.

In Latvia teacher training to prepare teachers for work with gifted children is not under consideration yet, but in the world this issue is regarded to be very important.

The curricula in teacher training institutions include little information about the characteristics of gifted children, and also the methods and strategies that could be used working with gifted children.

The results of our research indicate that teacher training on an issue of gifted children is considerably changing the understanding of teachers about the giftedness and presents challenges for work with gifted children.

The results of research allows us conclusion that there is the considerable differences in the Latvian teachers’ views about the development of giftedness as well as in the methods for the development of giftedness. Teachers who do not have a special training for the work with gifted children have several features in common:

- They are not ready to differentiate the gifted children as they are not familiar with their peculiarities;
- They are unable to discern the most typical problems of the development of gifted children;
- In the methods they are applying working with gifted children they approach only the pedagogical issues, not the psychological underpinnings of this problem.

Teachers engaged in Master and Doctoral programs are more open for diverse methods of work with gifted children and the level of their self-actualization according the scales of POI are considerably higher comparing to that of teachers in the first group.

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