9. PROBLEMS OF EDUCATIONAL PHILOSOPHY AND SOCIOLOGY

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MODEL OF STRUCTURE OF PERSONAL INNOVATIVENESS IN EDUCATION AND INNOVATIONAL ANXIETY: PILOT RESEARCH RESULTS

PERSONĪBAS INOVĀCIJU PIEŅEMŠANAS STRUKTURĀLAIS MODELIS IZGLĪTĪBĀ UN PERSONĪBAS INOVĀCIJU TRAUKSME: PILOTPĒTĪJUMA REZULTĀTI

Svetlana Baigozina, Aivars Lasmanis, Eduard Saveliev, Tālivaldis Mežis, Irina Filipova

Abstract

Implementation of any innovations, been these in education, personnel management or training in information technologies (IT), causes the necessity to consider the factor of each individual's willingness to accept innovations in professional or educational activity.

The questions considered in this paper are as follows:

- The attitude to innovations and to usage of innovations in professional activity and studying process;
- The analysis of subjective evaluations of innovations in education;
- Innovativeness and innovational anxiety of the subject of educational or professional activity;
- Parameters, structure and model of innovativeness of a personality;
- Model of interaction between The Leary Interpersonal 8-Circuit Model of Consciousness and innovativeness of a personality;
- Model of comparison and linear polarization of metaprograms and innovational anxiety;
- Interpretation of a three-dimensional model of psychological and personal qualities of acceptance of innovations in the results of factorial analysis.

Keywords: Innovational Anxiety©, Personal Innovativeness Structure Model©, Metaprograms Polarization Model©.

Definitions and concepts

Personal Innovativeness in the Domain of Information Technologies (PIIT), by definition, is the willingness of an individual to accept or reject any kind of information technologies [1]. We shall define (in [2], [3]) a *Level of Personal Innovativeness* as a complex consisting of personal innovational anxiety, personal behavioral models and personal sociability-directed characteristics. This combination determines a degree of the personal attitude to any kind of innovations on a scale of innovational anxiety and simultaneously determines the formation of person's behavior in situations or in the particular environment, connected with the factors of innovational anxiety. As *Factors of Innovational Anxiety* we shall define the presence of the direct or indirect, direct or postponed necessity to use any innovations (for example, new methods of communication or computer technologies) in professional work, educational process, or in a local information environment. As *Local Information Environment* we shall define computers and computer networks (hardware), programs (software), electronic data used for learning process, a communication facility and the communications, users of environment (subjects), social components of the user's communications which are incorporated in local information technological system in local institution. The local information environment is a component of the global information space which provides opportunity to apply the information during professional or educational activities. In general, *Local Information*

Environment is a set of objects, subjects and conditions which provide means for professional or educational activity. Consequently, we shall define *Personal Innovational Anxiety* as a factor of speed and direction in a process of the person's development under new or changed conditions of a local information environment.

The theoretical basis of research

The list of psychological, cognitive, sociological and personal theories and models:

1. A Field Theory in Social Sciences and a Dynamic Theory of Personality (Kurt Lewin, 1935).
2. A Theory of Cognitive Dissonance (L. Festinger, 1957, [4]).
3. A Theory of Reasoned Action (Ajzen, Icek, & Fishbein, Martin, 1975, 1980, [5]).
4. An Innovation Diffusion Theory (Everett Rogers, 1983, [6]).
5. A Social Cognitive Theory (Albert Bandura, 1986, [7]).
6. A Dynamic Theory of Organizational Knowledge Creation (Nonaka I., 1994, [8]).
7. The Interpersonal 8-Circuit Model of Consciousness, (Leary Timothy, 1958, [9]).
8. A Technology Acceptance Model (Bagozzi et al., 1992, Davis et al., 1989, [10]).
9. A Combined Technology Acceptance Model and Theory of Planning Behavior (Ajzen I. & Fishbein M., 1980, [5]).
10. A Professional Competence Model (Albert Bandura, 1993).
11. A Unified Theory of Acceptance and Use of Technology UTAUT (Venkatesh et al., 2003, [11]).

Last researches in nearest fields: see Ref. [14]–[26].

On the basis of the given theories and researches, a pilot-experiment and an empirical research were organized and new models were created (see Appendixes).

Description of all stages of the empirical research

A) The first pilot-stage, January 2005

- Creating of a questionnaire and questioning 52 teachers-experts in education.
- Descriptive frequencies analysis and content-analysis of answers.

B) Results and conclusions after the first stage

1. The attitude to IT innovations on the whole is positive.
2. Respondents explain existing problems by means of external reasons.
3. The results of the content-analysis of answers on possible problems in implementation of IT and ways of the decision: the opinion that the solution of problems depends on external factors prevail in respondents' sample. It means: a) significant displacement of the locus-control of respondents to external parts of a locus-control scale, or b) the particular level of anxiety of the respondents.
4. Conclusion after the 1st stage: respondents' anxiety might be personal, situational or it might be other anxiety caused by process: respondent's anxiety can be *innovational anxiety* at this moment of questioning – at the moment of active implementation of IT innovations in education [12].

C) The second stage, September 2005

- 27 respondents interviewed.
- Content-analysis of answers.

D) Results after the second stage

1. A list from 96 parameters (see Appendix 2) of willingness for usage of innovations was created.
2. A grouping of 96 parameters in classes was carried out. 16 classes of parameters were allocated and defined after the grouping.
3. Most and least frequently mentioned parameters were revealed.
4. Most and least significant parameters for respondents were revealed.
5. Comparison of results and reasons were revealed and described.
6. The next hypothesis was putted forward: it is possible that the respondents of the sample had given an inadequate evaluation of the situation; or the the possibility of displacement of a problem of innovations exists in this sample [13].

E) The allocated defined classes of parameters of innovations

Class 01 (psi) Parameters describing psychological features of a personality;
Class 02 (mer): Parameters of purposefulness;
Class 03 (kom): Parameters of communications;
Class 04 (prof): Parameters describing professional qualities;
Class 05 (pers): Parameters of personal features;
Class 06 (zin): Knowledge in new areas;
Class 07 (iem): Skills of using new technologies;
Class 08 (pra): Abilities to use new technologies;
Class 09 (arf): Parameters describing external influence;
Class 10 (arft): Parameters describing technical factors;
Class 11 (arfk): Parameters of the communications with experts;
Class 12 (att_prof): Parameters of professional development;
Class 13 (att_pers): Parameters of personal growth;
Class 14 (anx): Parameters of situational anxiety;
Class 15 (vel): Parameters describing desire to apply an innovation;
Class 16 (attieks): Parameters of the attitude to innovations [13].

F) The third stage, September 2005

- Questioning 16 respondents to find out the evaluation of 96 parameters on a 5-mark scale.
- The correlation and factorial analyses.

G) Results after the third stage

1. There is no correlation between the subjective evaluations of parameters of willingness for usage of innovations and the age and the work experience of the respondents.
2. There is a weak significant correlation between the subjective evaluation of some parameters and level and area of education of the respondents.
3. There is a weak significant correlation of evaluation of all parameters between themselves [13].

H) Conclusions after the third stage

Two components after the factorial analysis are extracted (see Figure 1 and Table I): internal motivation of development of a person and possible innovativeness of a person.

I) Discussions after the third stage

As a result of the previous pilot-research stages and supervision of groups of respondents, it is possible to formulate the following: The level of a person's acceptance of innovations is influenced basically by a combination of psychological and communication qualities of the person, the purposefulness of the development of personality, instead of knowledge and skills [13].

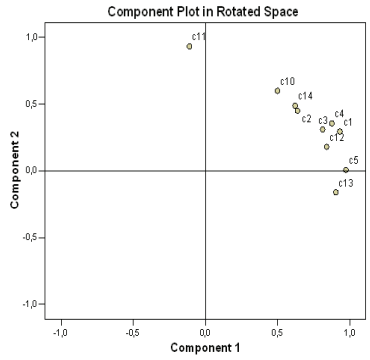

Fig. 1. **Component Plot in Rotated Space: two components extracted after the 3rd stage.**

Table 1

Rotated component matrix after the 3rd stage

	Component	
	1	2
pers_krit	.974	.006
psi_krit	.932	.293
atte_krit	.904	-.161
prof_krit	.877	.355
attp_krit	.840	.179
kom_krit	.813	.309
mer_krit	.639	.449
anx_krit	.623	.487
arfk_krit	-.111	.931
arft_krit	.500	.599

J) The fourth stage, October 2005−December 2006

- Questioning 129 respondents to find out the value judgment of 96 parameters on a 5-mark scale.
- Factorial analysis.

Results after the fourth stage

The level of a person's acceptance of innovations is influenced basically by a combination of psychological and communication qualities of the person.

The level of a person's acceptance of innovations is also influenced by the purposefulness of the development of personal qualities.

A person's acceptance of innovations changes during professional or study activities, it is possible to describe the direction, the speed, the acceleration of innovativeness.

Three components are extracted (see Table II, see the three-dimensional model of components in Fig. 2, see the two-dimensional projections of the 3D model of Component Plot in Fig. 3, Fig. 4 and Fig. 5).

Below is a description of the dynamic process of acceptance of innovations in the personal development and socializing of a person.

K) Components in Pair №1: The speed of innovativeness of a person (IP) − the Direction of IP (see Fig. 3)

Speed-direction (Component 1-Component 2): if the speed of acceptance of innovations is greater, the person's social communication direction of development emerges, and the person's direction on interdependence in interpersonal cooperation and joint development are greater at the same time. If the speed of acceptance of innovations decreases, personalized (internal) direction of development of the person increases.

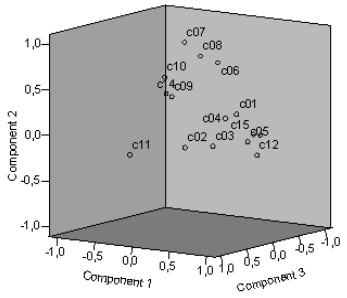

Fig. 2. **Component Plot in Rotated Space after the 4th stage**

Table 2

Rotated component matrix after the 4th stage

	Component		
	1	2	3
att_pers	.828	.279	.014
att_prof	.795	-.119	.237
psi	.783	.289	.257
pers	.711	.311	.169
attieks	.516	.459	-.101
prof	.512	.431	.311
pra	.108	.842	.261
iem	.141	.792	.188
zin	.302	.693	.084
arf	.475	.488	.360
arfk	.042	.066	.799
mer	.396	-.030	.647
arft	.061	.296	.608
anx	.125	.340	.456
kom	.407	.367	.417

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Direction-speed (Component 2-Component 1): if the direction of personal development is more personalized (internal or personal-oriented), the speed of acceptance of innovations decreases. If the direction of personal development comes nearer to external social communication-interdependent cooperation, the speed of acceptance of innovations increases.

L) Components in Pair №2: Speed-Acceleration (see Fig. 4)

Speed-acceleration (motives) (Component 1-Component 3): if the speed of acceptance of innovations decreases, motivation for activities is more internal. If the speed increases, motivation becomes more external. On the contrary, external motivation and external locus of control mean higher speed of acceptance of innovations. Internal motivation and internal locus of control mean lower speed of acceptance of innovations.

Hence, increase of the speed of acceptance of innovations is possible only by influencing the person, but the speed of change of innovativeness is lower if internal motivation is involved in a process.

Acceleration-speed (Component 3-Component 1): if motives are more internal, the speed of acceptance of innovations is low, if motives are external, the speed is higher.

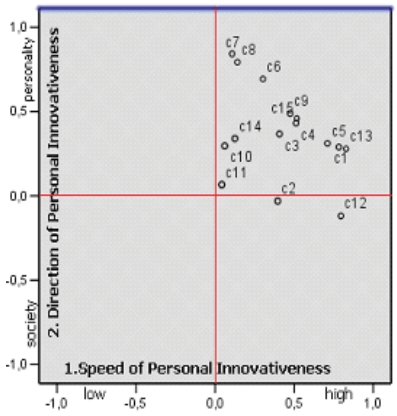

Fig. 3. **Components in Pair №1: Speed of Innovativeness of a Personality – a Direction of IP.**

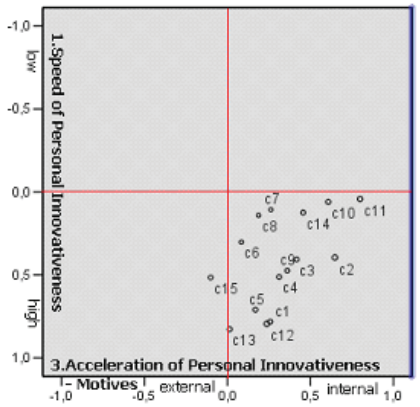

Fig. 4. **Components in Pair №2: Speed-Acceleration (motives)**

M) Components in Pair №3: Direction-Acceleration (see Fig. 5)

Direction-Acceleration (Component 3-Component 2): if motivation is internal, the social direction of innovative development of the person is operated in this process. Motives are directed on expansion of developing interdependent interpersonal cooperation and socialization of a person. If motivation is more external, personally-guided direction of development emerges.

It means that in a compulsory process of acceptance of innovations, a person is compelled to direct own efforts in order to receive additional knowledge and skills. It eventually will involve a process of conscious training and self-training. The attitude to the given process also is important: negative or neutral attitude influences greatly the process of compulsory acceptance of innovations in the case of external locus of control.

Direction-acceleration (Component 2-Component 3): if the direction of personal innovativeness is more personal, the internal motives operate in the process. If the direction is more socialized, external motives operate. It means that if the process of innovations is imposed by the speed of development of society, it induces involvement of internal motivation – depending on conditions and attitudes of a person.

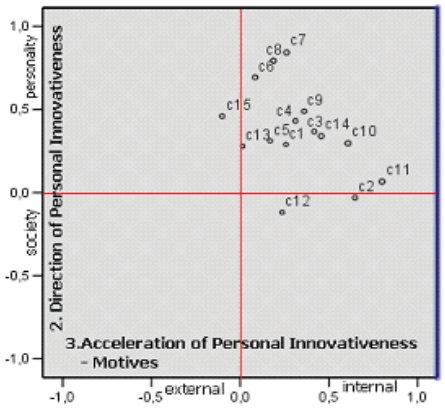

Fig. 5. **Components in Pair №3: Direction-Acceleration (motives):**

N) Conclusions after the fourth stage

Three components of dynamic interaction can be considered by analogy with physical concepts – speed, direction and acceleration.

Dynamic interaction can be presented as a process of fluctuations: changes of speed of development of the academic intelligence of a person (knowledge, skills, abilities); directions of development of emotional intelligence and qualities of a person (psychological and personal qualities, purposefulness, skills of communication, anxiety); changes of the level of innovativeness of a person: process of changing the level of innovativeness under the influence of conditions of the necessity to accept any innovations in professional or educational activity.

Models for describing structure and interactions of concepts

In order to describe the concept of innovativeness schematically, three models of interaction of concepts have been created:

1. The model of structure of leading innovativeness parameters PIM© is created (see Fig. 6).
2. The model of structure "The Leary's Interpersonal Model and Innovativeness" is created (szee Fig. 7).
3. The model of interaction polarization metaprograms of a personality and innovational anxiety MPM© is created (see Appendix).

Discussion and conclusions

The usage of the concept describing the level of innovativeness and practical measurement of the level of innovativeness of a person are significant for planning and developing training computer systems in all branches: for system engineering management in business and manufacture; for control systems for higher and secondary education; control systems and training of the personnel; for development of all systems of strategic and tactical planning; for management, use and development of human resources and human capital.

The submitted theoretical models and the developed scale of measurement of innovativeness of a person demand further studies and an additional research for verification of the concept. The questionnaire on the structure of metaprograms and the level of in novativeness of a personality is developed.

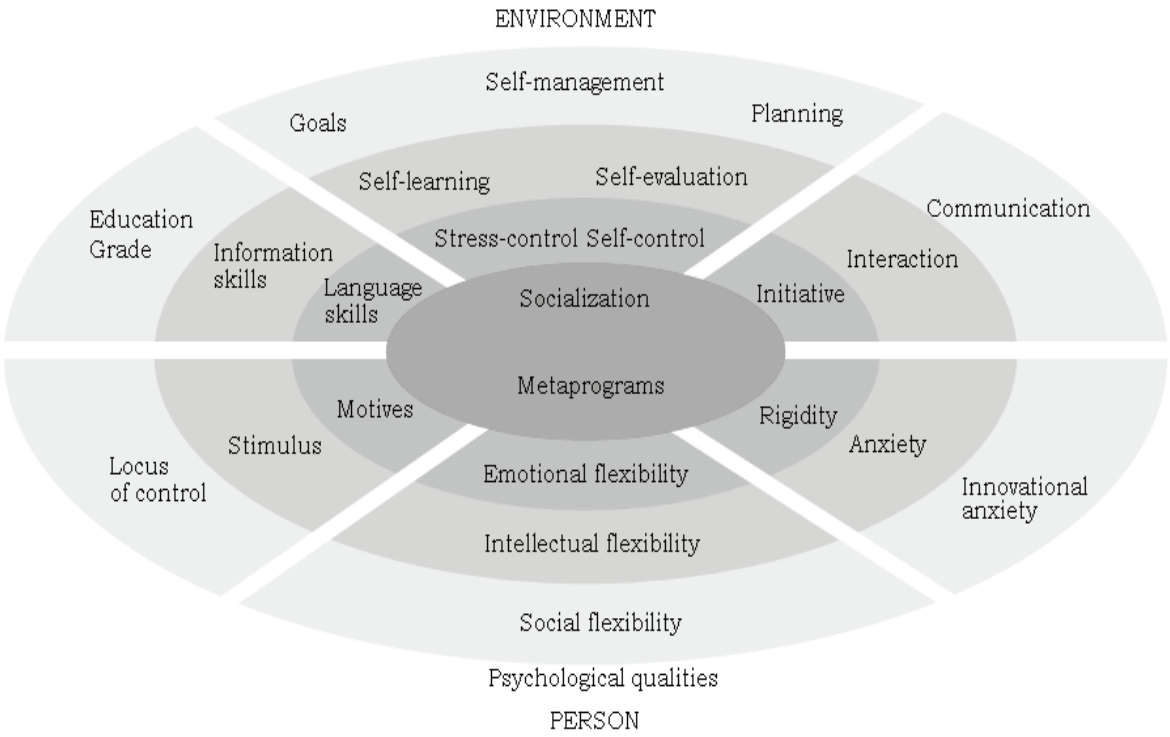

Fig. 6. **The Model of Structure of Innovativeness of Personality PIM© 2007**

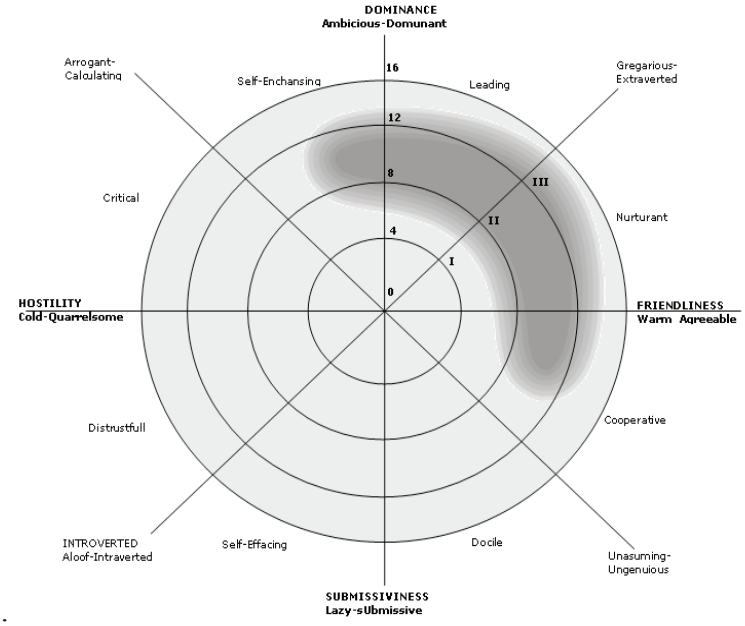

Fig. 7. **The Leary's Interpersonal Model and Innovativeness of Personality**

As there are no adequate methods for researching the given phenomenon, development of new tools for research of the structure of metaprograms, metaprograms' polarization and the phenomenon of innovativeness is necessary.

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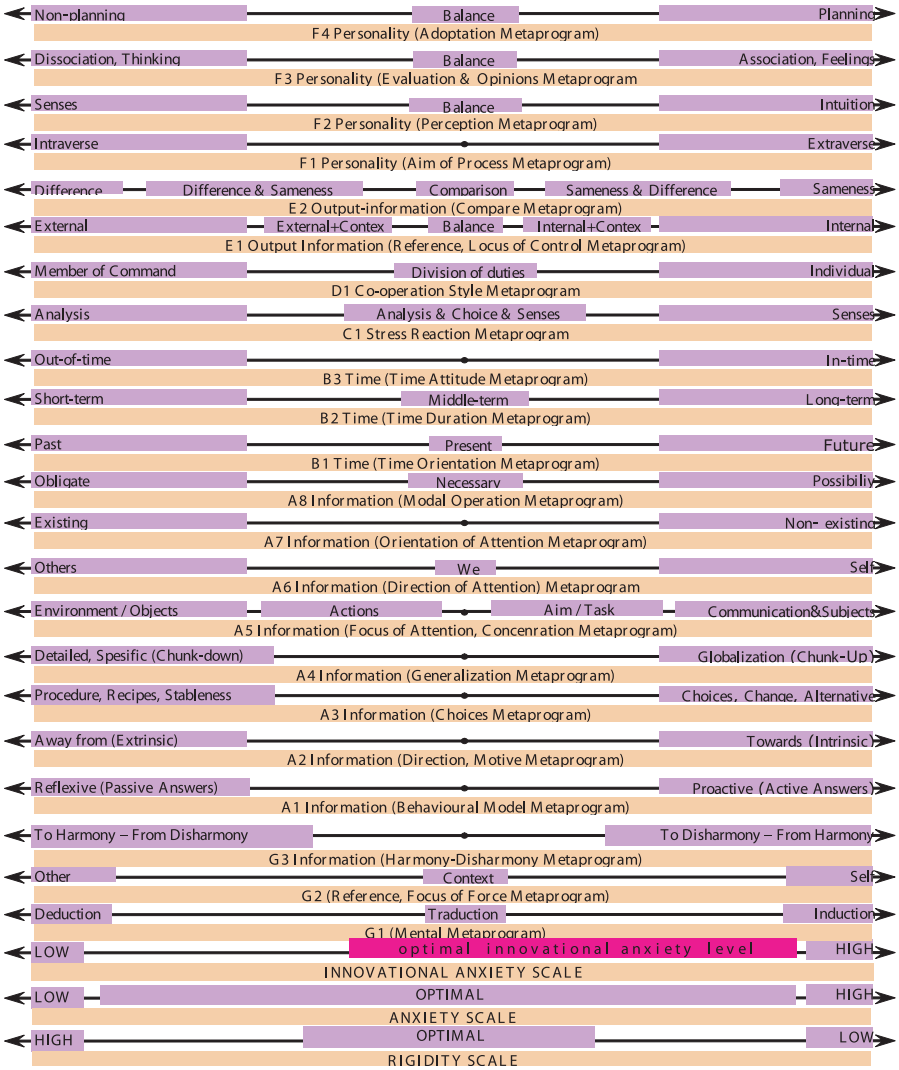
Appendix 1

The Model of Interaction Polarization Metaprograms and Innovational Anxiety MPM© 2007

As innovativeness assumes the level of willingness and application of definite models of a person' behavior, it is possible to assume the interrelation of The Model of Metaprograms and the Level of Innovativeness in a context of the information perception, filtration and processing process, as well as in a context of decision-making and formation or change of a certain model of behavior of the person, at which the extent of Innovativeness Level can be presented. During the process of the analysis of various metaprograms, opportunities of classification and association of some metaprograms by classes have been determined – by reception of information (Information), by the ways of processing information, on a conclusion of information and decision-making (Output-information), by personal traits (Personality), by communication and stress reaction (Stress-reaction). Besides, it is possible to distribute some metaprograms in a scale with two poles, polarizing some metaprograms in the left, central, or the right part of each metaprogram scale. The result of the classification and distribution is displayed on the model. Consequently, in parallel scales of known *Metaprograms,* the scale of *Person's Innovativeness* with three areas – low, optimal and high innovativeness – is set down. Drawing up a person's profile on specified metaprograms, in the case when more metaprograms at diagnostics are fixed on the right part of the scale or in the case when the metaprograms are more expressed on the right part, the Innovational Anxiety level is more optimal. Combinations of some metaprograms probably display the direction of innovativeness of the person's behavioral accents.



Kopsavilkums

Informācijas tehnoloģiju inovāciju pieņemšana, īpaši izglītībā, personāla vadībā un menedžmentā, ir saistīta ar nepieciešamību ņemt vērā katras personības gatavību akceptēt inovācijas profesionālās darbības ietvaros. Rakstā tiek apskatīti šādi temati:

- attieksme pret inovācijām un inovāciju lietojumu profesionālajā darbībā vai mācību procesa ietvaros;
- inovāciju subjektīvo novērtējumu analīze izglītības jomā;
- personības inovāciju pieņemšana un personības inovāciju trauksme;
- inovāciju pieņemšanas radītāji un personības inovāciju pieņemšanas strukturālais modelis;
- Liri personības saskarsmes modeļa un personības inovāciju pieņemšanas modeļa savstarpēja iedarbība;
- personības metaprogrammu modeļa un personības inovāciju trauksmes salīdzinājums un lineārā polarizācija;
- psiholoģiskās un personības īpašību inovāciju pieņemšanas 3-D modeļa interpretācija faktoranalīzes rezultātā.

Atslēgvārdi: Personības inovāciju trauksme©, personības inovāciju pieņemšanas modelis©, metaprogrammu polarizācijas modelis©.

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PATSTĀVĪGAS STUDĒTPRASMES UN KRITISKĀ DOMĀŠANA KĀ GALVENIE NOSACĪJUMI, UZSĀKOT STUDIJAS

INDEPENDENT STUDYING SKILLS AND CRITICAL THINKING AS THE MAIN CONDITIONS FOR BEGINNING STUDIES

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Anotācija

Raksta mērķis ir dalīties pieredzē, kas apkopota daudzu gadu garumā, strādājot ar pirmā kursa medicīnas studentiem Rīgas Stradiņa universitātē (RSU). Pirmais semestris augstskolā vidusskolas absolventam ir sarežģīts dzīves periods. Tāpēc tiek veikts pētnieciskais darbs dažādu didaktisko modeļu aprobēšanā, lai veicinātu ātrāku studētprasmes apgūšanu. Ir izstrādāts mācību materiāls, kas sekmē studentu patstāvību, vēlēšanos veidot savu mācību stratēģiju, attīsta kritisko domāšanu.

Atslēgvārdi: studētprasmes, patstāvīgas studijas, kritiskā domāšana.

Ievads

Uzsākot studijas augstskolā, jaunieši lielākā vai mazākā mērā sevi personificē ar konkrētu praktisko darbību šajā jomā. Rīgas Stradiņa universitātes medicīnas specialitāšu studenti savās nākotnes vīzijās jau ir ārsti. Varbūt tāpēc daļai studentu nemedicīnisko priekšmetu apgūšana šķiet lieka un apgrūtinoša. Nereti viņi gūst tam apstiprinājumu, jo neredz konkrētu un tūlītēju lietojumu materiālam, kas tiek dots teorētiskajās nodarbībās.

Lai mainītu šo situāciju, teorētiskais materiāls jādod tādā kontekstā, kas ļauj studentam saskatīt jēgu jauniegūtajā informācijā, un jāvirza students uz šīs jēgas saskatīšanu. Kad studenti sapratīs, ka zināšanu vērtība slēpjas zināšanu dzīvotspējā, viņi vēlēsies un spēs konstruktīvi izmantot savas zināšanas.

Topošo mediķu izglītība nav iedomājama bez dabaszinātņu un humanitāro zinātņu pamatu apgūšanas, bez cilvēka un apkārtējās vides eksistences savstarpējo likumsakarību izpratnes. Šodienas dzīves temps izvirza personībai prasību būt ar plašām, profesionālām zināšanām, daudzveidīgām prasmēm.

Tāpēc aizvien svarīgāka kļūst studentu patstāvība – uz pieredzi balstīta mācīšanās, literatūras meklēšana un analizēšana. Uzsākot studijas augstskolā jaunos apstākļos, studenti bieži nav pārliecināti, ka spēs sevi organizēt vai arī to nemaz nemāk. Dažkārt vērojama negatīva attieksme pret mācību kursu, kas prasa lielas pūles. Nepieciešams pilnveidot studentu patstāvīgā darba prasmes un mācīšanās pieredzi, īpaši akcentējot jauniešu kritiskās un radošās domāšanas nozīmi. Tikai personīgi nozīmīgās zināšanas var būt par pamatu tālākai izglītībai visa mūža garumā. Mācīšanās ir informācijas uztveres un apstrādes process, kura rezultāts ir atkarīgs no personīgā ieguldījuma, iepriekšējām zināšanām un motivācijas. Savukārt mācību procesa saturam un formai jārosina studenti pilnvērtīgi līdzdarboties tajā. Šim nolūkam tika izstrādāts uz patstāvīgo mācīšanos orientēts metodiskais materiāls un aprobētas interaktīvā darba metodes praktiskajās nodarbībās kā veicinošie faktori studiju pašorganizēšanas prasmju attīstīšanā.

Didaktisko modeļu izvēle

Studējošais pats veido mācību procesu, vadoties pēc konkrētiem un reāliem mērķiem, pats seko savas attīstības virzībai, pats nosaka gala rezultātu. Vienlaikus ir svarīgi procesa efektivitātei izvēlēties pareizus tehnoloģiskos paņēmienus, veiksmīgi tos kombinēt, iekļaujot, jau zināmās mācību formās: lekcijās, praktiskajos un laboratorijas darbos, konsultācijās.

Pašnoteikšanās jāsaprot kā individuāla sintēze – prasmes individuāli iegūt, veidot un izmantot savas zināšanas un spriedumus, patstāvīgi rīkoties (Rubene Z. 2004).

Vislabākās metodes ir tieši tās, kuras iesaista studentus aktīvā domāšanas procesā nekavējoties, nevis tās, kuras loģiskus procesus pēta abstrakti, atliekot uz nenoteiktu laiku iespēju domāt par kaut ko reālu. Turklāt kritiskā domāšana vissekmīgāk attīstās, ja to rosina studentu pašu zinātkāre vienlaikus ar autentisku izaicinājumu, kas studentiem šķiet nozīmīgi (Templs Č., Stīla Dž., Meredits K. 1998).

Studentiem ir nepieciešamas iepriekšējās zināšanas, lai gūtu labumu no kārtējās lekcijas, semināra, laboratorijas darba. Ja viņu prasības pēc informācijas ir zemas, pirms iedziļināšanās informācijas izklāstā nepieciešams izskaidrot cēloņsakarības. Ja prasības pēc informācijas ir augstas, mācību process jāorganizē tā, ka apgūstamā viela ir dabiski balstīta uz iepriekš zināmo.

Citiem vārdiem sakot, docētājam darbs jāorganizē tā, lai, nepazeminot studiju līmeni, mācību procesā iekļautos arī tie pirmā kursa studenti, kam studiju prasmes ir nepietiekamas. Docētājs un students ir sadarbības partneri. Šim nolūkam tika izstrādāts uz patstāvīgo mācīšanos orientēts metodiskais materiāls un aprobētas interaktīvā darba metodes praktiskajās nodarbībās kā veicinošie faktori studiju pašorganizēšanas prasmju un kritiskās domāšanas attīstīšanā.

Izstrādājot metodisko pieeju un metodisko materiālu vispārīgās ķīmijas apguvei medicīnas specialitātes studentiem, tika ņemtas vērā studējošo dažādās priekšzināšanas ķīmijā, pašorganizēšanās prasmes un mācīšanās stili. Bez ķīmijas zināšanām nav iespējams izzināt dzīvības procesu norisi. Nākamajos semestros medicīniskās bioķīmijas un citi kursi nav sekmīgi apgūstami bez šīm pamatzināšanām. Tāpēc ir nepieciešams apgūt ķīmiju medicīnas augstskolās jau pirmajā mācību gadā.

Mācību materiāls ir tikai daļa no kopējā darba. Paralēli tiek ieviestas un vienlaikus analizētas arī dažādas mācību darba formas un vērtēšanas varianti. Tabulā apkopoti galvenie mērķi, kas būtu sasniedzami, apgūstot patstāvīgas studētprasmes, veidojot savu mācību stratēģiju un attīstot kritisko domāšanu. Tabula veidota, pamatojoties uz RSU studiju reglamentu, kas nosaka studiju norises kārtību profesionālajās studiju programmās. Tabulā iekļautie mācību procesa elementi nesniedz pilnīgu pārskatu par visām darba formām augstskolā, bet konkrēti attiecināti uz populārākām darba formām ar pirmā kursa medicīnas studentiem.

Tabulā attēlotie mērķi ir sasniedzami, izmantojot atšķirīgus didaktiskos modeļus. Kognitīvās didaktikas mērķis ir pētīt tehniku un stratēģiju, kas tiek lietota uzdevumu risināšanā, spriešanā un lēmumu pieņemšanā, sasaistot to ar cilvēka intelektu (Халперн Д. 2000).

Kognitīvā didaktiskā modeļa pamatā ir mācīšana (zināšanu nodošana un pārmantošana), pragmatiskā didaktiskā modeļa pamats ir informācijas lietošana praktiskajā darbā, komunikatīvais didaktiskais modelis ir virzīts uz uzdevumorientētām mācībām, procesorientētais didaktiskais modelis ir patstāvīgas mācības dialogā ar docētāju (Maslo I. 1995).

Kritiski konstruktīvā didaktika. Klafki ar jēdzienu "kritisks" saprot pašnoteikšanās un solidarizēšanās spēju. Jēdziens "konstruktīvs" norāda uz koncepcijas praktisko ievirzi, tās darbīborientējošo, tēlojošo un pārveidojošo tendenci (Gudjons H. 1998).

Izveidotajā mācību materiālā fakti izklāstīti, pamatojoties uz pieminētajiem didaktiskajiem modeļiem, kā arī balstoties uz to, ka dabaszinātņu mācīšanas procesā jācenšas ieaudzināt studentos zinātnisku pieeju, ko raksturo zinātkāre, skepticisms, loģisku pamatojumu un pierādījumu meklēšana.

1. tabula

Mācību procesa elementi	**Studējošo darbības**	**Kritiskās domāšanas elementi**
Lekcija – studiju priekšmeta apguves veids, kurā docētājs izklāsta studiju programmas teorētisko materiālu. Lekcija ir studiju informācijas avots, studējošā izziņas darbības vadīšanas līdzeklis	Klausīšanās, analīze, pierakstīšana, saprašana	Iegūtās informācijas fiksēšana, sasaistīšana ar jau zināmo – ierosināšana
Seminārs – studējošie akadēmiskā personāla vadībā uzklausa un apspriež patstāvīgi sagatavotus ziņojumus	Patstāvīga literatūras meklēšana, izlasītā referēšana, kritiska analīze, jautājumu formulēšana, dialogs, piedalīšanās diskusijā	Studējošo kritiskās domāšanas attīstīšana, prasmju apgūšana: saskatīt un novērtēt būtisko, argumentēt un analizēt likumsakarības konkrētos apstākļos – apjēgšana, refleksija
Laboratorijas darbs – studējošie grupas akadēmiskā personāla vadībā veic studiju programmai atbilstošus eksperimentus, analizē iegūtos rezultātus un izdara secinājumus	Klausīšanās, vērošana, redzētā atkārtošana, eksperimenta analīze, rezultātu noformēšana un prezentēšana	Teorētisko spriedumu pārbaude: to noliegšana vai apstiprināšana – ierosināšana, apjēgšana, refleksija
Kontroldarbs – rakstiska zināšanu pārbaude nodarbībā	Faktu reproducēšana, analīze, risinājuma variantu meklēšana	Iegūtās informācijas fiksēšana, lai to sistematizētu turpmākai izmantošanai – apjēgšana
Kolokvijs – zināšanu pārbaudes forma, pabeidzot studiju priekšmeta programmas noteiktu tēmu	Literatūras avotu pētīšana un konspektēšana, pārrunas ar pasniedzēju par doto tematu	Jauniegūtās informācijas sasaistīšana ar jau zināmo, iespējamo risinājumu variēšana – refleksija
Eksāmens – zināšanu un prasmju par studiju priekšmetu (vai tā daļu) pārbaudes forma, kurā zināšanas vērtē ballēs, izmantojot 10 ballu sistēmu	Kursa padziļināta apgūšana gan patstāvīgi, gan auditorijās vai laboratorijās, konspektēšana, analīze, materiāla sistematizēšana, iegaumēšana un izklāsts mutiski vai rakstiski	Parāda prasmes izprast uzdevumus dažādos formulējumos un kontekstos, kā arī prasmes sistematizēt informāciju, to transformējot un radot jaunu informāciju – refleksija
Konference	Teorētiskā un praktiskā pētījuma veikšana un tā aprakstīšana rakstā vai tēzēs, prezentēšana un piedalīšanās diskusijās	Prasme izvirzīt problēmu, veikt zinātniski praktisku darbību, pamatot, nospraust mērķus, organizēt darbu, izklāstīt rezultātus mutiski un rakstiski, personīgās pozīcijas aizstāvēšana, vērtējot pretrunīgu informāciju – refleksija

Pretrunā ar zinātnisku pieeju ir pasivitāte (nevēlēšanās jautāt un pētīt); aizspriedumi; nepareiza informācija, kas ir iemesls izkropļotiem priekšstatiem; sistemātiskuma un spriešanas spēju trūkums (Templs Č., Stīla Dž., Meredits K.)

Šajā sakarā ir svarīgi atzīmēt, ka mācību darbā efektīvākās izrādījās tās metodes, kas studentiem bija zināmas jau skolā, taču pilnveidotas un pielāgotas augstskolas studijām. Kā piemēru var minēt D. Halpernas aprakstīto kritiskās domāšanas apgūšanas variantu.

D. Halpernas kritiskās domāšanas pamatojums balstās uz saikni starp domāšanu un zināšanām. Domāšanu, kas ļauj izmantot agrāk iegūtās zināšanas, lai radītu jaunas zināšanas. Par savas grāmatas mērķi D. Halperna izvirza tādu prasmju apgūšanu un attīstīšanu, kas raksturo skaidru, precīzu, mērķtiecīgu domāšanu. Praktisko paņēmienu bāze ir kognitīvās psiholoģijas idejas: atmiņa, loģiskās operācijas, uzdevumu risināšana, radošums, valoda, lēmumu pieņemšana.

Vārds "kritisks" nozīmē vērtējošs. Kad mēs domājam kritiski, mēs novērtējam savu domāšanas procesu rezultātu, ieskaitot pašu domāšanas procesu. Ievirze (установка) kritiskā domāšanā ir ne mazāk svarīga kā kritiskās domāšanas iemaņu attīstīšana (Halperna D. 2000).

D. Halpernas idejas par pamatu ir ņēmuši I. Zagaševs un S. Zair-Beks. Autori savā darbā neiedziļinās dažādu valstu izglītības sistēmu analīzē, bet runā konkrēti par pedagoģiskām tehnoloģijām kā vienu no iespējām mācību procesā. Ar terminu "pedagoģiskās tehnoloģijas" tiek domāti universāli mācīšanas mehānismi (универсальные механизмы обучения, инструментарий). Pedagoģiskā tehnoloģija ir mācību procesa organizēšanas metode, kas orientēta uz noteiktu mērķi. Populārākās mācību tehnoloģijas, kas minamas kā piemēri, ir problēmu risināšanas tehnoloģija, moduļu tehnoloģija u. c.

Autori konkrēti apraksta kritiskās domāšanas attīstīšanas tehnoloģiju "rakstot un lasot". Šo metodi izstrādājuši amerikāņu pedagogi Čārlzs Templs (*Charles Temple*), Džīnija Stīla (*Jeannie Steele*), Kurts Meredits (*Kurt Meredith*) (Zagaševs un S. Zair-Beks 2003).

Kā rāda pieredze, studentiem bieži vien ir grūti apkopot izlasīto un uzrakstīt konspektu. Rodas iespaids, ka pieraksti tiek veikti ar domu, ka tie nekad nebūs jālasa. Mūsdienu tehnoloģiskās iespējas ietaupīt laiku ir radījušas nevēlamu blakusparādību – nevēlēšanos veidot savu mācību materiālu, nemaz nerunājot par savu mācību stratēģiju.

Paralēli kritiskās domāšanas attīstīšanai "rakstot un lasot", semināros un laboratorijas darbos tiek stimulētas studentu diskusijas. Uzdodot jautājumus un meklējot argumentētas atbildes, studenti iemācās aizstāvēt personīgo pozīciju, uzsvērt būtisko, analizēt un novērtēt pretrunīgu informāciju – iemācās reflektēt. D. Halperna uzsver, ka māka uzdot jautājumus pozitīvi ietekmē gan to, kas uzdod jautājumu, gan to, kas atbild. Viena no labākajām metodēm, kas apvieno jautāšanu un materiāla pārskatu, ir SQ3R metode (*Survey, Question, Read, Recite, Review*): pārskats, jautājumi, lasīšana, izklāsts, atkārtošana. Studentiem ir jāmācas jautāt. Jautājums vienlaikus ir domāšanas virzītājs. Sekojošā tabulā ir jautājumu piemēri, kas palīdz studentam sakārtot savu domu gaitu, aptvert vēl trūkstošās zināšanas un nospraust izziņas procesa virzienu.

2. tabula

Jautājums	Izmantojamās domāšanas prasmes
Miniet piemēru ...?	Izmantošana
Kādā veidā var izmantot ...?	Izmantošana
Kas notiks, ja ...?	Izmantošana / hipotēzes izvirzīšana
Kā tas ir domāts ...?	Analīze / slēdziens
Kam līdzinās...?	Identificēšana
Kas līdz šim bija zināms par ...?	Zināšanu aktivizēšana
Kādā veidā ... saistīts ar ...?	Zināšanu aktivizēšana
Kādā veidā ... ietekmē ...?	Cēloņsakarību meklēšana
Paskaidrojiet, kāpēc svarīgi ...?	Analīze / vērtēšana
Vai piekrītat apgalvojumam, ka ...?	Vērtējums un tā pamatojums

Gatavību spriest veicina veselīga attieksme pret diskusiju. Daudzi cilvēki jauc diskusijas jēdzienu un strīda jēdzienu. Diskusija nozīmē kāda uzskata pamatošanu, bet strīdu var uzskatīt pa verbālu kautiņu. Kritiska domātāja raksturīga iezīme ir gatavība pārbaudīt citu cilvēku idejas. Atvērtība pārbaudei un kritikai nenozīmē, ka nevar būt savu uzskatu vai pārliecības, bet to, ka cilvēks labprāt

- pieņem lēmumus, kuru pamatā ir pierādījumi un to izvērtējums;
- pārbauda savas idejas un lēmumus;
- ir gatavs, ka citi cilvēki pārbauda viņu;
- pieļauj iespēju, ka viņam nav taisnība (Fišers R. 2005).

Kritiskai domāšanai nebūt nav jābūt oriģinālai, katram cilvēkam ir tiesības pieņemt cita cilvēka ideju vai pārliecību kā savu personīgo. Kritiski domājošs cilvēks atrod problēmas risinājumu un pastiprina šo risinājumu ar pamatotiem argumentiem. Katrs no pamatojumiem savukārt tiek pastiprināts ar pierādījumiem. Kā pierādījumi tiek izmantoti laboratorijas darbos iegūtie dati, teorētiskais pamatojums, personīgā pieredze. Praktiska strādāšana laboratorijās studējošiem ir nozīmīga un neatņemama sastāvdaļa kritiskās domāšanas trenēšanā.

Problēmu risināšana kā kritiskās domāšanas attīstīšanas metode īstenojama dažādās mācību formās, bet labākais veids gan docētājiem, gan studentiem, pēc D. Klustera domām, ir rakstu darbs. Rakstu darbā domāšanas process kļūst redzams skolotājam. Rakstītājs, patstāvīgi domājot, izmanto visu savu zināšanu bagāžu. Labs rakstu darbs satur problēmas risinājuma meklējumus un gala atbildi, kas tiek piedāvāta lasītājam. Gan skolēniem, gan studentiem rakstīšana ir grūtākā mācību procesa daļa (Klusters D.).

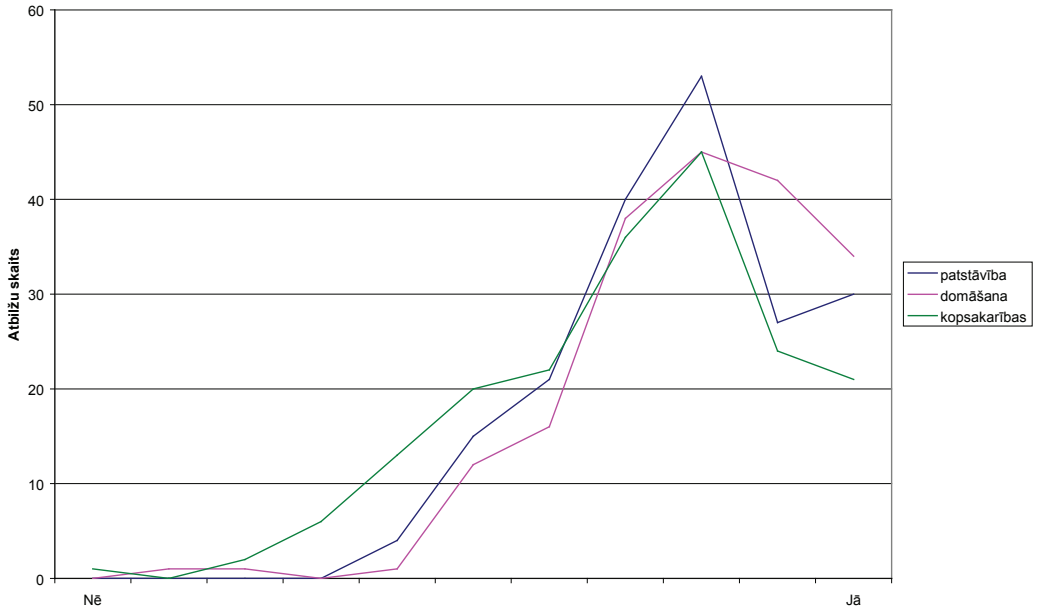
Izstrādātā metodiskā materiāla informācijā ietvertas patstāvīgam darbam nepieciešamās sastāvdaļas (Pidkasistijs P. 1980).

- obligātais, kas ietver zināšanu pamatu minimumu (fakti, likumsakarības);
- alternatīvais materiāls, kas ilustrē, apstiprina kādu ideju, vispārējo stāvokli;
- informatīvais materiāls, ko lieto kā pārskata materiālu citu nodaļu apskatā, lai studentus iesaistītu plašākā meklēšanā.

Veidojot mācību līdzekli, materiāls tika izklāstīts tā, lai studenti saprot, ka informācija ir domāšanas izejas punkts, nevis gala punkts, ka domāšana sākas ar jautājuma uzdošanu un risināmās problēmas noskaidrošanu un pamatotu argumentāciju.

Pētījuma rezultāti

Ar jaunizveidoto mācību materiālu vispārīgajā ķīmijā esam strādājuši jau divus gadus. Katra semestra beigās tiek veikta studentu aptauja. Rezultāti ir izmantojami gan metodikas, gan faktu izklāsta variantu pilnveidošanai. Jaunizveidoto materiālu vērtēja gan docētāji (ekspertu metode), gan studenti (aptauja). Aptaujājot studentus, bija interesanti uzzināt ne tikai viņu domas par grāmatas piemērotību, bet arī studējošo attieksmi pret mācību procesu kopumā.



Aptaujas rezultāti

Iespējamo atbilžu varianti studentiem tika piedāvāti skalā no "0" – pilnīgs noliegums līdz "10" – pilnīga piekrišana. Iegūtie dati tika apstrādāti ar secinošās statistikas neparametriskām metodēm, aprēķinot sakritības starp divām atributīvām pazīmēm (Raizs Ļ. 2000; Raščevska M., Kristapsone S. 2000). Uz jautājumiem: "Vai mācību materiāls rosina meklēt kopsakarības? Vai mācību materiāls ir piemērots kritiskās domāšanas veicināšanai?" studenti atbild apstiprinoši vai gandrīz apstiprinoši. Tikai 7%–9% studentu nedod apstiprinošu atbildi. Atbildes uz šiem jautājumiem vērtējamas kā sakrītošas. Lielāks studentu skaits dod pozitīvu atbildi uz jautājumu par mācību materiāla piemērotību patstāvīgo studiju iemaņu apgūšanai. Iegūtie rezultāti ir attēloti grafikā.

Aptaujas dati ļauj secināt, ka daudzas no praksē lietotajām mācību metodēm lietojamas ne tikai vispārizglītojošās skolās, bet arī augstskolā līdzās klasiskajām metodēm. Dažādo didaktisko modeļu un metožu efektivitāte atkarīga no to piemērotības katram konkrētajam mācību tematam un situācijai. Metodikas atbilstība dažādām studentu mācību formām un spējām uzskatāma par veicinošu priekšnoteikumu pozitīvai attieksmei pret apgūstamo materiālu.

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Summary

The objective of this paper is to share a many-years experience of working with the first-year students in Rīga Stradiņš University. Keeping in mind that the first semester at the University is a complicated period for a student, a research on approbation of different didactic models has been performed in order to stimulate the mastery of studying process. A study material has been devised that promotes independence and will of students to develop their own studying strategies and critical thinking.

Keywords: studying skills, independent studies, critical thinking.

DEVELOPMENT OF INDIVIDUAL AESTHETIC CULTURE AS A PHILOSOPHICAL AND PEDAGOGICAL PROBLEM

ESTĒTISKĀS KULTŪRAS ATTĪSTĪBA KĀ FILOZOFISKA UN PEDAGOĢISKA PROBLĒMA

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Abstract

The notion of aesthetic culture has not yet been universally defined in scientific terms. However, its utmost importance draws both public and educational attention to a range of issues related to the training of specialists compliant with modern cultural demands.

Aesthetic culture is a complex multi-level system of pedagogical interaction. On the one hand, aesthetic culture depends on the essence of communication between members of a given environment wherein socializing occurs. On the other hand, aesthetic culture is an integral part of both general and individual culture. Aesthetic culture is much wider than artistic culture. Artistic culture of an individual does not guarantee aesthetic compliance with the cultural ideal. Aesthetic culture is not a product of a conscious and planned action aimed at an individual but process of human existence, unique life and activity.

The notion of aesthetic culture has a vast meaning; and it may be used as a methodological basis for the philosophy of education, pedagogy and cultural studies. It pinpoints a number of important issues related to the nature and purpose of education, upbringing, individual and public culture.

The article gives an insight into the meaning of aesthetic development being a key category of aesthetic culture.

Keywords: aesthetic culture, artistic culture, professional culture, purpose of education, development, aesthetic subjects, personality.

Introduction

The title of this article may seem somewhat trivial at first. Strictly speaking, one might assume that the notion of aesthetic culture is tautological. Let us try to analyze the problem and prove that the notion of aesthetic culture is viable because it focuses public attention and draws the education system to the problems related to the development of an aesthetic individual.

Such notions as corporate culture, service standards, behavioral standards, speech culture, cultural communication, political culture, physical culture, aesthetic culture, everyday life culture and some other definitions have entered scientific terminology and our everyday communication. Even non-specialists understand that the word ‘culture’ in this connotation bears a different meaning; namely, it stands for a superior quality attributed to a certain matter or its results defined as ‘cultural’. For instance, a cultural manager is an individual, who organizes his/her activity so that its product conforms to the common perception of an ideal in this particular field of activity or its results. In other words, a cultural manager is an individual, who merely works well. The attribute ‘cultural’ used herein expresses our idea of how a certain type of activity should be organized and what outcome it should ideally achieve. Moreover, the word ‘cultural’ gains a different shade of meaning when contrasted with an activity, which fails to comply with our image of an ideal one. This discrepancy helps us distinguish a cultural activity and cultural products from non-cultural ones. Thus, the term ‘cultural’ is mostly used in the axiological context. Individuals resort to the word ‘culture’

when they want to evaluate a certain phenomenon through the prism of its compliance with a system of values accepted in a given society. (Stolowitsch, 1975, 1993, 1994; Kagan, 1995)

Let us now address the notion of culture in aesthetics. Can we consider aesthetics as any other field where culture is used? Can we use the same measurement system in aesthetics as in other fields of culture? By the notion of aesthetics culture a peculiarity of aesthetics is meant, which implies that aesthetics may be expelled from the realm of culture without it. Yet, is aesthetics viable without culture? Is it correct to ask this question with regard to the field of aesthetics, which is essentially the process of cultural reproduction?

Wide application of the notion means that is has become a commonplace in language and thinking. However, its disputability and a range of unsolved problems can be explained by the fact that it is located at the very margin of three disciplines, namely, cultural studies, aesthetics and pedagogy. The understanding of aesthetics culture directly depends on existing beliefs about the meaning of culture, its structure and social function of culture as well as pedagogical and aesthetics objectives dictated by the system of education. Culture is a quintessence of experience gained by the past generations. Culture is a tool used by individuals to acquire and multiply universal experience of the entire humankind. This feature links culture and pedagogy. The formation aesthetics culture of an individual and education are inseparable systems. Aesthetics culture as phenomenon firmly binds the two social systems, i.e. pedagogy and culture, which means its position within pedagogy and culture is to be defined.

The study of the notion of aesthetics culture is not purely theoretical as it is motivated by the needs of modern educations and contradictory pedagogical practices. It pinpoints a number of important issues related to the nature and purpose of education, upbringing, individual and public culture. Therefore, the notion of aesthetics culture has a vast meaning; and it may be used as a methodological basis for the philosophy of education, pedagogy and cultural studies. The problems related to the development of aesthetics culture should be considered as a body that incorporates interaction between universal and aesthetics culture, between its structural units, universal laws and development conditions.

It is possible to study aesthetic culture in great detail; yet, there are a number of associated difficulties in this process. One of them concerns the selection of scientific research tools for the study. What should these tools be in terms of their nature so that aesthetics, cultural studies and pedagogy would use the same language?

The article gives an insight into the meaning of aesthetic development being a key category of aesthetic culture.

Aesthetic development

One should be reminded of the definition of aesthetic development. Aesthetic development is roughly the development of human ability to perceive the world aesthetically. However, the above definition does not reveal the developmental nature of aesthetic traits of the human being. Moreover, one's esteem of culture, ugliness, disorder, comicalness and other phenomena related to one's aesthetic taste is obviously controversial, which results in a limited, referential interpretation of the phenomenon of aesthetic development.

The notion of development is controversial, too, which has commonly been pointed out in pedagogy. (Азархин, 1990; Анцыферова, 1981; Иванов, 1977; Симонов, 1989; Эльконин, 1994)

It may have several meanings. The first one refers to a purposeful and irreversible change in one's qualitative and structural traits (ontogenetic aesthetic development). The other one applies to a broad sociocultural context, i.e. accumulation of certain aesthetic abilities throughout human history, which provide for the perception of reality (phylogenic aesthetic development).

An individual acquires aesthetic traits in both cases. The process of acquisition is always marked with a certain specimen or ideal cultivated in culture as an aesthetic example for individual development. Generally, the ideal is perceived in a non-conceptual form and manifested in one's liking and disliking as to certain social groups. The ideal finds its theoretical embodiment in preset aims and objectives for aesthetic development. The researcher mostly relies on conventional ideal limitations, i.e. those individuals, who comply with the ideal, are qualified as aesthetically developed ones, whereas those, who do not, are considered undeveloped, insufficiently developed, aesthetically uneducated, immature, etc.

Moreover, the purpose of aesthetic development is 'leveling' and individual to a certain standard necessary for full-fledged human existence. The compliance with the aesthetic development standard in terms of the aforementioned interpretation is considered as the only way to introduce an individual to social aesthetic culture and promote personal aesthetic culture. On the contrary, incompliance is believed to be a limiting factor for true self-actualization and an obstacle to aesthetic cognition of the world. Aesthetic development is thus perceived as a logical and practical developmental process from lower aesthetic practices to more complex ones. The selection of advanced practices is made on the basis of authoritative permission, which officially approves of particular specimens for compulsory study. The aforementioned experience is frequently linked to true culture and is, thus, publicly justified.

It should be noted that the above approach is viable because the development of humanity is understood as progression from an alienated and incomplete individual to a harmoniously developed, free and culturally advanced personality. (Суна, 1985; Киященко, 1996)

Culture is therefore regarded as an initial rule for an individual. Throughout the process of socialization, an individual learns the totality of social achievements of the past generations. An individual may master cultural heritage both partially and as a whole. General acquisition of cultural values results in interiorization of the world of culture into one's individual world.

Therefore, acquisition of world art in general and the roots of national culture in particular are instrumental in the aesthetic culture of an individual. Acquisition of world artistic cultural experience in its turn instigates emotional development, imaginative and associative thinking, improves empathy, which underlies intuition being a key factor of aesthetic culture.

Yet, absolutism and normative regulation place individual aesthetic development in contradiction with real aesthetic and artistic practices of public life. If one should adhere to the normative approach, it is evident that most members of modern society are aesthetically inferior, i.e., they do not meet the high standards of aesthetic perfection.

If one views aesthetic development of an individual as compulsory ideal training, real aesthetic culture bearers are excluded from the scene, i.e. real people, who lead their ordinary lives, are replaced by abstract aesthetically advanced individuals. Real life proves that the aesthetic developments of an individual and aesthetic culture of a society both are multidimensional and controversial.

Aesthetic culture of an individual develops via the formal educational procedure and inside the habitual human environment. Insufficient (or lack of) attention paid to the above fact results in a gap between aesthetic theory and practical development 'channeled' through the conventional educational establishments; yet, it still occurs owing to the inclusion of an individual into the many-sided system of public relations. Aesthetic culture is formed under the influence of environment; it is marked with direct and meaningful development interwoven with various products of material and spiritual culture. Modern cultural environment offers its own type models based on its characteristic aesthetic principles. In contrast to works of fine arts, whose aesthetic message is fixed and clear, modern cultural texts are often vague and unstable.

Thus, methodological approaches, which promote complex aesthetic development of an individual, should be preferred. Aesthetic development as understood in the context of culture

show that contrasting artistic tastes may not be used as evidence of insufficient development, flawed aestheticism of society or an indicator of a malfunctioning aesthetic development system as a whole; on the contrary, these differences signal about the healthy state of the cultural organism. The controversy between refined aesthetic taste and alternative taste has always been an incentive and pushing force for culture. The study of cultural controversies is the starting point for reconsideration of the previously mentioned definition of aesthetic development of an individual.

Aesthetic development is determined by a number of various objective and subjective factors and, therefore, it may not be limited to purposeful influence on an individual. Consequently, it is untenable to believe that an aesthetically advanced individual may result from purposeful skill training and load of information or certain implanted preferences. Herein lies the basic difference between aesthetic and artistic development of an individual, while the latter is indeed based on the acquired ability to communicate with the world of artistic values. (Поспелов, 1965) However, artistic growth of an individual does not guarantee his/her aesthetic compliance with the cultural ideal. Aesthetic development is not a product of a conscious and planned action aimed at an individual but rather the very process of human existence, unique life and activity.

Everyone is 'doomed' to grow aesthetically and become an aesthetic subject. This is proved by the fact that every individual is able to enjoy aesthetic pleasures, which are quite straightforward and do not need any external approval or permission to qualify as aesthetic ones. The problem consists in systematization of existing aesthetic subjects in modern aesthetics and pedagogy.

The necessity for typological systematization of aesthetic subjects is largely explained by the existence of various artistic tastes and, moreover, by steady and stable manifestations of these tastes. The above facts unquestionably evidence to both specific artistic values and underlying aesthetic dependencies subject to pedagogical and aesthetic consideration.

Typological classification of an aesthetic subject is based on the analysis of a real artistic process and its agents. Aesthetics, likewise pedagogy, has indeed ignored the significance of typological differentiation of an aesthetic subject and studied it as a solid and inseparable body. Yet, the cultural variety of present-day society used as the starting point leads to a universal conclusion that the interrelation between sociocultural belonging of an individual and specific types of aesthetic development should become the basis for further research. The sociocultural diversity of modern society explains the existence of various aesthetic subject models and cultural types. It is essential for aesthetics and pedagogy to register existing differences as to how representatives of various social groups perceive and reproduce cultural experiences as part of their self-assertion.

Aesthetic development of an individual starts on the day of birth and activates when one is included into socialization. The trajectory of aesthetic development depends on the essence of communication between members of a given environment wherein socializing occurs. Mutual interaction and pertaining communication types in the family or close environment are initial aesthetic sources, through which a child learns different cultural patterns. Due to the fact that an individual belongs to a distinctive social group, whose properties are different from those of other groups, with its functional and role social models, his/her general development (including aesthetic one) is channeled through the prism of world perception characteristic of a given stratum. Depending on a cultural function performed by a given social group, its world perception may be aimed at individual adjustment or direct non-reflexive inclusion of an individual into existing public relations, whose principles should be reproduced by this person. Another option is independent reflexive participation. Both aesthetic intentions are not mere individual programs but rather a mode of existence and fulfillment, namely, social activity, labor, communication, routines, leisure, inner world, etc. It is obvious that the above world

perception types coexist within an individual as tools for one's self-assertion as a sociocultural being. Yet, the coexistence of various social groups in the system of culture leads to a dominant position of a certain group. The nature of aesthetic development of an individual determines his/her path of personal growth and attachment to a particular aesthetic subject type.

For instance, a world perception type, which favors adjustment to a given social standard, constructs its relationships with the world so that artistic communication or aesthetic development is mostly limited to utilitarian adoption aimed at stereotypic behavioral, thinking and empathy patterns. Aesthetic education and art perception in the aforementioned interaction system are used to introduce an individual to the preset world in order to assimilate in it. In accordance with the above objective, art is regarded as a set of illustrative examples providing information about typical social patterns and acceptable behavioral standards.

Reflexive world perception is aimed at personal growth, which stimulates individual search for optional models in addition to typical patterns of life. Such an active position of an individual allows choosing a suitable field of activity or even changing a course of life. In other words, pure consumption of culture is replaced by its acquisition.

Conclusions

Thus, one's belonging to a certain aesthetic subject type largely depends on the cultural function performed by the social group, to which an individual belongs, its world perception and characteristic view of culture. An individual, who acquires particular world perception, inherits common cultural characteristics and, moreover, contributes to it. Thus, everyone may be regarded as a complex aesthetic structure, with various types of aesthetic experience. Every individual, in this regard, has a potential to become any aesthetic subject. It is quite uncommon (in real life) when an individual appears as an aesthetic subject of a pure type. As a matter of fact, a single person is able to perceive a variety of creative types. A single individual may belong to both refined and common culture; yet, the degree of perception may be different. A single individual may attend sports events and be a theatergoer, listen to classical music or watch a talk show. The thirst for aesthetic pluralism is quenched due to a variety of genres and art types characterized as adaptive or non-adaptive for their functional application. On the other hand, objective differences in human lives resulting from their contrasting world perception types and dominant values alongside with the opportunity to actualize a certain structural level of aesthetic culture are evidence to differences in aesthetic subjects.

Admission of diversity in aesthetic subject types is opportune for an individual, who may now be released of abstraction and existence out of historical context and a particular stratum, which is favorable for aesthetic enrichment. Secondly, this new approach reveals that aesthetic education furthered exclusively by educative efforts is impossible. Aesthetic education should not be reduced to purposeful influence on an individual because in this case the entire system of public relations underlying the path of aesthetic development of an individual is ignored.

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Kopsavilkums

Šis raksts veltīts jēdziena "estētiskā attīstība" skaidrojumam, kas uzskatāms par vienu no estētiskās kultūras pamatkategorijām. Estētiskā attīstība notiek dažādu objektīvu un subjektīvu faktoru ietekmē. Estētiskā attīstība nav plānveidīga un apzināta iedarbība uz cilvēka personību, bet gan viņa esības, viņa unikālās dzīves un darbības fenomens. Mākslas pedagoģija un estētika ilgu laiku ignorēja estētiskā subjekta principiālās diferenciācijas faktu, jo uzskatīja to par monolītu un nedalāmu vienību.

Katram indivīdam piemīt daudzpakāpju estētiskā struktūra, kas pārstāv dažādus estētiskās pieredzes tipus. Estētiskā subjekta tipizācija balstās uz reāla mākslinieciskā procesa un estētisko subjektu analīzi. Mūsdienu sabiedrības sociāli kulturālais neviendabīgums radījis dažādus estētiskos subjektus. Cilvēku dzīvesveida objektīvās atšķirības, dažāda pasaules uztvere un attieksme pret vērtībām apliecina reālās atšķirības starp subjektiem arī estētiskā plāksnē.

Dažādu estētisko subjektu pastāvēšanas atzīšana, pirmkārt, palīdz atteikties no tāda abstrakta subjekta ārpus vēstures un konkrētas sabiedrības, ko var vienkārši piepildīt ar estētiskām zināšanām. Otrkārt, tā liecina par to, ka tikai ar apgaismības idejām vien nevar gūt panākumus estētiskās audzināšanas laukā. Estētisko attīstību nevar ierobežot ar mērķtiecīgi izstrādātu cilvēka ietekmēšanas sistēmu, ignorējot visu sabiedrisko attiecību loku, kas patiesi ir cilvēka estētiskās attīstības iedvesmas avots.

Atslēgvārdi: estētiskā kultūra, mākslinieciskā kultūra, profesionālā kultūra, izglītības mērķis, attīstība, estētiskais subjekts, estētiskais tips, personība.

AN APPROACH TO THE INTEGRATION OF QUALITATIVE AND QUANTITATIVE RESEARCH METHODS IN RESEARCH OF PEDAGOGY

INTEGRĒTĀ PIEEJA KVALITATĪVAJĀM UN KVANTITATĪVAJĀM METODĒM PEDAGOĢIJAS PĒTĪJUMOS

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Abstract

Two distinct research methods coexist in research of pedagogy: quantitative methods, which seek to measure and analyze causal relationships between variables in a framework with free values, and qualitative methods, which examine the process of creating meanings from which new or improved theorems are generated. Applying these two methods separately to research of pedagogy, it becomes clear that the results obtained are incomplete and thus it is difficult to choose definitively between quantitative and qualitative methods when embarking on a specific research. To solve this problem, a new research method based on integrating quantitative and qualitative methods is proposed.

Keywords: Approach to the Integration, Qualitative and Quantitative Research Methods, Research of Pedagogy (Education).

I. Introduction

The problem. According to author`s experience, in the beginning of 21st century Latvian scientists in education have been focusing on problematics regarding qualitative and quantitatvice approach. The reason behind has been "import of ideas" and willingness "to export own ideas" abroad.

Causal relationship. The proportion of qualitative and quantitative approaches and interface in researches is remarkably related to research quality.

Constructs. Solution of the problem would improve the quality of researches significantly – research results: a)reliability (suitability, safety in concrete cultural environment); b)validity; c) practical application.

Review. The above mentioned can be approved by analysis of information made by the author in 2007 (keyword: Quantitative And Qualitative Approaches): 1) Cambridge Journals Online (CJO; univesral data base of full texts on information more than in 100 research journals as well as related Internet resources in the humanitarian and exact sciences); 2) Eastview Social Sciences & Humanities (Russia social and humanitarian journals` full text data base); 3) Academic Search Complete (designed specifically for academic institutions, is the world's most valuable and comprehensive scholarly, multi-disciplinary full-text database, with more than 5300 full-text periodicals, including 4400 peer-reviewed journals); 4) Academic Search Premier (humanitarian un social sciences` manybranch full text data base); 5) ERIC (education bibliographic data base); 6) ProQuest (manybranch full text and annotation data base); 7) Publisher`s SAGE journal full text database; 8)ScienceDirect (Publisher`s Elsevier journal data base); 9) SpringerLink (Internet on-line data base).

Question. What could be the possible solutions to the Integration of Qualitative and Quantitative Research Methods in Research of Pedagogy?

II. Methods

In qualitative research the author has applied following research methods:

1. Content analysis. It included the following types of analysis: 1) *Thematic analysis of text. (*The identification of themes and major ideas in a document; 2) *Indexing.* A variety of automated methods for rapidly indexing text documents exists 3) *Quantitative descriptive analysis*. (To describe features of the text quantitatively). Content analysis includes phases: 1 phase.There are many texts to analyze (Data bases of the University of Latvia; URL: http://www.lu.lv/eng/library/databases/), the author has to start by sampling from the population of potential texts to select the ones that will be used. Second phase, the author needs to identify and apply the rules that are used to divide each text into segments. Third phase – *coding*. The development of a coding scheme was based on the article theme. Final phase – author analyzed the coded data, both quantitatively and qualitatively, to determine which themes occur most frequently, in what contexts, and how they might be correlated.

2. Grounded theory – a complex dynamic iterative process in which the development of a theory and the collection of data related to that theory build on each other. The author begins with the raising of generative questions that help guide the research but are not intended to be either static or confining. As the researcher begins to gather data, core theoretical concepts are identified. Tentative linkages are developed between the theoretical core concepts and the data. Author's opinion is a conceptually dense theory as each new observation leads to new linkages that lead to revisions in the theory and more data collection.

3. Nonstructured Interview.

III. Results and Discussion

During the research the author came to such conclusions:

1. When analizing the available accessible subscribed and test data bases (URL: http://www.lu.lv/eng/library/databases/), the auhor concludes that there is increasing number of scientists using Quantitative And Qualitative Approaches in researches and the quality is growing. Also the number of dissertations in relation with this issue is increasing. (see Appendix A)
2. Regarding the proportion of qualitative and quantitative methods in researchess of pedagogy (in Latvia and abroad) there can be stated kind of disappointment in quantitative research methods. Reason for disappointment in quantitative methods is because the results in such researches can often be "flat" (sometimes even commonplaced). In result of this the methodical pendulum has been moved in favor to qualitative methods.
3. Inspite of this in several countries (within EU) very often the traditional methods are used in large quanitities, e.g., questionnaire. In large scale questionnaires (international) there is not observed the cultural environment of concrete country[1]. This is very typical in comparative researches where united methodics is relevant. Observing the cultural environment in such researches would rise costs remarkably. In result we get possible superficiality in research (risk).
4. Nowdays in science of education there can be noticed kind of crisis connected to absence of clear theoretical perspective. In European Union there are well worked out concepts

[1] The cultural environment of people group is amount of people group`s existence and activity social, material and non-material conditions; mutual attitude and interaction among individuals and objects, that determine the character of their existence and development. The formation of people group`s cultural environment and character is determined by external environment, social conditions and concrete persons and their value orientation within the people group. The system of people group values determines its strategy, structure and procedure in decision taking. The character of people group cultural environment is determined by its leader – his/her personality, intelectual, emotional and will features, value orientations.

on macrosocial level. On national levels there are few such theories/concepts or they are missing at all. If they are, the quality is low (reliability, validity, practicalness).

5. The culture of methodics nowdays is facing kind of decline. There are three reasons for that. The first is related to situation[2] – there is need for primary data and its interpretation, but there is no interest for those data reliability and correctness. The other reason is connected to change of generations among scientists in education. The third reason is connected with rapid growth of science of education without special readiness: a) the knowledge of research supervisors in research methodology, methodics, b) technics is staying behind the knowledge in theory of education; c) there are no textbooks in research technologies.
6. Regarding proportion in qualitative and quantitatvie approaches and interface in the world there exist four positions for the moment being. The first one is so called *radical position*. It asserts that those two approaches can`t be conciliated. Most radical fraction of this position asserts that, when modernism is echanged now by postmodernism, the classical pedagogy should leave as well (as incorrect), instead of it should come "qualitative" education. However, the "moderate fraction" of this radical position assert that quantitatvie and qualitative approaches in education coexist simultaneously, but proportion of qualitative approach would increase since it correspnds the modern trends. Second position is so called *position of existentialism,*which asserts that each of those approaches have its own spectrum of cognitive opportunities, own strenghts, weaknesses, opportunities and threats. From this position there exist no criteria that could allow to judge about the prevalance of qualitative or quantitative approach: advantage to any of those approaches depends on researcher`s existential choice. Third position is so called *pragmatic position*, and it is considered to be the most popular in the world for the time being. It asserts that each of those approaches has its own relevance zone[3], i.e., there exists kind of district in research task, where the use of some concrete approach is the most effective, even maybe the only one possible. The choice of the approach is determined by the researcher himself, based on the research objectives and tasks. The fourth position is so called *empiric narrow position*. It asserts that there is no big diference among qualitative and quantitatvie approaches: there have been/are still used different methods, and by this reason the discussion is meaningless, fabricated. For example, the is no united terminology.
7. Regarding Approach to the Integration of Qualitative and Quantitative Research Methods in Research there exist three different approaches 1) Complementation[4]; 2) Combination[5]; 3) Triangulation[6].
8. In order to solve problem 'The Integration of Qualitative and Quantitative Research Methods in Research of Pedagogy", there can be used four kinds of triangulations in research (the author of the idea in qualitative researches Denzin, 1970). The first type of triangulation is – *data trianguation*. In this type the combination of different data types, data collection and

[2] Situation – circumstances appeared within concrete period of time, temporary situation, condition of matters

[3] Relevant approach – approach that is important for the concrete researcher at concrete time

[4] Complementation – originated from French complementaire 'additional' < Latin complementarius . Something that adds to one`s totality, wholeness. Complementation, where each operation is capable of revealing different, interesting zones of reality due to quantitative and qualitative research is carried out separately and afterwards, in the last stage, they are joined to complete each other.

[5] Combination – originated from Latin combinatio. – 1. Connection, combination in certain order (mainly for homogeneous subjects, phenomena, their components). – 2. A group of well-planned in beforehand methods and actions for reaching a certain target. Combination, which seeks to achieve complementary results using the strength of one method to improve another and carrying out an experiment first and the other after the knowledge of the first results. Most frequently, a qualitative pilot study is followed by a quantitative investigation.

[6] Triangulation – originated from triangulatus 'triangleshaped'. Triangulation (or Cross-validation), which combines two or three theories or data sources to study the same phenomenon and thus gain a more complete understanding of said phenomenon. In other words, the obtained quantitative o qualitative data will be validated by the other data since the type of results should be the same.

analysis there are three significant factors to be taken into account: 1) Time (longitudinal, cross-section); 2) Space/Location (cross-cultural, across sub-cultures); 3) Participants (individuals or groups). Second type of triangulation is *Investigator triangulation*. In this type the combination of insights from different investigators; involves multiple researchers in an investigation; using multiple, rather than single observers; Within a single study, not across studies. The third type of triangulation is *Theory triangulation*. In this type the combination of different theoretical perspectives; involves using more than one theoretical scheme in the interpretation of the phenomenon; meta-analysis of previous research. The fourth type of triangulation is *Methodological triangulation*. In this type there is a combination of different methods; application of different methods in research of object (intermethod strategy; between-method strategies), varying data in each of these methods (within-method strategies); using more than one method may consist of within-method or between-method strategies.

9. Application of those four triangulation types demands high proffesional competence from the researcher. As basis for the triangulative thinking might be considered good basic knowledge in research methods. According to auhor`s oppinion they should already be studied within bachelor`s study programm. The argument for this affirmation is the following: the base for the triangulative thinking should be formed in the beginning of the study process, and not in some other stage. (see Appendix "The Cardinal Research Methods of Pedagogy – The Base for Triangulation")
10. When making survey about big business corporation perfomance, where there has been current problem of the Integration of Qualitative and Quantitative Research Methods, it can be concluded, that during last ten years they have been very much oriented on solving this problem. Thus, for instance, "SPSS inc"[7] (URL: http://www.spss.com) has totally 111 different solutions, that might be divided into: 1) business solutions (including part "Scientific researches"; altogether 9 parts); 2) solutions for industries (including part "education"; altogether 8 parts); 3) technologies (together 8 parts). Out of those 111 SPSS solutions made by corporation, in education there might be topical 34 solutions (connected with the Integration of Qualitative and Quantitative Research Methods), but for the moment being there might be topical 10 solutions. The University of Latvia has bough couple of those solutions, out of them only one might be binding. ("SPSS Base", which is oriented towards quantitative methods). However, in reality specialists in science of education are not capable in this solution, because the competence in such technologies (base of methodology) is low.

IV. Conclusions

In this article there has been narrated Approach to the Integration of Qualitative and Quantitative Research Methods in Research of Pedagogy. The scientists all over the world pay more and more attenion to this issue. Inspite of that, there exist four positions in the world regarding this issue: 1. radical position; 2. position of existentialism; 3. pragmatic position (most popular in the world for the time being); 4. empiric narrow position. For solving the problem there exist three different approaches: 1) Complementation; 2) Combination; 3) Triangulation. In order to solve this problem, the author suggests to apply four types of triangulation in pedagogy researches: 1. data triangulation; 2. Investigator triangulation; 3. Theory triangulation; 4. Methodological triangulation. However, in order to be able to apply those four types of triangulation in research, the researcher has to have good knowledge in

[7] SPSS Inc. is one of a leading worldwide provider of predictive analytics software and solutions. SPSS accronime for "Statistical Package for the Social Sciences", although it has already been used for long time as the Integration of Qualitative and Quantitative Research Methods.

research methods and Technologies. The author offers his solution (the chart) having utilized theese research methods.

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Kopsavilkums

Latvijas Universitātes asociētais profesors pedagoģijas zinātņu doktors Aivars Lasmanis savā rakstā "Kvantitatīvo un kvalitatīvo pētīšanas metožu integrēšanas pieeja pedagoģijas pētījumā" atklāj, ka pasaulē uz šo brīdi pastāv četras pozīcijas šajā jautājumā: 1. radikālā pozīcija; 2. eksistenciālisma pozīcija; 3. pragmatiskā pozīcija (mūsdienās pasaulē populārākā); 4. šauri empīriskā pozīcija. Tāpat tiek konstatēts, ka pasaulē uz šo brīdi pastāv trīs dažādas pieejas šīs problēmas risināšanā:

1) komplementācija (*Complementation*);
2) kombinācija (*Combination*);
3) triangulācija (*Triangulation*).

Lai risinātu šo problēmu, autors piedāvā pedagoģijas pētījumos lietot četru veidu triangulācijas: 1. datu triangulāciju; 2. pētnieka triangulāciju; 3. teoriju triangulāciju; 4. metožu triangulāciju. Tomēr, lai pētījumā lietotu šo četru veida triangulāciju, pētniekam nepieciešamas labas zināšanas pētniecības metodēs un tehnoloģijās. Rakstā autors piedāvā savu risinājumu (shēmu) pētniecības metožu apguvē.

Atslēgvārdi: integrēšanas pieeja, kvantitatīvās un kvalitatīvās pētīšanas metodes, pētniecība pedagoģijā.

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Web: http://www.alnet.lv/

Appendix A

"Researchers, whose researches have been related to "Quantitative And Qualitative Approaches " (years 1980–2007)

YEAR	RESEARCHERS
1980.	Smith, D. & Fraser B. (1980, January 1)
1983.	Hare, R. &Noblit G. (1983, February 1)
1986.	Chaudron, C. (1986, January 1)
1991.	Richardson, J. & King, E. (1991, January 1)
1992.	Roter, D. & Frankel, R. (1992)
	S K Jean Lee (1992)
1996.	Miyuki Sasaki (1996); idejas turpinātājs - Paul Angelis (1999)
	Pernice, R. (1996, December)
1997.	Allen, M. & Silver, C. (1997, April 1)
	Belcheir, M. & Michener, B. (1997, January 1)
	Santos, Susan Rouse (1997) Ph.D. dissertation
1998.	Chen, C., Taylor, P. & Aldridge, J. (1998, April 1)
	G. Parker, G. Gladstone, J. Roussos, K. Wilhelm, P. Mitchell, D. Hadzi-pavlovic, M.-P. Austin and I. Hickie (1998)
	Janet Z. Giele & Glen H. Elder Jr. (eds) (1998)
	Mercer l. Sullivan (1998)
	Philip, L. (1998, February)
	She, H., &Fisher, D. (1998, April 1)
1999.	Borodkin, Leonid (1999)
	Brian Pateman and Annette M. Anks (January 1999)
	Forbes, D. (1999, October)
	Francisco Cribari-Neto, Mark J. Jensen and Įlvaro A. Novo (1999)
	Jennifer K. Jacobs, Takako Kawanaka and James W. Stigler (January 1999)
	Sara Cushing Weigle (1999)
	Weigle, S. (1999, January 1)
2000.	Atkinson, I. (2000, August)
	Elaine Wethington (2000)
	Ilias Karasavvidis, Jules M. Pieters and Tjeerd Plomp (June 2000)
	Marian Tulloch (2000)
	Mary Patricia Tully, Judith A Cantrill (2000)
	Reinhard Wittenberg (2000)
	Russell D. Hamer (2000)
	Wethington, E. (2000, June)
2001.	Christian Erzberger (2001)
	Laura D'odorico, Stefania Carubbi, Nicoletta Salerni And Vincenzo Calvo (2001)
2002.	Frederick L. Ahearn Jr. (2002)
	Howard White (March 2002)
	Lazaraton, Anne (2002)
	Robert Adcock (2002)
2003.	Barr, S., Ford, N., & Gilg, A. (2003, August)
	Oliva, J., Llunell, M., Alemany, P., & Canadell, E. (2003, December)
2004.	Anastasios Merkouris, Elizabeth D. E. (May 2004)
	Diekman, Shane Thomas (2004) Ph.D. dissertation
	Peterson, Wendy E. (2004) Ph.D. dissertation
	V. Pellegrino, E. Lucchetti, G. Boėtsch (2004)
2005.	Barsky, Allan Edward (2005)
	Bressi, S. (2005, Summer)
	Der Ananian, Cheryl Anne (2005) Ph.D. dissertation
	James Panico, E. Charles Healey, Kyle Brouwer and Michael Susca (2005)
	Jennifer E Lansford, Toni C Antonucci, Hiroko Akiyama, Keiko Takahashi. (2005)
	Keith F. Punch (2005)

YEAR	RESEARCHERS
	Plewis, I., & Mason, P. (2005, July)
	Sara K Bressi (2005)
2006.	Griel, Amy E. (2006) Ph.D. dissertation
	Hicks, L. (2006, April)
	Hyeon Bae, Sungshin Kim, Joing-Il Bae (2006)
	Ming-Lung Hung, Wan-Fa Yang, Hwong-Wen Ma and Ya-Mei Yang (April 2006)
	Theo L. Dawson, Kurt W. Fischer and Zachary Stein (December 2006)
	Williamson, G. (2006, June)
2007.	Dorien Van De Mieroop (June 2007)
	Emad Saad (2007)
	Gregory Fairbrother (2007)
	Karl Neumann (2007)
	McGee, T. (2007, September)

Appendix B

"The Cardinal Research Methods of Pedagogy - The Base for Triangulation"

TEACHER AS A GUIDE IN VEDIC EDUCATIONAL PHILOSOPHY
SKOLOTĀJS – CEĻVEDIS VĒDISKĀS IZGLĪTĪBAS FILOZOFIJĀ

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Abstract

The study of the Vedas, regarded as the oldest among the literatures of the world, enables us to get a thorough knowledge of the whole ancient Indian educational system. This paper highlights the main characteristics of the educational system in the ancient Vedic period (c. 3000 BC to 1192 AD) and deals particularly with the personality of the teacher – his moral and intellectual powers, his position and the relation between the teacher and the pupil. The research questions are: Which rules and regulations were laid down for the ancient teachers? What were their duties, qualifications, responsibilities and teaching methods? The author's purpose is to present various aspects of the role of teacher as a guide and to give some perspectives for better understanding of the teacher leadership theories in present educational systems. The central message in this paper is that teacher's personality plays a critical role in raising motivation and achievement among learners. In conclusion, general trends of ancient Vedic theory towards teacher qualities and its possible legacy in the educational system of teacher training in the modern age have been discussed.

Keywords: the role of teacher, Vedic educational philosophy, teacher as a guide, teacher qualities, teacher characteristics.

Introduction

The interest to study the ancient Vedic view of teacher's role has grown out of the modern discourse on the teacher leadership as an intrinsic and important part of school and classroom improvement. Teacher leadership is a new concept that is gaining increasing interest from both practitioners and researchers. Over the past decades, many authors (Katzenmeyer, Moller, Liebermann, Fessler, Muijs, Harris, Gehrke, Smylie, Fullan, Segiovanni etc.) have carried out research on different models, approaches and forms of teacher leadership in practice. Latvian professor Žogla (2006) accented at last ATEE conference in Klaipeda that teachers' quality is a holistic concept which does not depend only on knowledge and skills, but also on personal qualities, and she stated that "teachers as well as their educators are not well prepared for being leaders in their respective professional spheres" (Žogla, 2006, p. 140). All that calls for better models of leadership as teacher's professional abilities.

In 1988, Howey covered an immensely wide spectrum: "Teachers must assume leadership positions, that will enable them to model methods of teaching, coach and mentor colleagues, study critically and thoughtfully various aspects of classroom life, develop curriculum and instructional materials, and strengthen relationships between the school and home." (Howey, 1988, p. 28).

Merideth (2006) in her book "Leadership Strategies for Teachers" discusses actions and behaviours that together define a teacher-leader and characterizes him through her own REACH model: Risk-taking, Effectiveness, Autonomy, Collegiality, and Honour. Teachers who seek challenges and create new process, model best practice, professional growth, and heart, display initiative, independent thought, and responsibility, promote community and interactive communication skills, demonstrate integrity, honesty, and professional ethics are the type of ideal teacher-leaders in their classrooms, schools, and their professional learning communities (Merideth, 2006, p. 3). As Merideth reminds us, teacher-leaders should place their students' learning as their primary goal and work within their own classroom to improve student achievement, which is the most important practice of teacher leadership.

It is worth noting that one of the most significant current discussions among school teachers and a serious drawback in modern education is the lack of respect for the teacher on the part of the students. In today's society, many of the students seem to behave towards their teachers as if they were their paid servants. This lack of respect for the teacher leads towards behavioral and spiritual retardation. In the Bhagavad-Gita it is said: "Only a person filled with respect and faith for his master can obtain wisdom" (Siddhartha Krishna, 2007). It could be useful to analyze the reasons for lacking respect in the society from another perspective.

Different philosophies of education have presented the role of a teacher in the light of their principles. To consider the roles, responsibilities and influence of teachers in ancient cultures is an active step to provide teachers with leadership roles for their today's professional development. In this paper, an attempt is made to explain the Vedic view of the role of the teacher as a guide in the process of educating children. The aim of this article is to demonstrate that the educational system of the ancient India, in certain ways, anticipated some of the fundamental theories developed by the great modern western educationalists, and to show that the teacher's personality holds a special place in the whole educational system; his teaching through example and influence plays a significant role in mentoring.

In the vast range of Vedic literature, the teachers have been discussed very often. The notion of the teacher as a guru or preceptor dates back to the ancient Indian texts known as the Upanishads. Other ancient texts that discuss the role of the teacher include the Bhagavad-Gita, as a section of the Indian epic, the Mahabharata, the Guru-Gita and the Ramayana. In these texts, the ideal teacher-student relationship is exemplified in the characters guiding children to morality and duty. That a pupil can achieve the right path only through the proper guidance and instruction of the teacher has been first indicated in the Rigveda. The essential features of its system were moral education and character building in addition to intellectual and vocational learning. Vedic theory of education is an elaborate unified system of imparting knowledge exposed in Vedic texts and practiced in Hindu society which dates as far back as 9,000 years. (Patel, 1994, p. 9)

In recent years, an increasing amount of literature on classical education in ancient India has been published, which has been represented by a mass of authentic contemporary originals, including Vedas, Purānas, Smṛti texts, literary classics, works of scholars, scientific treatises, foreign travellers' narratives and other primary writings on grammar, linguistics and polity and could give us remarkable quantity of interesting information concerning educational matters.

Vedic Educational Philosophy

In Vedic philosophy, education is an important means to achieve the four aims of human life, namely virtue, wealth, pleasure and liberation. Also, it is vital to the preservation and propagation of morality, without which, declare the Vedas, we cannot regulate our society or families properly or live in piece. Education is the means by which an individual can gain the right knowledge, control his desires and learn to perform his duties, so that he can overcome the impurities of egoism and delusion.

In Vedic tradition, an illiterate person is considered to be equal to an animal because, without education, he will not be able to rise above his physical self. An immoral or evil person without a sense of responsibility is a destructive force, which may bring misery to himself and others. In turn, an educated person uses his knowledge for the welfare of the world and not for his own selfish and egoistic aims. Hence, as a part of their education, in ancient India, students were advised to do good and cultivate virtue under the careful and personal guidance of their teachers, so that they would remain on the path of righteousness for the rest of their lives and contribute to the welfare of the society.

Knowledge is seen as the only means of obtaining an object like "a well placed lamp". Regular incessant study is the means of acquiring knowledge. Accurate knowledge adorns a person. In the matter of execution of duties, correct and definite knowledge acquired by keen study helps one to discriminate "the right path". (Chatterjee, 1999, p. 153)

The supreme aim of education according to the Vedic view is not only the conversation and transmission of traditional culture, but also the need for the renewal of experience in the personal lives of successive generations – building a personality radiant with power and energy. The freedom of the human mind and spirit is the special responsibility of the educator because the strength of a society depends largely on the goodwill and freedom enjoyed by its members (Pruthi, 2005, p. 39).

The Position of the Teacher in Vedic Culture

In ancient India, the teacher or preceptor held a position of great honour and stateliness. The teacher was important in each of the stages of the human life because there is always the need of a preceptor for cultivating a methodical and disciplined life as well as for securing excellence in mundane and extramundane existence (Chaube/Chaube, 2006, p. 35). Even the word 'guru' (preceptor) has a special implication of one who dispels the darkness of ignorance and gives instruction.

It is to emphasize that the teacher was supposed to symbolize all the good ideals, traditions and the code of behavior of the society (Pruthi, 2005, p. 23). There were also certain rules and regulations laid down for the teachers to prevent them from becoming willful and wayward. There may not exist any doubt with regard to their moral and intellectual excellence.

The prescribed regulations for the teacher were as follows:

1) To treat the student as his own child and be responsible for his maintenance and residence;
2) Not to withhold from the student anything that he knows and to give the student the full benefit of his knowledge and experience;
3) To impart education in total within the prescribed time limit (c. twelve years);
4) The daily work prescribed for the student shall be in the interest of the student. The teacher shall not derive personal benefit from the knowledge and bodily work of the student. (Chaube/Chaube, 2006, p. 132)

It is significant that, in the ancient times, only that person was deemed worthy of teachership, who himself had been an ideal student during his academic career, who had his natural desire that his truth and principles, learning and experience should survive him and promote the good of the society, who possessed the qualities of guiding the society along the right lines, who had the spiritual and ethical attributes, and the moral qualifications of the teacher. Only such a person had the right to be a teacher. (Pruthi, 2005, p. 59)

It must be remembered that the ancient Vedic education policy was known for charging no fee from the pupil. A person who taught for an income was particularly marked as one who would trade learning and considered as condemnable. At the end of the student life the pupil presented his teacher *gurudaksinā* that can be described as a fee for teaching. It brings into focus the fact that the ideal preceptor was honest and free from desire; he could treat even a king as an object of disregard. He led a very simple life, devoid of any thing of luxury. (Chatterjee, p. 146)

The Personality of a Teacher

The worldwide famous vedantist and Indian thinker and philosopher Swami Vivekananda contended that "no knowledge is possible without a teacher" and attached a lot of importance to

the personal life and character of the teacher: "A teacher must be dedicated to his profession and teach with devotion, purity of mind and heart" (Vivekananda, 1992, Vol. I, p. 48). Expressing his ideas about a teacher in 1897, Vivekananda said: "My idea of education is personal contact with the teacher. Without the personal life of a teacher, there would be no education" (Bharathi/Rao, 2005, p. 43). The teacher, according to Vivekananda is "one who teaches us the best in life, one who is life giving, strengthening, purifying and his holiness is an inspiration. Teacher must be a person who practises thoroughly what he preaches and would always see good in his students – whatever may be wicked in them, is their own doing" (Vivekananda, 1992, Vol. I, p. 48). Only a person with an attitude of renunciation can be a good teacher. A teacher should try to influence his students through his ideal examples: "When the lotus opens, the bees come of their own accord to seek the honey, so let the lotus of your character be full-blown, and the results will follow" so Vivekananda, 1992, Vol. IV, p. 177).

According to Vivekananda, to impart what he has learnt to others, the teacher definitely needs to be perfectly pure because only then value will be attached to the words he speaks.

Vivekananda lists four characteristics of a teacher:

1) The first condition – being pure in thought, speech and action – is absolutely necessary.
2) The second condition that is necessary for a teacher is that he must know the spirit of the scriptures. It is the knowledge of the spirit of the scriptures that constitutes the true teacher. If he has not spiritual power in himself, there will be no worthy vibration of spirituality in the mind of the teacher, which could be conveyed to the mind of the taught.
3) The third condition is with regard to the motive. The teacher must remember that the only medium through which knowledge can be transmitted is love, pure love for the entire mankind. Any selfish motive, such as the desire for money, name or fame, will immediately destroy this conveying median.
4) The fourth condition is that the teacher should not think that he is making the child grow: "You cannot teach a child to grow, you can only help" (Bharathi/Rao, 2005, p. 43).

We can be safe when these conditions are all fulfilled in a teacher, if they are not, it is unsafe to allow to be taught by him, for there is the great danger that, if the teacher cannot convey goodness to pupil's heart, he may convey wickedness.

Why is the personality of a teacher so important? Teacher should set an example with his life and offer only suggestions and should not be in the habit of giving dry and lifeless advice the pupils must realise in their own life and must live by.

The Teacher's Responsibilities

In the process of education, the teacher is the pivotal point, and the heart of the matter. Education takes place through the interaction between the teacher and the taught. In Vedic culture, he is the maker of man, the true textbook for the pupil. He trains the mind, cultivates the manners and shapes the morals of the members of the community; he teaches the art of living.

In fact, according to the Vedic view, the teacher's role is revered as:

1) the custodian of cultural values and identity,
2) a spiritual guide and mentor,
3) the purveyor of useful skills (Scharfe, 2002, p. 277).

"Practically the life of a Brahmin (*teacher –auth*.) is the life of study whereby he becomes the custodian of the nation's culture to the promotion of which he has dedicated his whole life" (Sharma, 2004, p. 94).

The following description based on numerous studies (for example, Chatterjee, 1999; Chaube, 2006; Ghosal, 2006; Ghosh, 2001; Pruthi, 2005; Scharfe, 2002; Sharma, 2004) illustrates the main responsibilities of the teacher:

- the teacher's way of life and lived values are as the guiding light; he should be pure and mighty as the sun;
- the teacher should teach truthfully to his best ability;
- the teacher must teach moral virtues side by side with teaching of other subjects;
- he has to inspect the pupil's moral conduct, and warn him of defects and transgressions and make him seek remedies and repent;
- the teacher must have the substance of his lectures thoroughly digested in his mind, and give a lesson in a way that suits the circumstances and must not pass any fact or theory unexplained;
- the teacher may be helpful "as a friend" and give some helpful indications how some rules should be understood;
- the teacher has to take into consideration the tastes and innate tendencies of the individual, to evaluate the internal factor of the student in planning his career. According to the Vedic concept of integrated society, he should recognize the worldly – spiritual, political, economical or professional – interests of a child to aspire to his future vocation and function and the status in the society;
- the teacher must have a knowledge of the capacity of his student – he should gear his presentation to his audience like Buddha or Jesus were masters in adjusting their sermons to the mental capacity of his listeners. Then, regarding Vedic knowledge: the teacher is the earlier part, the student the back part; knowledge is the junction, teaching the connection, as it is said in the Upanishads;
- a good teacher must impart his knowledge to his pupils without any discrimination. The teacher is not supposed to impart his knowledge only to the intelligent student. If the student is meritorious and can acquire mastery in the subject, the teacher is credited with it. But if the pupil seems to be dull or slow in grasping his study, the teacher is not blamed. Still the teacher is highly esteemed and exalted in a venerable position if he has the power of excellence of imparting education to the pupil of little merits and of enabling him to succeed in grasping the sense of a subtle art of science;
- the atmosphere should be free enough so the child could breathe moral health and strength which is most favourable to the development of a spiritual life;
- the teacher must form the external factor ideally – the school environment should be peaceful and calm and imbibed with the air of disciplined, orderly and pure life;
- the teacher must train the rules of behaviour towards parents, friends and enemies, moral conduct and good habits with perfect human powers so that man can do what is right;
- the teacher must teach not in words, but through his own conduct in real life settings. How to integrate the knowledge in life can only be understood by being in a physical presence of a Master;
- the teacher must send his student to consult other teachers, if the particular student requires specialized knowledge in any topic;

- in case of a pupil's illness, the teacher has to nurse him, supplying all the medicine needed, and pay attention to him as if he was his child;
- in the pursuit of knowledge, the teacher is the spiritual leader of the people at all social levels.

Scharfe (2002), the Professor of Sanskrit at the University of California, in his major study on ancient Vedic education offers a contrasting list of undesirable traits as they are described in the Vedic literature and identifies four kinds of teachers that should be disqualified:

1) the unmethodical teacher who is compared to a pot filled with beans that lie in it without any regularity and come out haphazardly;
2) the inaccessible teacher who is compared to a rough-stemmed palmyra tree, because its fruit is hard to reach unless it drops spontaneously;
3) the third is the half-instructed teacher, compared to a cotton holder or tinderbox: its small aperture makes it difficult for anything to go in, and it is equally difficult to get anything out of it;
4) the dishonest teacher, at last, is compared to a leaning coconut tree that draws water and nourishment from the yard but drops its fruit into the neighbour's yard: he receives the benefit of teaching but does not share his knowledge with his students. (Scharfe, 2002, p. 283–284).

According to the Vedic philosopher Vivekananda, the success of education depends upon the initiative taken by the teachers in enthusing the child towards study, self-confidence, self-realisation and self-reliance. (Bharathi/Rao, 2005, p. 39)

Relation between the Teacher and Students

In the Vedic view, the relation between the teacher and students should be pleasant and happy. Smrti texts advise the student to regard the teacher as well as his parents; otherwise his knowledge would become ineffective. Similarly, the teacher is equally affectionate towards his students. The teacher and the student both are united with a common aim of preserving and propagating sacred thoughts (Ghosal, 2006, p. 163).

As a matter of fact, teachers at the Vedic schools were forbidden to impart knowledge to such persons as students who are jealous, wanting in simplicity and straightforwardness and devoid of any self-control (Ghosh, 2001, p. 24). A student had to undergo a twofold course of discipline, physical and spiritual. The highest ideal picture of teacher-pupil relation is that the preceptor is the guardian of the pupil and is always eager for the welfare of the pupil. In turn, the pupil is eager to obey and respect the preceptor.

In the Vedic texts, students are put in three classes: the best are compared to a goose or a cow, the average student to a soil or a parrot, while the bad students are likened to a pot full of holes, a goat, a buffalo or a fibrous webbing at the base of a coconut or Palmyra stalk.

1) The wild goose was credited with the miraculous ability to extract the milk out of a mixture of milk with water. The cow feeds and ruminates (and then gives milk), as the good scholar discerns and chooses the good while rejecting the bad.
2) Like the average student, the soil yields only in proportion to the labour and cultivation bestowed upon it; or the student is like a parrot, which can, without understanding, only repeat what it has been taught.
3) We found listed four types of bad students:
   a) like a pot full of holes, the bad student does not retain anything;
   b) as a goat roams from one field to another, so a bad student goes from one teacher to another and from one subject to another, never attaining much;

c) as a buffalo which stirs up the mud in a tank into which it enters, the bad student causes confusion and trouble;

d) as the web lets the toddy run through and retains the residue, so the bad student forgets all that is useful and remembers only that which is useless. (Scharfe, 2002, p. 284)

However, the teacher was expected to conduct himself in accordance with the twenty-five virtues prescribed for him. These included: "keeping an eye over his pupil, telling him what to cultivate and what to avoid, when to be particularly attentive, instructions relating to bed, sickness, food and company. The teacher was expected to boost the morale of this pupil, encouraging him not to fear and to be zealous. He was to teach him nothing partially, nor keep anything secret, nor indulge in foolish talk with him, but pardon when he noticed any defect in him, encourage him to come forward and make him strong. The preceptor was to look upon his pupil as his son and love him, share his food with him, never desert him in adversity and always befriend him" (Pruthi, 2005, p. 190).

Methods of Teaching

The earliest reference to the method of teaching under a system of direct teacher's instruction has been recorded in the Frog-hymn of the Rigveda. It describes five stages in getting knowledge:

1. Student's recitation of the Vedic texts following the teacher's pronunciation. Understanding and learning by heard.
2. The individual work at the stage of mental aptitudes of each individual pupil.
3. Instruction by the teacher through dialogues, i.e., by way of discussing the topic through a series of questions and answers and using of illustrations, stories and parables. Introspection and contemplation on part of the students. Direct perception of truth through their own experience
4. Teaching students through self-instruction (one learns by teaching). Full understanding by exchanges of opinion and argument with one's fellow students.
5. Lecturing to the public (leading to the perfection of an accomplished scholar). (Ghosal, 2006, p. 166–169; Ghosh, 2001, p. 28)

To sum up, it was the method of gaining knowledge through hearing, meditation, contemplation, and recollection (Chaube/Chaube, 2006, p. 28). It is interesting to observe that, through the ages, the technique of oral creation, preservation, and transmission of knowledge continued with the same accuracy from generation to generation.

Vivekananda stresses the following with regard to the Vedic method of teaching and learning:

1) Education from within – the pupils may learn to apply their own intellect – "Like fire in a piece of flint, knowledge exists in the mind, suggestion is the friction which brings it out" (Vivekananda, p. 28).

2) Concrete to abstract – the mind works through various stages to attain its fuller development to deal with the abstract.

3) Individual differences – teaching must be modified according to the needs of the students – the true teacher can immediately come down to the level of the student and see and understand through his mind.

4) Positive suggestion – positive feedback encourages learning, negative thoughts only weaken the students.

5) Concentration as the best method and the key to knowledge. The very essence of education is not collecting of facts, but concentration of mind – power of endurance and control of the internal and external senses.
6) Faith in oneself that enables the pupil to imbibe knowledge effectively.
7) Reverence for the teacher.
8) Freedom – open discussion on all topics of study between the teacher and the taught.
9) Purity in thoughts, speech and act is absolutely necessary in both the teacher and the taught. (Vivekananda, Vol. I, p. 28–93)

The most relevant questions are: Are these principles and practices of ancient Indian education still valid? Has the genuineness of the education system changed over time? Educational principles today do not campaign for corruption, sexual promiscuity, cowardice, self-benefit etc. On the contrary, there is an articulated policy and principle of universal values that should guarantee human civilization. There is a directive to teach fundamental duties. The modern education also follows the principle of specialization on the foundation of a broad spectrum of general education and it champions individualized instruction. The difference and the problem are in the practices – these have moved miles away from the stated principles. The industrial model of education misconstrued the teacher's role. Teachers teach; the responsibility of learning is left to students and is not ensured. There is an ever widening gap between knowledge creation and knowledge absorption (Mukhopadhyay, 2003, p. 14).

Conclusions

We tend to think of development in education as being linearly progressive, but the present paper tries to demonstrate that there are some parallels in the modern theory which could probably be made with knowledge existed thousands of years ago. The Vedic theory implicitly and explicitly regards the stated attributes as requirements of a good teacher. The same attributes are in the focus of the modern training of potential educators: intelligence, assertiveness, psychologically safe learning environment, teaching of organized and relevant knowledge etc. In their book, American scholars Collinson and Cook (2006) identify the same six important and desirable conditions that foster learning as they were practised by ancient Vedic educators thousands of years ago: "prioritising learning, fostering inquiry, facilitating the dissemination of knowledge, practicing democratic principles, attending to human relationships, and providing for members' self-fulfilment" (Collinson/Cook, 2006).

But the Vedic theory also displays some facets not to be found in the modern theories and practice of education. The main aspects not found in today's society are the personal standards of morality and relationship between the educator and the student.

There is a widening gap in the modern education between principles and practices in teacher behaviour. In the Vedic view, a teacher's life is not only an open book; it is also the most important life-book where the disciples learn their ways of life. Each disciple should be thoroughly exposed to teacher's learning habits and commitment, purity of conduct, family life, reverence for other people, etc. Compared to that, a large majority of modern day students are exposed to indiscipline, private tuition, no adequate care, lack of learning habits and poor conduct and lack of values. Values can rarely be taught like any other subject; values are lived and hence inculcated through demonstration by teachers and elders, and imitation by students. The decadence of our times is caused by poor demonstration of values as lived by teachers and elders in the society (Mukhopadhyay, 2005, p. 101). Our modern industrial model of education has misconstrued teacher's role. The argument is not for closing down schools and starting Vedic *gurukulas*. The argument is for a shift in practice to bring it closer to the principles. It does not require extra financial resources; it needs a change of the mind.

As to the question of the teacher as a guide, we must consider that central to the traditional educational system of the Veda is the concept of teacher's character and personality. In the Vedic literature, he is viewed as a remover of darkness, a god in human form: without serving him and without his blessings, a student cannot accomplish much in his life. In imparting knowledge, the teacher shows the way, not by trial and error, but by his own example and through his understanding of the scriptural knowledge, gained by his own experience and practice. While the parents are responsible for the physical welfare of their children, a teacher is responsible for their spiritual and intellectual welfare. The teacher in the Vedic tradition not only teaches his pupil mandatory subjects, but also shapes his character and personality by instilling in him an awareness of the world around him; the teacher urges the students to lead a life useful to the society and face various challenges which comes across in life and turn these into opportunities (Dogra/Gulati, 2006, p. 165). It is his moral and professional responsibility to subject the students to rigorous discipline and shape them into responsible adults (Jayaram V, online).

The teacher should give an inner vision and intellectual regeneration. The life of the teacher must serve as a model to follow and imitate. The teacher should be regarded as the builder, guide and leader of the society and considered as the most important component of the education system.

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Anotācija

Raksta autore iesaistās modernajā diskursā par skolotāja funkcijām izglītības un audzināšanas procesā, īpaši uzsverot skolotāja kā vadītāja, padomdevēja un parauga lomu (angl. "*leadership*", "*guidance*"). Raksts balstās uz seno Vēdu, kas pazīstamas kā vissenākais literatūras piemineklis pasaulē, un kurās atrodamas fundamentālas zināšanas arī par senās Indijas izglītības sistēmu, teoriju, kas praktizēta gadu tūkstošiem ilgi un vēdiskajā kultūrā saglabājusi savas tradīcijas līdz mūsdienām. Šis referāts dod ieskatu vēdiskā laikmeta (apm. 3000. g. p. m. ē. līdz 1192. g. m. ē.) izglītības galvenajās nostādnēs un īpaši izgaismo skolotāja personību: viņa morālās un intelektuālās dimensijas, prestižu sabiedrībā, pienākumus, funkcijas un apmācības metodes. Raksta mērķis ir parādīt skolotāja kā vadītāja jeb līdera lomas dažādos aspektus, tādējādi dodot sava veida pienesumu mūsdienu teorijām par skolotāja funkcijām. Galvenais uzsvars likts uz ideju, ka skolotāja personība ir noteicošais faktors motivācijas un sasniegumu veicināšanai skolēnu vidū. Secinājumos vēdiskās izglītības teorijas principi attiecībā uz laba skolotāja kompetencēm samēroti ar to iespējamo realizēšanu mūsdienu skolotāju sagatavošanas procesā.

Atslēgvārdi: skolotāja loma, skolotājs-padomdevējs, skolotājs kā paraugs, skolotāja personība, vēdiskā izglītības filozofija.

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PRE-SERVICE TEACHERS' COMPETENCE IN RESEARCH AND PRECONDITIONS FOR OBTAINING QUALIFICATION

TOPOŠO SKOLOTĀJU ZINĀTNISKO PĒTĪJUMU KOMPETENCE UN NOSACĪJUMI TO ATTĪSTĪBAI

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Abstract

Review of scientific literature at national level points to a number of research on expressing teachers' professional competencies. However, shortage of studies of pre-service teachers' professional and general competencies can be noticed. One of those is competence in research activity.

Considering the above introduced realia, the article deals with a scientific problem formulated in the following way: What are the pre-service teachers' abilities showing their competence in teaching practice and how is this competence determined by subjective preconditions.

Part 1 of the article discusses the conception of competence in research activity formulated by the pre-service teachers' in view of external and internal aspects. The examination of the latter competence in terms of the internal aspect reveals a place of competence in research activity in a general structure of competencies. Taking into account the model of the European qualification structure, competence in research activity is defined as a structural component of cognitive competence. Examining the conception of competence in research activity in terms of the external aspect discloses the content of competence.

Part 2 of the article introduces research methodology and organization of competence in researching and looks at preconditions for stimulating research activity of the students involved in teaching practice.

Part 3 of the paper focuses on the results of a research on students' competence in researching and preconditions for stimulating research activity. The inquiry was carried out at Vilnius Pedagogical University, Lithuania in 2006. The teachers-mentors' attitude to competence in research activity of the students involved in teaching practice was investigated. In addition, a reflective students' position on competence in research activity was analysed.

Keywords: competence in research activity, subjective preconditions.

Introduction

Changes in teacher's roles are taking place under the grounds that the educational process is based on the paradigm of learning. Apart from traditional teacher's roles (teaches a certain subject and acts as a mentor), completely new functions such as an innovator, advisor, promoter of educational processes, researcher etc. appear. The variety of positions requires new competencies. The paper focuses on the attitude that *competence* defines *abilities* to perform certain activity based on personal knowledge, skills, viewpoints, experience, dispositions, qualities and values. In order to ensure teacher's competence necessary for performing an adequate action, its structure and content must be fully accepted.

The educational system based on the learning paradigm finds important teacher's competence in research which is the ability to apply knowledge of strategic control in practical social and research. Pre-service teachers' competence in research can be examined in the light of two aspects: internal and external. The examination in terms of the latter aspect reveals the place of competence in research in the general structure of professional competencies. The examination in terms of the internal aspect discloses its content.

In order to define a place of competence in research in the general structure of professional competencies, the strategy used in the article refers to the common European principles for teacher competencies and qualifications (Common European Principles for Teacher Competences and Qualifications, 2005). The document distinguishes four groups of teacher's competence: cognitive, functional, personal and ethical. Competence in research as well as those in student acquisition, reflection and learning to learn falls into the group of cognitive competencies.

The abilities showing the content of competence in research slightly vary in the standards of different countries. For example, the standards of teacher training in the Netherlands (Good quality teachers for good quality education, 2004) emphasize the ability to conduct research, examine educational material and innovations applied at school and individually analyze and evaluate surveyed data whereas Canada (Standards for the Education, Competence and Professional Conduct of Educators in British Columbia, 2004) stresses undertaking pedagogical investigation based on students' reflections, Germany (Standards of competence for teachers, 2003; Standarts fuer die Lehrerbildung, 2005) highlights examining researched data and educational material received from different sources integrally with building methodology, England (Standards for the award of Qualified Teacher Status, 2005) accentuates exploring learners' needs identifying alterations in school, students and teachers' activity. An adequately chosen research strategy and methods and the ability to prepare a report on the carried out research are emphasized in the ratified schedule of teacher's competence in Lithuania (Standards of competence for teachers, 2007). The content of teacher's competence in research shows up employing a comparative aspect to summarize the examined schedules of teacher training in Lithuania and abroad. The content consists of the ability to choose an adequate research strategy, structure and methods to launch investigation, the ability to undertake research on professional activity, the ability to study the needs for teaching/learning collaborating with school community, organizations and enterprises, the ability to process researched data using information technologies and the ability to analyze and interpret the obtained data.

A review of scientific literature reveals that a number of investigations into expression of teachers' professional competencies have been carried out (Wells, 1995; Bibby, 1997; Herling, 2000; Descy, Tessaring, 2002; Jucevičienė, Lepaitė 2002). However, there is lack of surveys on in-service and pre-service teachers' competence in research. An assessment of foreign literature indicates that professional competence of pre-service teachers is a relevant topic for research (Intyre, 1997; Kennedy, 1997; Putman, Borko, 2000; Verburgh, Elen, Clays, 2006; et al.). Pre-service teachers' ability to understand research as a process and relations between research and learning have been studied (Krieg, Sharp, 2000; Werner, 2000; Beck, Kosnick, 2002; Edwards, 2001, 2001a, 2005; Kynäslahti, Kansanen, Jyrhämä, Krokfors, Maaranen, et al. 2006, 2007). The analysis of literature discloses that quite a few investigations are conducted in universities and that the lecturers from the establishments of higher education frequently give research too much prominence. Therefore, methodical educational activity and pre-service teachers' professional competencies encounter problems (During, Jenkins, 2005; Lehtelä, 2007).

We suppose that a situation in comprehensive school is different. The teachers overemphasize methodical activity and are insufficiently interested in educational research the number and quality of which in comprehensive school depend on teachers' preparation to conduct investigations and competence in research. The perspective of educational research undertaken in comprehensive school is obviously determined by the present situation on teacher training. The development of pre-service teachers' competence in research is scheduled in the curricula of pedagogical studies. However, it is not the only condition. It is supposed that competence in research is also determined by the subjective preconditions related to the personality of a learner and includes professional motivation, perspective on continuing education and mastering information communication technologies.

Considering the above mentioned realia, the article deals with *a scientific problem raising the following questions*: 1) what pre-service teachers' abilities are demonstrated to display competence in research during teaching practice? 2) how competence in research is determined by subjective preconditions?

The object of the research is competence in research of pedagogy students.

The goal of the research is to disclose the content of pre-service teachers' competence in research, considering the subjective preconditions.

Methodology of the Research

Pedagogical-Psychological Preconditions

The article examines pre-service teachers' competence in research and preconditions for obtaining qualification and refers to the theory of cognitive thinking which is based on the information-processing model used in cognitive psychology. From a cognitive point of view, teaching is effective when the university students receive information and are encouraged to accept active cognitive processes such as search for information, evaluation of alternative decisions and creative interpretation and meta-cognition of results.

Instruments of Research

In order to examine pre-service teachers' competence in research and preconditions for obtaining qualification, methods of research including assessment of scientific literature, surveying and statistical data analysis were applied.

The article presents the data of the survey on pre-service teachers' competence in research that took place in Vilnius Pedagogical University in 2006. A scientific inquiry was rather exhaustive and aimed at evaluating teaching practice of university students having different pedagogical competencies which were evaluated by the students themselves and by the teachers-mentors coordinating teaching practice.

A sample survey as a model was chosen and provided applying the methods used in IEA international research (International Association of the Educational Achievement). Cluster sampling as a technique was used. In this technique, the total population is divided into groups (or clusters) and a sample of the groups is selected. Then the required information is collected from the elements within each selected group. This may be done for every element in these groups or a sub-sample of elements may be selected within each of these groups. The students from different departments participated in research i.e. those studying exact sciences (informatics, mathematics), natural sciences (physics, chemistry, biology), the humanities, social and technology subjects were surveyed after one month of teaching practice. 900 students of bachelor studies in total were questioned. Moreover, 250 mentors coordinating students' teaching practice in different schools of Vilnius were examined.

The questionnaire was prepared considering practical pre-service teachers' preconditions for competence in research in national comprehensive schools. Within teaching practice, the university students are allowed to look after research projects launched by the learners of the senior classes at school. Therefore, the questionnaire contained questions dealing with supervising schoolchildren's research. The answers to the questions of this group were the indications of how they managed to initiate, coordinate and evaluate schoolchildren's research projects. The university students were evaluated by the mentors filling in the forms.

Within teaching practice, the students themselves can carry out research on educational activity. Therefore, the questions on the surveyed participants' research activity were included in the questionnaire. It must be mentioned that all respondents had equal objective preconditions for research. First, everyone had completed a theoretical pedagogy course focusing on the basics

of research activity. Second, within teaching practice, the students were offered a possibility of choosing one in three suggested practical obligatory tasks. One of the tasks concentrated on research. Having chosen the latter assignment, the respondents had to conduct educational research, prepare a report and handle it to the Department of Educology. The university students obviously could also join other research on school educational activity. The surveyed participants' answers to the questions of the conducted research were aimed at evaluating the ability to research. In addition, students' competence in research was evaluated by the mentors who participated in the event.

The third group of the questions covers subjective evidences determining respondents' competence in research and embraces the ability to master information communication technologies, professional motivation and provisions regarding continuing education (expected postgraduate studies/Master's or Doctor's degree; no further studying is expected). The latter questions were answered by the university students only.

To evaluate competence in research, the rank scale of measurement and three evaluation ranks 'largely succeeded', 'succeeded', and 'failed' were introduced. It was considered that the respondents could not be involved in research. Therefore, besides three evaluation ranks describing competence expression, an extra version of the answer 'missed' was added.

To process the research data, descriptive statistics was applied and correlation coefficients and the percentage of answers were calculated. In order to evaluate statistical significance of different positions, the χ^2 (chi square) criterion was used to examine homogeneity of population. Probability of statistical margin $p \leq 0.05$ was accepted. Critical limits of probability of statistical margin p shows permissible margin value of statistical decisions. The statistical decisions disagreeing with specification $p \leq 0.05$ are treated as invalid, i.e., the permissible margin of statistical decisions which is more than 5% was established. To statistically process the data of research, the statistical packet SPSS 14 was applied.

Results of the Research

Students' competence in research can de disclosed supervising schoolchildren's research projects during teaching practice at school. The respondents are provided possibilities of assisting the learners in planning and conducting research projects and evaluating them after work is completed. The abilities to supervise schoolchildren's research activities were evaluated by the students themselves and their mentors (Table 1).

It was established that almost every second surveyed participant dealing with teaching practice had an opportunity to conduct learners' research projects.

Table 1.

University students' abilities to supervise learners' research projects in comprehensive school: the percentage of students and mentors' attitudes

Activity	Largely succeeded	Succeeded	Failed	Missed
Mentors' attitudes				
Planning project activities	4.4	36.0	4.4	55.2
Coordinating project activities	8.4	35.2	3.6	52.8
Evaluating project activities	6.8	31.6	4.4	57.2
Students' attitudes				
Planning project activities	6.3	34.2	6.2	53.3
Coordinating project activities	18.4	39.0	5.2	37.3
Evaluating project activities	12.2	41.6	4.4	41.8

The mentors suppose that the students were rationally planning, carefully coordinating and evaluating schoolchildren's research projects during the supervision of research projects. The majority of mentors (57.2%) pointed out that the students did not evaluate learners' research projects. The latter result could be determined by objective reasons as some of the schoolchildren's research projects were not finished until the deadline of respondents' teaching practice.

Considering the rank 'largely succeeded', the evaluation of students' answers shows that the respondents more positively evaluated learners' abilities to coordinate and evaluate projects (Table 1). The data of our research indicates that the students rather than their mentors better evaluated abilities to supervise schoolchildren's research projects. However, a statistical evaluation of students and mentors' attitudes to supervising project-based research discloses that in all cases, a statistically insignificant deviation was established.

Within teaching practice, the students of Vilnius Pedagogical University have a possibility of supervising schoolchildren's research activity and self-sufficiently conducting investigation into educational activity. The mentors' position on the students' abilities to undertake research and a reflexive evaluation of the students' abilities to be competent in conducting research were examined (Table 2).

Table 2

Students' competence in research: the percentage of students and mentors' attitudes

Activity	Largely succeeded	Succeeded	Failed	Missed
Mentors' attitudes				
Planning research	7.6	48.4	1.2	42.8
Conducting research	7.6	50.8	1.2	40.4
Preparing report on the carried out research	6.8	44.4	3.6	45.2
Dissemination of the results of research	5.6	33.2	4.8	56.4
Students' attitudes				
Planning research	16.6	64.6	2.7	16.2
Conducting research	20.8	60.8	4.3	14.1
Preparing report on the carried out research	19.6	61.2	3.3	15.7
Dissemination of the results of research	12.0	52.7	6.0	29.3

The assessed data shows the difference between the attitudes to abilities to conduct research of the teachers-mentors and students themselves. The differences can be clearly seen evaluating the attitudes of different groups according to the rank 'largely succeeded' and the answer 'missed'. For example, 40.4% of the respondents indicated they did not carry out research on educational practice. However, only 14.1% of those involved in teaching practice maintained they did not undertake any research. Such findings require explanation. We think it could be determined by insufficient collaboration between the mentors and students involved in teaching practice. As research on educational practice is a task given by the Department of Educology, it could be accomplished individually by the respondents themselves. This precondition is confirmed by the data on dissemination of the research results. Almost one third (29.3%) of the respondents involved in teaching practice agreed they had not been disseminating the results of educational research. Therefore, neither mentors nor school community knew about the carried out research of some students. To sum up, the results of research have relation to competence in research as they revealed the drawbacks of organizing teaching practice which are insufficient collaboration between the mentors and students involved in teaching practice and dissemination of the research results. These conclusions obviously require new research on students' teaching practice.

A statistical evaluation of students and mentors' attitudes showing the abilities to conduct research disclosed that in all cases, statistically significant deviation was established (Table 3).

Table 3

Students' competence in research: statistical significance of the percentage deviation of students and mentors' attitudes

Activity	χ^2	df	p
Planning research	8.59	6	0.011
Conducting research	8.11	6	0.029
Preparing report on the carried out research	7.12	6	0.037
Dissemination of the results of research	7.23	6	0.035

Subjective characteristics determining students' competence in research were investigated. We were interested if mastering new information communication technologies, professional motivation, a position on continuing learning and the sex of a respondent could be related to competence in research.

For example, proper mastering of information communication technologies (ICT) probably can have a positive impact on competence in research. Such experience is required preparing a report on research and processing the investigated data. Thus, a question about respondent's experience of applying ICT was included in the questionnaire.

The links between respondent's professional motivation and competence in research were analyzed. The circumstances of entering the university can be accepted as one of the factors discussing student's professional motivation: a student is studying his/her favourite subject or studies at pedagogical university were one of the options to enter an institution of higher learning.

The study on students' competence in research also considered an attitude towards continuing learning: intention to study for taking a Master's or Doctor's degree or having no developed vision of continuing learning.

To display correlations between subjective characteristics and competence in research, mathematical statistics was applied. Taking into account that the analysed characteristics were measured using ranking and nominal scales, the Spearman rank correlation coefficients were practised (Table 4).

Table 4

Correlation between students' competence in research and subjective characteristics in teaching practice: the Spearman rank correlation coefficients

Activity	Sex	Mastering ICT	Professional motivation	Attitude to continuing learning
Planning research	0.04	0.024	-0.009	0.288**
Conducting research	0.171*	0.009	0.056	0.282**
Preparing report on the carried out research	0.170*	0.017	-0.007	0.047
Dissemination of the results of research	0.03	0.002	0.019	0.064

*$p < 0.05$ **$p < 0.01$

The data of our research indicate that statistically significant correlation coefficients were established considering the sex and attitude to continuing learning of the students involved in teaching practice. However, it is very weak (*$p < 0.05$) and weak (**$p < 0.01$) correlation.

Meanwhile, a statistically significant relation between the examined abilities of research activity and subjective characteristics (abilities to use ICT, professional motivation) has not been confirmed.

Conclusions

- ◊ An assessment of literature sources disclosed that teacher's competence in research was an integral part of cognitive competence expressed through the ability to choose an adequate strategy of research, investigate professional activity, process, analyze, interpret and evaluate researched data.
- ◊ Empiric research revealed that almost a half of the respondents – the students involved in pedagogical practice – supervised schoolchildren's research projects. Even a major part (almost four fifth) of the surveyed participants conducted research on educational activity. The ability to plan and undertake research and prepare a report on the carried out study show a high level of students' competence in research. However, students' abilities to disseminate the results of the conducted research require a further development as more than one third of the respondents pointed out they had not been involved into similar activity.
- ◊ A comparison of students and mentors' attitudes indicates differences in defining competencies in research. The students rather than their mentors more positively evaluate personal competence in research. A deviation is statistically confirmed. Considering teachers-mentors and students' answers, an evaluation of individual abilities to undertake research show that neither very strong nor very weak competence in research can be distinguished. More than a half of the respondents agreed they succeeded or largely succeeded in planning and implementing research on educational activity and in preparing a report on the undertaken study.
- ◊ Lack of studies on comprehensive school teachers' competence in research can be noticed. Thus, there is no information on either teachers-practitioners or pre-service teachers more frequently conduct research on educational activity and what differences between in-service and pre-service teachers' competence in research are. The above introduced problems require new research on educology, the results of which could help with evaluation of teachers' competence in research in the light of other professional competencies.

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IMPLICATIONS OF TOTALITARIAN VALUES IN THE POST-SOVIET EDUCATIONAL SPACE: THE THEORETICAL AND METHODOLOGICAL RESEARCH BASIS

TOTALITĀRISMA VĒRTĪBU IMPLIKĀCIJAS POSTPADOMJU IZGLĪTĪBAS TELPĀ

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Abstract

After the collapse of the Soviet Union all post-Soviet countries carried out reforms of their educational systems. This process is rather complicated, as in parallel to the transition from one social regime to another, the society's consciousness also changes; this has raised questions about the impact of values integrated in the previous ideological system upon the formation of a modern educational policy as well as questions about the value orientation of graduates of pedagogical higher educational establishments, who studied under the circumstances of totalitarian ideology, and their influence on the implementation of reforms. As observations have proven in Latvia, the unwieldy course of the educational reform and many problems related to its implementation frequently originate from the inability of many educationalists and teachers to accept the values, norms and principles of liberal education. This article represents an insight into the theoretical and methodological substantiation of the comparative research "Implications of Totalitarian Values in the Post-Soviet Educational Space". This research identifies the value orientation influenced by totalitarianism and its implications upon the introduction and implementation of reforms in modern Latvia.

Keywords: post-Soviet educational space, totalitarianism, implications of totalitarian values, educational reform.

Introduction

Any educational process encompasses references to desiderata, namely, to things that do not exist yet, but which participants of the process wish to accomplish. Accordingly, education, including the educational system, always includes a normative aspect; not in the sense that they comprise strict norms that need to be complied with, but in the sense that the understanding of education itself fundamentally embodies certain values.

The question, what values should be chosen as a point of reference in a particular educational process, is the one that helps to make this process more purposeful, more foreseeable and, possibly, more efficient. Another thing to be considered is the fact there are no simple answers to this question; particularly, in the opinion of numerous philosophers, people have failed to identify the values or normative principles that all others should recognise and accept as the basis for conduct.

Although the search for the so-called "final" substantiation of morality has not succeeded and given generally recognised results, it does not mean that there is no possibility to establish values on which to base, for instance, the educational process. It rather means that these values are established politically, for instance, as a result of pragmatic political discussions.

Judging from normative documents which describe the objectives of education in the European Union and particularly in Latvia the understanding about education is based on the liberal tradition where a significant place is devoted to the rights and autonomy of the individual, the ability and possibilities to make independent decisions, tolerance of different opinions, the ability to independently apply knowledge in a specific situation. For instance, "The Educational

Conception of Latvia" emphasizes that one of the major tasks of education is "to promote the development of a person in a democratic society who is able to independently see and competently solve problems, is aware of one's belonging to a family, the nation, the state of Latvia and the humanity, bears responsibility for one's actions, is free and tolerant both in views and activities". ("The Educational Conception of Latvia", 1994/95, 6) Unfortunately, as many philosophers and politologists of the liberal tradition have already pointed out that the implementation of these values in human activities is often not so successful. Why are people avoiding attaining their "maturity", as I. Kant put it. (Kants, 2004) Is it laziness, escape from freedom or the result of manipulations of some kind of external powers?

Various philosophers and politologists scholars have offered various answers. (Adorno, Horkheimer, 1947; Arendt, 1951; Berlin, 1969; Fromm, 1941; Popper, 1945; Rory, 1989) In any case, one thing is clear: people possess various values that may run afoul, and they do not always give priority to the values that the liberal tradition defends. It means that one of the ways how to understand better why people do not act autonomously and do not respect the freedom of others, is to understand the various values they possess and how the conflicts of value influence their actions.

The introduction of an educational model that is based on the ideals of liberalism in post-Soviet countries faces a number of difficulties. There are several reasons for these difficulties, but one of them, possibly, is the discrepancy between those values that were recognized and promoted in Soviet society and the values that are accepted in liberal democracies.

This is the reason why the research project "Implications of Totalitarian Values in the Post-Soviet Educational Space" was started at the University of Latvia in September 2007. Its objective is to explore the implications of totalitarian ideology on value awareness of pedagogues in the post-Soviet educational space.

Research problem and context

Since the collapse of the Soviet Union, the educational reform has been carried out in all post-Soviet countries, including those that were only under the influence of the Soviet Union – Poland, Bulgaria, the former German Democratic Republic and others. This process is rather complicated, as in parallel to the transition from one social regime to another, the society's consciousness also changes; this has raised questions about the impact of *the values integrated in the previous ideological system upon the formation of a modern educational policy* as well as *questions about the value orientation of graduates of pedagogical higher educational establishments, who studied under the circumstances of totalitarian ideology, and their influence on the implementation of reforms*.

In Latvia these and other issues have not been examined in a comprehensive and complex piece of research, and the investigations of other countries of the post-Soviet educational space have not been studied either.

As observations in Latvia have proved, the unwieldy course of the educational reform and many problems related to its implementation frequently originate from the inability of many educationalists and teachers to accept topical values, norms and principles. As foreign experts have admitted, the reform of the educational contents, at least in the stage of basic education continues successfully. In pedagogical practice the new standards and programmes are perceived sceptically and frequently one faces nostalgia for values that ruled in the Soviet educational system. This aspect encumbers the implementation of the reform in its essence. Over the last years the issue about civic education has become topical, which has been promoted within the framework of the European Union; this is attested by the fact that the year 2005 was nominated "European Year of Citizenship through Education".

The comparative research "Eurydice" that was carried out in 2005 in 30 countries presented conclusions that in almost all countries the objectives of civic education provide a possibility

to acquire basic understanding about politics and form a civic attitude, as well as promote active participation in public processes. In two thirds of these countries civic education is a regular component of education for would-be teachers. (Erydice, 2005)

In Latvia's case, the issues of the syndrome of burnt-out teachers, the status of teachers in the society and other essential issues become more and more topical. However, issues about resources available in education are also very important, as overloaded teachers are not ready to accept new solutions in the area of tolerance education and to get inspiration from the experience of other democratic countries and methodological literature.

The results of the research "Tolerance Barometer of Teachers", completed in 2007, demonstrate a comparatively high indicator of authoritarianism among teachers in Latvia. In general teachers lack reference points about the themes of tolerance and understanding about the concept of tolerance and respect towards diversity; respectively, teachers are not prepared to solve conflicts in the class when students differ from others (nationality, race, sexual orientation).

On the one hand, teachers believe that they do not need additional knowledge in intercultural education and methodology, and on the other hand, teachers admit that they would not know how to act in case there were more children who are different. (Austers, Golubeva, Strode, 2007)

The research "Implications of Totalitarian Values in the Post-Soviet Educational Space" searches for reasons and interconnections, which could result in suggestions for teachers in respect of the improvement of teachers' professional studies and professional advancement, as well as draw the attention of the makers of educational policy to the research results in the formation of strategic plans in education and the initiation of subsequent reforms. The proportion of totalitarian ideology in the consciousness of educational leaders and implementers influences the choice of pedagogical approaches, determines the professional competences of teachers, as well as establishes the value orientation of their personalities and forms their worldview. Therefore, when analysing and evaluating the acquired data about educational achievements within the framework of international studies, it is impossible to generalize conclusions unless they are correlated with studies that are similar to those mentioned herein. This refers to the issue of the quality of education and the solutions of related problems in the future.

Methodology and course of the research

With an aim to identify the implications of value orientation of totalitarianism in the implementation and introduction of reforms in Latvia nowadays, a group of 7 researchers has been established. It has started work on a comparative research project within the framework of pedagogy, theology and philosophy. The research will be carried out in 6 post-Soviet countries: Lithuania, Estonia, Latvia, Poland, Bulgaria and the territory of the former German Democratic Republic. During the research teachers will fill out questionnaires, they will be interviewed with the help of the narrative interview method.

At present, one of the topical issues of comparative research is the discovery of threats to democracy. (Allemann-Ghionda, 2004) This research analyses transformations in the educational system pointing out the pedagogical, political and social contexts.

In accordance with the inner logic of the research, *three methodological approaches are applied: the empirical, the hermeneutical and the ideologically critical.* The empirical approach is a combination of qualitative and quantitative research methods; the hermeneutical approach relates to data interpretations; and the ideologically critical method is applied with an aim to disclose the societal and ideological stratifications in respondents' judgements, as well as in critical analysis of the educational process. The particularity of the ideologically critical method is its focus towards the identification of antiemancipation factors, i.e., the

factors that encumber a person's emancipation possibilities in one's thinking and actions, for instance, prejudices, stereotypes, destructivity etc. In comparison with topical trends of the modern pedagogical research to explore positive experience, the emancipation studies analyse the so-called negative experience or ideological stratifications. As mentioned above, this methodological approach can be used in combination with the hermeneutical and the empirical approaches in order to ensure the presence of the constructive aspect.

For purposes of data collection a questionnaire will be used that comprises expressions of a hidden anti-emancipation character. By accepting or rejecting these expressions, respondents confirm the totalitarian or democratic inclination of their thinking.

Nowadays the method of a narrative interview is widely applied in biographical investigations. (Jakob, 2003; Kade, Nittel, 2003) The analysis of biographical cases is used in research to identify regularities that provide a possibility to make general conclusions. (Fatke, 2003; Mayring, 2002) Case studies analyse information, stories of persons, i.e., in a methodological and controlled manner they reveal the interrelations of particular cases with common research conclusions and statements. The aim of case studies is the verification of the existing statements, their supplementation or acquisition of new theoretical statements.

When biographical case data are processed, case summaries are created in order to systematically reconstruct social constructions of respondents' narrations. Namely, in the narration the respondent offers the construction of one's social experience and day-to-day life. The task of researchers is to reconstruct it according to the methodological approach. (Bohnsack, 1993) In this research interpretation is grounded on the basic principles of the narrative interview that is particularly suitable for the cognitive purposes to identify socio-cultural experience.

The research consists of several stages:

1. 01.09.2007–31.07.2008. The theoretical research in Latvia, the elaboration of the instrument, the selection of international cooperation partners.
2. 01.09.2008–31.12.2009. The approbation of the research instrument, translation, the implementation of the research in the Baltic States, Poland, Bulgaria and Germany, the summarization and assessment of the results of the second stage and international discussions.
3. 01.01.2010–01.09.2010. The summary, analysis and assessment of international results, the organisation of an international conference in Riga. The publishing of the research results, its presentation and international approbation.

The chosen approach of this research is the most advantageous economically as it does not involve a large amount of human resources. The project managers envisage that member states involved in the project will invest various types of resources in order to obtain national data, thus we would gain maximal results with limited use of resources of project managers.

Close research cooperation links are being established among higher educational establishments in the countries of the interest zone of the former Soviet Union. Taking into account the conditions of competition of a free market, the advancement and strengthening of such cooperation links in the future could be the decisive factor for sustainable development. By stating the impact of the totalitarian ideological system on the modern educational processes and activities, it is possible to identify the hidden and unrecognized threats to the development of human resources and reduce related risks in the educational space. The status of the University of Latvia will be strengthened as a regional research centre both in the Baltic region and in a wider context.

As a result of the research, suggestions will be elaborated for the teachers' educational programmes and the creators of educational policy to assist in the formation of strategic plans in education and the initiation of subsequent reforms.

In the period from September until December 2007, the following tasks were carried out within the framework of this research:

- the analysis of research materials related to the examined problems and issues in Latvia;
- the exploration of the concept of totalitarianism within the context of the examined problems;
- the development of criteria and indicators for totalitarian values;
- the search for and identification of international cooperation partners;
- the analysis of documents regulating education in the Republic of Latvia within the context of objectives and tasks;
- the elaboration of research instruments is being continued.

General characteristics of the concept of totalitarianism

In the framework of this research, the analysis of the concept of totalitarianism is essential in order to develop the theoretical substantiation for the research.

The concept of totalitarianism is one of the ways to characterize Soviet society. It is well known that the historical origin of this concept comes from the works of Giovanni Gentile, the theoretician of Italian fascism, who used it in a positive sense – as characteristics of an ideal society. For Gentile totalitarianism meant the fact that common ideals and goals cover not only "the political regime and the advancement of a nation, but also its will, thoughts and feelings" (Gentile, 2004), thus it is only natural that Gentile actively worked at radical transformation of the Italian educational system. (Arendt, 1951) After World War II the concept of totalitarianism was used by several influential theorists in order to criticize the society that existed in fascist Germany and Soviet Russia. The most popular works of the post-war period that use the concept of "totalitarianism" are "The Origins of Totalitarianism" by Hannah Arendt and "The Open Society and Its Enemies" by Karl Popper.

The concept of totalitarianism was used by these philosophers and later by such politologists as Karl Friedrich, Zbigniew Brzezinski and Huan Hose Linz who primarily denotated a certain kind of political system. (Friedrich, 1957; Friedrich, Brzezinski, 1956; Linz, 2000) The explanations of the concept of totalitarianism provided by these authors certainly are not identical, but as an operational definition we can accept the main six features of totalitarianism listed by K. Friedrich and Z. Brzezinski: the official, "total" ideology, one mass party, the political elite (for instance, the party) controls the army, the elite has monopoly in the mass media, terrorist control of security forces over the society, centralised economic management.

When we speak about the USSR, this concept was primarily referred to Stalin's Russia, not all period of the existence of the Soviet Union. In any case the Soviet regime, for instance, in the 1970ies, was significantly different from the one described by researchers of totalitarianism in the post-war years. Moreover, one has to take into account that a totalitarian country and "the new person" that this country had to create in accordance with totalitarian ideology were ideas that have never been realized fully. (Linz, 2000) Both the mechanism how the country functioned and day-to-day life in the USSR and its satellite countries were much more complicated phenomena; it is impossible to express all these features by one term naming one or the other "totalitarian".

Thus the concept of totalitarianism as a conceptual means with whose help one could analyse the impact of the Soviet educational system upon modern educational processes is certainly problematic. Not all processes that happened at a Soviet school were "totalitarian"; and it is also true that a pupil who is educated in a democratic society would find much in common

with day-to-day life of a Soviet school. However, it does not mean that discrepancies do not exist. For instance, the values of a totalitarian society in principal cannot coincide with the values of a liberal and democratic society, for instance, authoritarian paternalism hopelessly comes into collision with an individual's autonomy. This research is devoted to and focused on the expression of values in the educational process. The model of a totalitarian society similarly to an ideal, or to be more precise – exactly as an ideal, embraces certain values that may not be realized ever in full, however, they serve as constant reference points in the society in the management and assessment of ongoing processes, and in this sense it influences these actual processes. Therefore the concept of totalitarianism helps to highlight and characterise the aspects of the Soviet educational system that were related to values.

Hence, it is impossible to apply the term "totalitarianism" within the context of this kind of research in its narrowest meaning, i.e., the meaning of a political regime. This is the reason why the works of politologists Friedrich, Brzezinski and Linz have not been applied as the theoretical background for this research, but instead works with a more philosophical orientation have been used, namely, "The Origins of Totalitarianism" by H. Arendt and "The Open Society and Its Enemies" by K. Popper, as well as the lecture of I. Berlin "Two concepts of Liberty" delivered in 1958. (Arendt, 1951; Popper, 1945; Berlin, 1969) Although these authors analyse the political regimes, they also characterize the values that were typical of totalitarian culture in general and the modes of behaviour that a totalitarian society promoted and developed. Although they do not provide an expanded theory of totalitarian values, it is possible to identify a totality of certain indicators in these texts that characterize a totalitarian society and modes of behaviour of people living in it. Regardless of the fact that totalitarianism was most vividly expressed during the rule of Stalin, the totalitarian values and modes of behaviour have been preserved in the following decades.

It is doubtless that totalitarian values and modes of behaviour were also manifest in the educational system, therefore it is possible to examine the educational process in the post-Soviet countries and analyse to what extent the features that were criticised by opponents of the totalitarian regime after World War II manifest themselves both in Soviet schools in later decades and in schools and their development after the collapse of the Soviet Union.

As a result of the analysis of the concept of totalitarianism the following criteria of totalitarian values have been put forward:

Table 1

Criteria and Indicators of Totalitarian Values
(according to K. Popper, H. Arendt and I. Berlin)

Criteria	Indicators
Lack of changes	- Strict control and state monopoly - Unification and equalling - Stability as a value (non-existence of changes means no moral problems) - No rational attempts to improve the living conditions - No attempts to change the existing hierarchy
The right way (one truth, one regime)	- Ideologization and indoctrination in one truth - Freedom creates chaos and disorder - Absolute laws - Prohibitions, taboos strictly regulate human behaviour - Single correct lifestyle - A human being identifies oneself with the law - Desire to force people to live according to "the correct" representations - Totalitarianism's stereotype: lies are many-sided, but there is only one truth

Criteria	Indicators
Public institutions as magical powers	- The sacral function of public institutions - A totalitarian society does not recognize separate cases or contingencies - Inconsistency between words and deeds or "double morality" - A human being is sacrificed in the name of particular goals; sensitivity and originality are oppressed - Belief in an ideal, perfect society that can be achieved; confidence that it is feasible - Self-abnegation – self-denial (unselfish work) - Lack of critical reflection, superstition - Blind participation in co-activities - Anonymity of power - Cult of heroes - Adjusting of individual life to society
"Ours" – "Theirs", polarization in thinking	- Lack of tolerance in society, defined hostile groups - Life is a struggle - It is automatically accepted that in case people act "normally, correctly", they are rational; the "irrational" people should be restricted - Hostility towards life, a cynical attitude to life, scorn - Intolerance, fear of the otherwise-minded
Collective Responsibility	- Focus on "the average person/student" - No individual/personal responsibility - Indifference to public processes as there are no means how to influence them - Egocentrism, egocentric bitterness (other people are to blame, no undertaking of responsibility) - Isolation and lack of normal social relations
Authoritarianism (moral expert, subordination/ compliance)	- Need for a morality expert - Enforcement to establish a happy future - Leader acts as a shepherd: watches over and takes care, imposes one's will, though the motives of activities are positive - Obedience to the superior as a virtue - People have no personal opinions, they put up with the situation, thus masses of people can be addressed and the acceptance of one's opinion can be attained

The developed criteria will be applied in the elaboration of instruments for this research, namely, the development of the questionnaire and interviews.

Discussion

It is recognized that education as a social structure is rather conservative. (Андреева, 2000) Moreover, in the Soviet Union and other states of the socialism block the school was the institution that was largely subjected to the influence of norms and standards of totalitarian ideology. Although the educational establishments could not stay outside the processes of public changes after the collapse of the state regime, nevertheless the model of a closed society was preserved at times when political transformations already took place beyond their walls. Therefore, the idea about educational establishments as institutions, which embody and implement social changes has to be put into practice by taking into account the system's reforms and, particularly, by pointing out the possibilities of people's emancipation and self-determination.

Theoreticians of this research offer the following problematic issues for discussions in order to promote and contribute to the efficiency of the investigation:

- Will implications of totalitarian values help and disclose burdens of educational reforms in the post-Soviet educational space?
- Are the established value criteria only typical of post-totalitarian societies?
- Do ideals of liberal education implicitly render assistance in finding solutions for problems of the educational crisis?

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Kopsavilkums

Pēc Padomju Savienības sabrukuma visās postpadomju valstīs tiek īstenota izglītības reforma. Šis process nav vienkāršs, jo paralēli pārejai no vienas sabiedriskās iekārtas uz otru noris sabiedriskās apziņas maiņa, kas radījusi jautājumus par iepriekšējā ideoloģiskās sistēmā integrēto vērtību iespaidu uz mūsdienu izglītības politikas veidošanos, kā arī pedagoģisko augstskolu absolventu, kas izglītību ieguvuši totalitārās ideoloģijas apstākļos, vērtību orientāciju ietekmi uz reformu īstenošanu. Kā liecina novērojumi Latvijā, izglītības reformas smagnējā gaita un daudzas ar reformas īstenošanu saistītās problēmas izriet no daudzu izglītības vadītāju un skolotāju nespējas akceptēt liberālās izglītības vērtības, normas un principus. Šis raksts ir ieskats salīdzinošā pētījuma "Totalitārisma vērtību implikācijas postpadomju izglītības telpā" teorētiskajā un metodoloģiskajā pamatojumā. Pētījumā tiek noskaidrotas totalitārisma radīto vērtīborientāciju implikācijas mūsdienu Latvijas izglītības reformu ieviešanā un īstenošanā.

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