e-PEDAGOGIUM

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for interdisciplinary research
in pedagogy

Content

Reviews and short reports

Editorial

The first English-written issue of the e-Pedagogium journal of 2014 keeps the direction toward interdisciplinary research in the field of pedagogy and educational practice. The following pages offer articles by authors from Bulgaria, the Czech Republic and Poland what is related to the range of their topics.

Four of the articles focus on the university environment from the perspective of both students of teaching and university teachers. These are specifically the article by Iwona Czaja-Chudyba from Poland concentrating on developing constructive criticism in students of teacher training programs. The article discusses an original definition of constructive criticism, analysis of students' critical competences as well as inspirations and conditions of the practice of constructing standards for teaching, curricula and classes aimed at developing constructive criticism in students of teacher training programs.

The next article by Jana Kvintová, Martin Sigmund and Hana Hřebíčková from the Czech Republic observes life satisfaction and subjective health assessment in future teachers compared with current university students of physical culture and natural science. The study presents the results of a survey aimed at life satisfaction and subjective health assessment in Czech university students. The analysis covers a comparison of future teachers and students of physical culture and natural science. The monitored variables present significant factors influencing the quality and level of university study and overall academic performance.

The topic of training of future teachers in the Czech Republic from the perspective of voice care is dealt by the article by Petr Špaček and Tereza Sedláčková, focusing of on the issues of the correct vocal tract configuration in a specific voice education process. The vocal tract is used daily by every educator as a way to communicate. However, most of them do not realize that an integral part of using something as obvious as the human voice requires some care. The care is called "vocal hygiene" which is a prevention and a certain set of actions leading to a voice healthiness and the right function of the vocal tract.

The issue is developed by the article by Elena Zheleva from Bulgaria, dealing with the issue of The Health Care University Lecturer as an Educationalist, Medical Specialist and Researcher. The scientific medico-pedagogical research practices at university level attempts to offer a solution to the problems related to the education and training of Health Care specialists. A characteristic feature of these research practices is the generation of new ideas and the acquisition of knowledge about the research object.

The fifth article by Martina Fasnerová turns attention to elementary schools. It deals with joined-up linear handwriting in elementary grades in the context of postponed compulsory school attendance. The paper presents a long-term research study carried out at elementary schools in the Czech Republic.

The majority of the articles in the presented issue is of interdisciplinary character as they interconnect pedagogy, educational sciences and other scientific disciplines such as philosophy, psychology and medicine. Still, all these issues return back to pedagogy, and they enable widening of its own theories.

Board of editors

Articles

Developing Constructive Criticism in Students of Teacher Training Programs

Iwona Czaja-Chudyba

Abstract

The article makes an attempt to analyse the issue of constructive criticism as an important area of reflection at a university. The article discusses an original definition of constructive criticism, analysis of students' critical competences as well as inspirations and conditions of the practice of constructing standards for teaching, curricula and classes aimed at developing constructive criticism in students of teacher training programs.

Keywords: constructive criticism, critical thinking, university education

Rozvíjení konstruktivně kritického přístupu u studentů učitelských oborů

Abstrakt

Článek se věnuje rozboru otázky konstruktivně kritického přístupu coby důležité oblasti úvah na vysoké škole. Zabývá se autorskou definicí konstruktivně kritického přístupu, rozborem kritických kompetencí studentů a inspiracemi a podmínkami pro praktickou konstrukci standardů výuky, programů a aktivit, které mají za účel rozvíjet konstruktivně kritický přístup u studentů učitelských oborů.

II/2014

Klíčová slova: konstruktivní kritika, kritické myšlení, vzdělávání na vysoké škole

Introduction

The issue of critical thinking as an important area of reflection and research has appeared in the Polish educational literature only recently. Information smog, invasiveness and uncontrollability of content transferred by the media make it necessary to introduce paradigmatic changes into educational processes – moving from the imperative of obedience to the imperative of independence, activity, caution and mistrust (Crozier, 1996; Kwieciński, 2000). The key everyday experience of an individual involved in dilemmas of numerous blurred categories of the real-virtual, objective-subjective, individualistic-global, temporary-universal type should be "critical verification of sense" – careful, persistent and in-depth verification of rationality of thinking. An academic teacher also should be prepared to fulfill the role of a guide in this process.

1 Aims of the study

This article is a result of over ten years' experience in teaching students of teacher training courses at the Pedagogical University in Krakow. It is aimed at presenting and explaining the notion that being reflective, aware and competent, despite minimum personality predispositions, also requires the knowledge of strategy and methods of critical information processing.

**What has already been written about? –
competences of a practising teacher and an intellectual**

A considerable interest in the issues connected with critical thinking is accompanied by significant diversity of understanding this notion. In the description of "awareness", "orientation" or the critical "attitude", critical pedagogy should be given the priority. In her handbook on emancipation pedagogy, M. Czerepaniak-Walczak (2006, p. 153) defines "critical awareness" as the ability to *"think critically about problems, perceiving them and solving them effectively"*, contrasting it with naive and semi-transitive awareness. In regard to the competences of a teacher participating and creating the process of emancipation of subjects. The author emphasizes the ability to *"individual search for models, contents, methods and forms of work on one's own and the criticism of acts and orders, formal regulations and standards sanctioned by tradition [...]. The main effort focuses on going beyond one's experience and one's own perspective in thinking and in*

acting, broadening the horizons and possibilities on a continuous basis" (Czerepaniak--Walczak, 2006, p. 194)

Earlier concepts of a teacher's competences underline the reflective and critical attitude (by H. Giroux, a transformative intellectual, D. Schön, reflective practitioner and J. Kincheloe, post-positivist practitioner) *implicite* assume also the occurrence of above-average personality predispositions of a teacher (Mizerek, 1999). For example, J. Kincheloe (2000; 2004), while presenting a description of a teacher's responsibilities in the post-modern era, estimates that he/she will be characterised by auto-reflection, independence, activity, involvement in the deconstruction of the social world, flexibility and ability to improvise, affirming "differences" and cultural pluralism, authenticity, humour, empathy. Compared with the educational reality (Nalaskowski, 1995; Kwieciński, 2000; 2007; Klus-Stańska and Nowicka, 2005), these concepts sound like idealistic postulates. They do not fit the reality of recruitment and academic education of future teachers and it is impossible to translate them into the language of practice. However, guidelines how to achieve such a state are provided rarely. These concepts ignore the basic and elementary level of a critical attitude – the capability of critical reasoning.

2 Why constructive criticism? – understanding and meaning of this notion

Definitions of critical competences are connected with the adopted scope of critical thinking. For E. Glasera (1941, after: Fisher, 2006, p. 3), the co-author of the most popular tools for testing critical skills, thinking is an ability to consider problems and issues in a logical manner, knowledge about methods of logical research and reasoning and ability to use them. R. Ennis (2003, p. 295) defined them succinctly as: *"rational, reflective thinking focusing on deciding what to believe in and what to do"*. R. Paul and colleagues from the "*Critical Movement*" (Paul, Binker & Weil, 1995) suggest that this type of thinking should be defined as progressive, in which an individual continuously and dynamically improves his/her thinking by using and imposing intellectual standards. A. Fisher (2006, p. 8) lists several fundamental characteristics of critical thinking, in particular, rational identification of elements of knowledge (perception and evaluation of assumptions, evidence and conclusions), explaining and interpreting views and meanings, determining the credibility of arguments and evidence, formulating correct explanations, accepting or rejecting ideas. According to M. Lipman (1996), critical thinking is distinguished from other types of thinking by the fact that it is based on criteria of objectivity, usefulness and logic.

A majority of researchers quoted here regard the ability to think critically more as *"a method or a personality trait"* (Cotrell, 2006, p. 2), assuming, however, the existence of significant individual differences for this skill. The abilities to observe, reason,

analyse, judge, assign values and make decisions as well as argue are the basis for critical thinking (Cotrell, 2006, p. 4). This type of thinking requires precision, attention to details, sensitivity, persistence in arriving at the foundations of judgements, the ability to adopt somebody else's perspective, objectiveness, far-sightedness and the ability to predict consequences. It requires a constant effort of analysing knowledge in the light of evidence that supports it and conclusions to which it leads. It is connected with scientific and research thinking (Bailin, 2002), reflective and philosophical thinking (Lippman, 1996; Czerepaniak-Waczak, 2006; Woroniewicz, 2006) and also with creative thinking. Constructive criticism, however, does not involve fault finding, but the ability to notice numerous implications, the context, contradictions, discrepancies between intentions and results of actions and multiple-aspect consequences of expressed ideas, and decisions taken. It is a type of rational thinking in which noticing a problem, a defect or a negative assessment of a state is the beginning of search for a new solution, improvement of the reality. It is criticism of propositions and possibilities which is aimed at adding value and becoming aware of a broader perspective, the context.

3 How is it? – critical and creative competences of students in teacher training programs

In view of the fact that the criticism understood in this way is nearly completely ignored by Polish pedeutologists, empirical reports on this issue are very rare. Therefore, the level of critical thinking in students was not research or defined. Finding a satisfactory answer to the question above requires broad analyses. Three of them are – in my opinion – of fundamental importance. They pertain to three components of critical orientation: (1) analytical skills (2) a research approach – ability to doubt, to be surprised or interested or to ask questions and (3) a self-reflection. Results obtained in research (Czaja-Chudyba, 2013) unambiguously indicate that a considerable percentage from a group of students cannot analyse a text critically, settling for generalizations and stereotypes, does not have a habit of doubting and checking the context and the truthfulness of data presented in publications, it is also characterised by a lack of preparation in the area of elementary logic and is not able to analyse critically invalid or uncertain research results or information. Superficiality and schematism of students' conclusions and self-reflection, their triviality and conventionalism as well as inability to formulated questions and problems were also observed. The analysis of answers connected with demonstrated, preferred and accepted attitudes reveals the dominance of student conformity, dogmatism and destructiveness.

The results obtained raise concern and evoke questions. They confirm polemic analyses of critics of the methods of educating students – future teachers. They show that a vast majority of students are "uncritical" or "deprived of reflection" practitioners

who accept and copy knowledge and submit themselves to the "anti-category of re-flective education" (Woroniewicz, 2006, p. 212) – a negative social influence, prejudice, stereotypes and symbolic violence.

4 Where to draw inspiration from? – an outline of selected concepts of the formation of critical thinking

Taking into consideration the research results presented above, it seems important to become familiar with the formations of the ability to think critically popularised in foreign literature. A majority of the propositions presented below is of analytical and training character, being combined with studying texts or active drama exercise in a group (or a pair) accompanied by following the partner's statements attentively. The authors assume that the critical and creative abilities can be measured and learned, i. e. that it is possible to learn to think critically using appropriate strategies. This view is shared by a majority of researchers, usually from the cognitive orientation (Nęcka, 2001).

S. Cotrell (2005) proposes that the intellectual ability to be critical should be taught at ten stages of original exercises allowing students to develop critical competences (in particular the ability to identify erroneous, false assumptions and argumentation, critical analysis of written texts and creation of logically coherent oral and written statements). At the preliminary and final stage, the author presents a range of tests allowing for self-evaluation of the critical thinking level and monitoring the progress in training. Further exercises pertain to: the identification of the main thesis of a text, supporting or contradictory arguments, structurization of statements (evaluation of logic, coherence, the order of argumentation, adequacy of conclusions and the summary), finding hidden assumptions (stereotypes, ideology, emotive associations, overgeneralization), distin-guishing between the cause and effect, linguistic implications, apparent correlations, the habit of searching and analysing sources and evidence, distinguishing between certainty and probability, possibility, separating facts from opinions and finally – the practice of discussion – asking questions, paraphrasing, exchanging arguments and opinions.

L. Elder and R. Paul and their colleagues, based on theoretical assumptions con-cerning 35 dimensions of critical thinking (Paul, Binker. i Weil, 1995, s. 60), developed numerous programs for children, youths and adults. Their only book which was trans-lated into Polish (Elder and Paul, 2007), intended for popularization purposes, does not fully render the specificity of a multiple aspect program of teaching fair-minded criticism, which have been propagated for several years by representatives of *"the Criti-cal Movement"*. The authors propose a twenty-five day course devoted to becoming familiar with and implementing 25 ideas connected with the intellectual and emotional development. Practical exercises focus on the development of characteristics such as:

empathy, intellectual humbleness, noticing contradictions, hypocrisy, justice and objectivity in judgements, determining precise objectives, thinking precision, focusing on specific issues, asking questions, predicting consequences, reason, non-conformity and freedom, avoiding egocentrism or servility, critical analysis of the media and political propaganda, extending knowledge, effectiveness of actions. Exercises proposed by the authors are individual.

The inclusion of practical exercise in a theoretical and methodological context is an advantage of A. Fisher's book (2006). The author focuses in particular on analysis of texts and situations significant for studying at the university level, using a varied scope of material he presents exercises developing elementary capabilities of analytical reasoning. The presentation of further strategies is followed by self-evaluation tests and vast comments pertaining to the essence, nature and improvement of critical thinking.

In the English-language literature, a lot of interesting proposals for comprehensive training programs aimed at developing critical thinking abilities can be found (Swartz, 2003; Luckey, 2003). The failure to popularize such classes in Poland is becoming a very disturbing phenomenon.

What next? – conclusions and postulates concerning the practice of constructing teaching standards, curricula and classes with students.

Exemplifications of individual problems will have their sources in the practice of pedagogical research. A closer look at daily educational practices as well as the behaviours and qualities of students in teacher training programs falsify the concept of a teacher as a critical practitioner. This makes it more important to reconstruct standards and curricula for future teachers to increase the number of classes promoting critical thinking. Changes should pertain to both the formal aspect (content, subjects, selection of texts) the methodological aspect (teaching strategies- used and proposed) as well as emotional aspects (creating an atmosphere allowing for taking a different perspective, freedom, involvement, individualism). In their implementation, it is worth taking into account the following guidelines and remarks:

– While teaching classes connected with education as well as general and professional knowledge, tasks and problems connected with ordering, organizing, analysing, evaluating and describing information should be created. Exercises including basic principles of logical and deductive thinking should not – as it is the case now – constitute a separate kind of activity not connected with other experiences.
– Stimulation of a research attitude is extremely important – one that will allow for an active search for information as well as for experimentation and verification of formulated hypotheses.
– Students should be given open-ended tasks which evoke critical thinking, e. g. by asking questions combined with an analysis of questions, paraphrasing, encouragement to inquisitiveness, reformulation of questions.
– Encouraging students to paying attention whether materials presented in texts are not too simplified or untrue, developing sensitivity to untruths, paying attention to

contexts, absurdities, contradictions and mutually exclusive oppositions. Tracing and making students aware of groundless generalizations.
– Providing educational materials which create an opportunity for a reflective approach to the presented problem from numerous perspectives (Muchacki, 2006).
– Exploring and assessing methods used for the development of knowledge in specific disciplines with students.
– Demanding that students should defend their positions by looking for appropriate arguments. Allowing students to participate in establishing the criteria and assessing the involvement as well as one's own and other people's work. Respecting constructive criticism. This is connected with the encouragement of students to comparing their own ideas with other, alternative ideas and to ensure the possibility of reflection on the teaching process.

Conclusions

The academic education of teachers may not result in shaping individuals "closed" to diversity, multidimensionality of social and cultural reality, unable to perceive the pluralism of views and interpretations of reality. Research shows, however, that as long as the number of pedagogical theories allows the teacher to make his/her choices in a conscious and critical manner, it makes future early education teachers feel lost or even indifferent (Grochowalska, 2012). Classes should allow students to become familiar with the multitude of images of the educational world, however, on the other hand, they should allow for the development of critical thinking to empower them to become distanced critics of reality, demonstrating critical and analytical abilities to observe and interpret the educational process.

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Contact:
Prof. UP dr hab. Iwona Czaja-Chudyba
Instytut Pedagogiki Przedszkolnej i Szkolnej
Uniwersytet Pedagogiczny im. KEN w Krakowie
Ul. Ingardena 4, Kraków, Polska
E-mail: iwona.czajachudyba@gmail.com

Life Satisfaction and Subjective Health Assessment in Future Teachers Compared with Current University Students of Physical Culture and Natural Science

Jana Kvintová, Martin Sigmund, Hana Hřebíčková

Abstract

The study presents the results of a survey aimed at life satisfaction and subjective health assessment in current Czech university students (n = 522; average age 21.2 ± 1.29 years). The analysis covers a comparison of future teachers and students of physical culture and natural science. The monitored variables present significant factors influencing the quality and level of university study and overall academic performance. The results of the survey indicate significant differences in the different variables in terms of gender differences and selected study specialization. The results of the study enrich the current theoretical background and are applicable in everyday work with students in the area of educational and psychological counselling in university.

Key words: well-being, health, university students, study specialization.

Introduction

The term of life satisfaction has its general basis in philosophical concepts of human be-
ing and also in psychological and anthropological images of humans (Rodná & Rodný,
2001). Life satisfaction tends to be understood as one of the dimensions of the well-
being construct. Well-being is a term often described periphrastically and with respect
to other related terms: in Anglo-Saxon terminology the most frequently related term
is life satisfaction, but also welfare, pleasure, prosperity or happiness. It is also often
related with the term of health (Kebza & Šolcová 2005). The World Health Organiza-
tion (WHO) uses a definition of health where well-being is directly specified: "Health is
a state of complete physical, mental and social well-being and not merely the absence
of disease or infirmity" (WHO, 1948, 2014).

     In contemporary scientific literature there is no congruence in defining this term.
There are several terms used in relation to life satisfaction. For example, they include
'well-being', 'subjective well-being', or 'quality of life'. There is also a degree of discrep-
ancy in translating the term by Czech scientists. Here are some examples: Lašek (2004)
translates 'subjective well-being' both as 'subjective life well-being' and 'subjective life
satisfaction'. Blatný (2001) translates the term of 'well-being' as 'mental well-being', Kebza
and Šolcová (2005) as 'personal well-being', Křivohlavý (2009) uses the shortest alterna-
tive, i. e. 'well-being'.

     The World Health Organization (WHO) defines quality of life as an individual's per-
ception of their position in life in the context of the culture and in relation to their
goals, expectations, lifestyle and interests (Kováč, 2004). In foreign scientific publica-
tions quality of life tends to be perceived as a synonym to life satisfaction, see McAuley
et al. (2006). Kebza and Šolcová (2003) refer to the studies by foreign researchers who
frequently assume that quality of life has two dimensions; subjective personal well-
being and objective personal well-being. As a result, personal well-being is often un-
derstood as a part of quality of life (Diener et al., 1999; Blatný, 2001; Blatný et al., 2005;
Hnilica, 2009; Kebza & Šolcová, 2005; Kožený, Csémy, & Tišanská, 2007, Křivohlavý, 2009).

     During the last two decades personal well-being has become one of the most stud-
ied psychological topics. Before that, psychology rather focused on the sources and
causes of personal unwell-being and on the ways of overcoming and coping with these
negative feelings (Hrdlička, Kuric, & Blatný, 2006).

     According to Carlson et al. (in Kebza & Šolcová 2003), a significant dimension of per-
sonal well-being is also wellness. In defining personal well-being the term of wellness is
sometimes used as a synonym. More often the term is defined independently as a con-
cept related to accepting certain behaviour and lifestyle encouraging optimum physical
and mental health. Such behaviour includes stress coping, healthy diet, non-smoking,
appropriate sleep, physical exercise, etc. Kebza (2005) states that physical activity has

a short-term as well as long-term effect on mental well-being; in particular it has a positive influence on self-respect, anxiety, depression, tension, and stress perception.

Recently there has been a growing interest of the professional community in the issues specified above and in the health of university students. University students represent a specific population group and the national capital and future investment of every society. In terms of development, the period of university study is characterized by achieving maturity in the somatic, mental, emotional and social areas. An individual of this age category leaves adolescence and moves to adulthood, or to be more precise, young adulthood. For these individuals, the mentioned developmental facts present both positive and negative confrontations with life reality.

It is generally assumed that the population aged between twenty and thirty years represents a group with the lowest degree of morbidity and mortality. It should be emphasised however that the results of research studies analysing risk factors influencing the university population point to a fact that the overall health condition in university students is worse than the health condition of non-studying population of the same age. Similarly, the prevalence of psychological distress is higher among university students compared with working non-studying population of the same age (Roberts, Golding, Towell, & Weinreb, 1999; Adlaf, Gliksman, Demers, & Newton-Taylor, 2001; Dyrbye, Thomas, & Shanafelt, 2006).

The factors that influence students' health are very specific and they are assumed to be closely linked with university study. The main stressogenic factors are academic overload, constant pressure to be successful and competition among classmates. In some countries these factors include financial limitations and concerns about one's own future (Lu, 1994; Omigbodum et al., 2006). Undesirable stress influences not only students' health but also their academic performance (Hamaideh, 2011). At the same time, academic distress is associated with gender influences, selected study specialization, overall duration of university study or social and adaptation influences. It is therefore important for the factors influencing successful study to be balanced and not to lead to health deterioration and decreased probability of successful completion of university study. In terms of possible academic failure, the most significant factors are lack of self-confidence, concerns about the future, emotional instability, tendency to extraversion, feelings of disillusion, rigid interpretation of study requirements and inability to promptly adapt to the changing nature of academic activities.

Successful coping with the demands of university study often requires a combination of personality factors, abilities, required degree of motivation and will together with appropriately selected style of study, rational use of time and appropriate regime. The main variable saturating possible causalities in relation to the health of university students include academic load, selected study specialization, level and length of overall distress, personality characteristics and social aspects. These factors form the context of research of this study of current university students.

The aim of the present study is to assess the degree of life satisfaction and assessment of subjective satisfaction in the area of health in current university students. The paper analyses the current state of the monitored variables in future teachers compared with university students of physical education and natural science, all in the context of gender differences and length of study.

1 Research sample

The research involved a total of 522 students of Palacký University from three different Faculties. Specifically, the students were from the Faculty of Education, Faculty of Physical Culture and Faculty of Science (term: students of natural science is used further in text) (Table 1).

In the context of our research, 'current university student' was any individual properly enrolled in full-time study whose age was appropriate to the grade studied. In terms of age, the individuals were younger adults aged 19 to 26 years. The highest number of students were in the categories of 20, 21 and 22 years (n = 420). In total these categories represented over 80% of the total sample. The average age of the whole sample was 21.2 ± 1.29 years. In terms of ethical aspects, all participants were fully informed about the purpose of the research and about a possibility to terminate their participation at any stage without giving any reason. All participants were informed about further data processing and with guaranteed anonymity. Each participant was involved in the research study on a voluntary basis and consented to data processing and/or publication.

Table 1
Basic description of research sample (n = 522)

	Number of participants	Men / Women
Faculty of Education	218	11 / 207
Faculty of Physical Culture	118	50 / 68
Faculty of Science	186	38 / 116
TOTAL	522	131 / 391

Diagnostics

To assess the current level of life satisfaction, the research study used a standardized psychodiagnostic tool – Life Satisfaction Questionnaire (LSQ) (Rodná & Rodný, 2001). The Czech version of the LSQ is based on the original German questionnaire Fragebogen zur Lebenszufriedenheit (FLZ) (Fahrenberg, Myrtek, Schumacher, & Brähler, 2000). The LSQ is designed for standardized description of inter-individual and intra-individual life satisfaction variability. The questionnaire aims at the assessment overall life satis-

faction and its individual components: health, work and employment, finance, leisure time, partnership, relationship with one's own children, one's own person, sexuality, friends and acquaintances, living.

Table 2

Life satisfaction and its components in current university students

Life satisfaction (n = 522)	Mean ± SD	Range	Standard[1] Man (14–25 yrs.)	Standard[1] Woman (14–25 yrs.)	Standard[1] Average (14–25 yrs.)
Health	34.5 ± 6.55	11–49	42.8	39.6	41.2
Work and employment	34.9 ± 5.85	17–49	36.4	35.9	36.2
Finance	31.4 ± 6.71	7–49	31.7	32.1	31.9
Leisure time	36.2 ± 8.03	7–49	37.6	35.6	36.6
Partnership	41.2 ± 6.50	15–49	38.6	40.0	39.3
One's own person	35.6 ± 6.20	7–49	39.8	37.9	38.9
Sexuality	36.4 ± 7.33	12–49	36.2	35.8	36.0
Friends and acquaintances	37.3 ± 5.13	17–49	38.2	37.0	37.6
Living	36.9 ± 6.80	7–49	35.9	35.9	35.9
TOTAL	248.4 ± 30.73	155–354	262.2	254.0	258.1

Legend: N – number of probands; SD – standard deviation; Standard[1] – source (Rodná & Rodný, 2001)

The overall level of life satisfaction and its components in the context of gender differences shows a higher degree of satisfaction in men than women. However, the observed difference is not significant (Table 3). A total of four statistically significant gender-based differences were observed across the different items. University male students feel healthier compared with female students ($p = 0.002$; $d = 0.32$). At the same time, men reported a significantly higher level of satisfaction in the Finance item ($p = 0.021$; $d = 0.24$) and in the One's own person item ($p = 0.027$; $d = 0.23$). On the other hand, university female students reported a higher level of satisfaction in the Partnership item ($p = 0.043$; $d = 0.25$). Other differences in the life satisfaction components with respect to gender differences were not significant.

Table 3

Gender, life satisfaction and its components in current university students

Life satisfaction	Mean ± SD (Man = 131)	Range	Mean ± SD (Woman = 391)	Range	p	d
Health	36.1 ± 6.35	11–49	34.0 ± 6.54	15–49	0.002	0.32
Work and employment	35.0 ± 6.14	17–49	34.9 ± 5.76	18–49	NS	
Finance	32.6 ± 6.42	7–49	31.0 ± 6.77	7–45	0.021	0.24
Leisure time	36.5 ± 8.44	12–49	36.1 ± 7.90	7–49	NS	
Partnership	39.8 ± 7.57	15–49	41.5 ± 6.14	20–49	0.043	0.25
One's own person	36.6 ± 6.80	7–49	35.2 ± 5.95	15–47	0.027	0.23
Sexuality	35.6 ± 7.65	13–49	36.6 ± 7.20	12–49	NS	
Friends and acquaintances	37.3 ± 5.33	17–49	37.3 ± 5.07	18–49	NS	
Living	37.1 ± 6.97	16–49	36.8 ± 6.75	7–49	NS	
TOTAL	252.3 ± 33.97	155–354	247.1 ± 29.49	158–316	NS	

Legend: SD – standard deviation; *p* – statistical significance; NS – not significant.

Table 4 presents the results of future teachers in comparison with the students of physical culture and natural sciences. The value of overall life satisfaction in the students from the Faculty of Education was higher compared with the students from the Faculty of Science. The difference however is statistically insignificant. A comparison of overall satisfaction of future teachers and the students of physical culture shows significantly lower values ($p = 0.001$; $d = 0.41$). Similarly, a comparison of the students of physical culture and the students of natural science shows significant differences ($p = 0.001$; $d = 0.51$).

A comparison of the individual components indicates further significant differences with respect to study specialization (Table 4). The Health item showed the lowest value in future teachers. On the contrary, the highest value was achieved by the students of physical culture, who reported significantly higher values compared with future teachers ($p = 0.001$; $d = 0.53$) and the students of natural science ($p = 0.005$; $d = 0.38$). A similar trend was observed in the Work item, where the highest values were reached by the students of physical culture; these values were significantly higher compared with future teachers ($p = 0.011$; $d = 0.33$) and the students of natural science ($p = 0.001$; $d = 0.55$). Also in the Finance category the students of physical culture reported the highest values, again significantly higher compared with future teachers ($p = 0.028$; $d = 0.34$) and the students of natural science ($p = 0.001$; $d = 0.30$). In the Leisure time category the highest values were observed in the students of physical culture. Compared with future teachers the results are insignificant but compared with the students of natural

science the values are significant ($p = 0.001$; $d = 0.42$). Mutually significant differences were observed in the One's own person item. The highest values of satisfaction with One's own person were reported by the students of physical culture. Compared with future teachers the difference was significant ($p = 0.001$; $d = 0.50$); the same applies to a comparison with the students of natural science ($p = 0.001$; $d = 0.50$). The students of physical culture achieved a significantly higher level of satisfaction in the Sexuality item compared with the students of natural science ($p = 0.033$; $d = 0.32$). The difference in the Sexuality item in future teachers compared with the students of physical culture is significantly lower. In the categories of Partnership, Friends and acquaintances and Living no mutually significant differences were observed with respect to study specialization (Table 4).

Table 4
Life satisfaction and its components in future teachers in comparison with university students of physical culture and natural science

Life satisfaction components	Mean ± SD	Range	H	Comp.	*p*	*d*
Health						
E	33.3 ± 6.87	11–49	22.27542 p = 0.0001	E–P	0.001	0.53
P	36.8 ± 6.17	19–49		P–N	0.005	0.38
N	34.5 ± 6.04	21–49		E–N	NS	
Work						
E	34.9 ± 5.68	18–49	22.29258 p = 0.0001	E–P	0.011	0.33
P	36.8 ± 5.92	19–49		P–N	0.001	0.55
N	33.6 ± 5.70	17–46		E–N	NS	
Finance						
E	30.9 ± 6.33	7–45	7.339834 p = 0.0255	E–P	0.028	0.34
P	33.1 ± 6.67	11–49		P–N	0.001	0.30
N	31.0 ± 7.03	7–46		E–N	NS	
Leisure time						
E	36.7 ± 7.04	12–49	14.80247 p = 0.0006	E–P	NS	
P	38.1 ± 8.05	15–49		P–N	0.001	0.42
N	34.5 ± 8.76	7–49		E–N	NS	
Partnership						
E	41.4 ± 6.11	20–49	0.2387107 p = 0.8875	E–P	NS	
P	40.7 ± 7.81	15–49		P–N	NS	
N	41.1 ± 6.06	21–49		E–N	NS	

Life satisfaction components	Mean ± SD	Range	H	Comp.	p	d
One's own person						
E	34.8 ± 6.16	7–46	25.83557 p = 0.0001	E–P	0.001	0.50
P	37.9 ± 6.14	15–48		P–N	0.001	0.50
N	34.9 ± 5.92	15–49		E–N	NS	
Sexuality						
E	36.4 ± 7.30	12–49	6.652220 p = 0.0359	E–P	NS	
P	37.7 ± 7.01	16–49		P–N	0.033	0.32
N	35.4 ± 7.44	13–49		E–N	NS	
Friends and acquaintances						
E	37.6 ± 4.92	23–49	2.400777 p = 0.3011	E–P	NS	
P	37.9 ± 4.72	19–49		P–N	NS	
N	36.7 ± 5.57	17–46		E–N	NS	
Living						
E	37.6 ± 6.16	21–49	4.425473 p = 0.1094	E–P	NS	
P	37.1 ± 7.26	17–49		P–N	NS	
N	35.9 ± 7.11	7–49		E–N	NS	
TOTAL						
E	247.3 ± 27.36	173–316	20.44530 p = 0.0001	E–P	0.001	0.41
P	259.2 ± 31.99	188–354		P–N	0.001	0.51
N	243.0 ± 32.04	155–316		E–N	NS	

Legend: E – Faculty of Education; P – Faculty of Physical Culture; N – Faculty of Science; SD – standard deviation; H – Kruskal-Wallis test score; Comp. – comparison; *p* – statistical significance; NS – not significant.

The results of subjective assessment of health and its components in current university students are presented in Table 5. Significant differences with respect to study specializations were observed in almost all Health items. Only in the assessment of Pain frequency no significant differences were identified among the students with respect to study specialization.

Future teachers (students from the Faculty of Education) reported significantly lower values of satisfaction with one's own physical health compared with the students of physical culture ($p = 0.0001$; $d = 0.47$). In this item the students from the Faculty of Education reported the lowest values, also compared with the students of natural science.

Similarly, in the item of satisfaction with one's own mental condition future teachers scored the lowest values of all monitored fields of study. On the contrary, the students of physical culture reported significantly highest values compared with the students from the Faculty of Education and the Faculty of Science ($p = 0.04$; $p = 0.02$). These differences can be considered highly significant in terms of material significance ($d = 0.95$; $d = 0.81$).

In the item of physical condition the highest scores were achieved by the students of physical culture. Compared with future teachers and the students of natural science these are significant differences (p =.001; d = 0.28).

The highest values of subjective assessment of mental performance were achieved by the students of physical culture. The difference was significant in comparison with the students of natural science (p = 0.0158; d = 0.27).

The lowest satisfaction with organism immunity was observed in future teachers. The difference was significant in comparison with the students of physical culture.

The highest degree of satisfaction with illness frequency was reported by the students of natural science and by the students from the Faculty of Education. On the contrary, the students of physical culture scored the lowest values. The difference is significant compared with the students of natural science (p = 0.0334; d = 0.27).

Table 5

Comparison of various health components in future teachers and university students of physical culture and natural science

Health components	Mean ± SD	Range	H	Comp.	p	d
Physical health						
E	4.96 ± 1.41	1–7	19.59116 p = 0.0001	E–P	0.0001	0.47
P	5.58 ± 1.19	1–7		P–N	0.0028	0.38
N	5.10 ± 1.32	1–7		E–N	NS	
Mental condition						
E	4.20 ± 1.34	1–7	8.911156 p = 0.0116	E–P	0.0353	0.95
P	5.42 ± 1.20	1–7		P–N	0.0239	0.81
N	4.39 ± 1.31	1–7		E–N	NS	
Physical condition						
E	4.98 ± 1.54	1–7	55.35764 p = 0.0001	E–P	0.0001	0.28
P	5.37 ± 1.13	2–7		P–N	0.0001	0.28
N	4.99 ± 1.45	1–7		E–N	NS	
Mental performance						
E	5.05 ± 1.17	1–7	8.847190 p = 0.0120	E–P	NS	
P	5.31 ± 1.19	1–7		P–N	0.0158	0.27
N	4.98 ± 1.21	1–7		E–N	NS	
Immunity						
E	4.95 ± 1.67	1–7	9.470024 p = 0.0088	E–P	0.0493	0.28
P	5.40 ± 1.53	1–7		P–N	NS	
N	5.44 ± 1.36	1–7		E–N	0.0278	0.32

Health components	Mean ± SD	Range	H	Comp.	p	d
Pain frequency						
E	4.42 ± 1.66	1–7	5.036484 p = 0.0806	E–P	NS	
P	4.76 ± 1.83	1–7		P–N	NS	
N	4.47 ± 1.64	1–7		E–N	NS	
Illness frequency						
E	4.73 ± 1.71	1–7	6.890704 p = 0.0319	E–P	NS	
P	4.50 ± 1.80	1–7		P–N	NS	
N	5.17 ± 1.59	1–7		E–N	0.0334	0.27

Legend: E – Faculty of Education; P – Faculty of Physical Culture; N – Faculty of Science; SD – standard deviation; H – Kruskal-Wallis test score; Comp. – comparison; p – statistical significance; NS – not significant.

4 Discussion

Psychosocial research highlights the continuous, topical and serious nature of the issue of concentration on the life of university students, the main focus being their social, economic and study conditions, particularly with respect to the changing offer of educational services, changing concept of university policy and, last but not least, social changes (Menclová & Baštová, 2005). A certain load can be presented by e. g. a change in the professional focus, where a study course has to be changed to reflect the labour market (Wagnerová, Hoskovcová, & Šírová, 2008). In 1980s in the Czech Republic, little emphasis was put on material profit ensuing from professional focus in terms of motivation factors. According to Grác (in Kohoutek, 1998) motivation was typical for the preference of intrinsic motives (79%) as opposed to extrinsic motives. This is also confirmed by Freiová (in Kohoutek, 1998), who described the main motivation elements, i. e. the need for personality refinement, application of individual abilities and interests and only third was the need for obtaining qualification. Currently the main students' motivation factors for entering a university are relatively clearly structured (Linhartová, 2008; Menclová & Baštová, 2005). These factors primarily include achieving a certain level of education in order to start a successful professional career and a well-paid job. Complementary features of these factors are obtaining a university degree and a high status in the society. The most frequent problems during the course of study include lack of finance, combining occasional employment and study, difficult commuting and passing exams and obtaining credit.

In the Czech environment, there are presently several studies focussing on the issue of current university students and their study. The research dealing with the social portrait of a university student implies that a typical student enrolled in a state university is unmarried, childless, average age of 24 years and lives in a university residence hall

(Menclová & Baštová, 2005). In her study aimed at university aspects, Linhartová (2008) describes a current university student as more open, more critical to very critical, with considerable self-confidence, using assertive behaviour, with good language abilities and well knowledgeable about information technologies. On the other hand, the personality of such student is characterized by lower independence and responsibility. There are clear differences with respect to study specialization. Plháková and Reiterová (2010) examined the differences in personality and social skills in university students of exact sciences and humanities. The authors conclude that students of psychology are more open to new experience and less neurotic compared with students of mathematics and informatics. Student of psychology scored significantly higher values in the scales of emotional sensitivity, social control and overall scales of emotional and social skills. On the contrary, students of mathematics and informatics achieved significantly higher scores in the scale of social perceptiveness. At the same time the authors observed significant gender differences; women scored higher values than men especially in sensitivity and emotional expressiveness.

The issue of quality of life, life satisfaction and personal well-being is also addressed by a research study aimed at the relationship between personality and personal well-being. Hřebíčková, Blatný and Jelínek (2010) point to a relationship between university students' personality traits of the five-factor personality model (neuroticism, extraversion, openness to experience, agreeableness, conscientiousness) and personal well-being. The authors revealed that the prediction of personal well-being in university students is codetermined by four personality traits (neuroticism, conscientiousness, extraversion, agreeableness). As far as gender differences are concerned, the prediction of personal well-being in female university students is codetermined by the above specified four personality traits in the order given, while in male university students the agreeableness predictor is missing.

The factors of personal well-being and life satisfaction are influenced both by personality characteristics and the selection of study specialization. In our sample of university students of three different specializations we observed certain differences in terms of study specialization. In the study, the primary focus was on the students of the Faculty of Education (future teachers) in comparison with the students of physical education and natural science. In terms of overall life satisfaction the students of the Faculty of Education reported higher values compared with the students of natural science but lower than the students of physical education. In general, the students of physical culture are significantly more satisfied compared with the other two specializations. This trend is maintained by the students of physical culture in most items of life satisfaction and also with respect to health. The values scored by future teachers and the students of natural science alternate. The observed higher values in the students of physical culture can be attributed to both personality characteristics and study specialization. This group of students is represented by current and former active athletes

and their study takes both theoretical and practical form. These facts could have an effect on the findings.

On the contrary, the students of natural science whose study is purely theoretical scored the lowest values in overall life satisfaction, which corresponds with the selected components. A trend similar to overall life satisfaction and individual components in current university students is observed also in subjective health assessment. Also in this category the highest scores were achieved by the students of physical culture. On the contrary, the lowest values of satisfaction with health were observed in the students of the Faculty of Education. Compared with the students of physical education these values were significant. Future teachers reported the lowest satisfaction in the area of Physical health, Mental condition and Physical condition and Pain frequency. It is possible that the results represent a certain profile in the monitored parameters in the students from the Faculty of Education. At the same time, the observed differences between future teachers and the students of physical culture and natural science are to a certain extent determined by gender saturation as a majority of students at the Faculty of Education are women.

The degree of life satisfaction can also be associated with academic adaptation and the overall demanding nature of the study. It turns out that particularly fresh university students have considerable problems with adaptation to university demands, resulting in a certain degree of emotional instability and consequent academic underachievement in the form of unfinished assignments, courses, etc. This procrastination appears to be a relatively frequent phenomenon in the population of university students (Gabrhelík, Vacek, & Miovský, 2006). Delayed work or completion of assignments leads to stressogenic situations that have an overall effect on the work of a student. In the process of adaptation the first year of study seems the most strenuous as all demands, difficulties and problems emerge during a short period of time. There are two principal problems – the previously mentioned need for orientation in a new environment, understanding the demands and reacting to them. The other problem is the coexistence of students in a residence hall, inclusion among other students, development of a new social network and acceptance of the role of a university student. These aspects are confirmed by Hicks and Heastie (2008) who add that students living in a residence hall tend to be more endangered by undesirable stress and adaptation and mental problems compared with students who live elsewhere. Students whose place of residence does not change do not experience some of these problems and their adaptation to university life is smoother. Some studies point to a fact that better social adaptation to a university environment is also influenced by material aspects, the so-called 'higher material well-being' (Batrymbetova, 2008).

Taking into consideration the above mentioned findings in the context of university population, the aim of our research study was to extend the reservoir of existing knowledge. An important motivation aspect of the present survey was an effort to detect

and describe those variables that can have an influence on the overall quality of life and health of current university students in a way that no complications occur or even blocking of adequate academic performance during university study. These findings will extend the knowledge about this specific population group and at the same time can be used in the delivery of educational and psychological counselling in universities.

Limitations of the study. The overall number of research participants is relatively extensive, at the same time there is a gender disproportion, particularly the higher number of women from the Faculty of Education. With respect to the transversal design of the study a cohort effect is also possible. These facts are considered in the context of the present findings.

Conclusions

In the context the present findings about current university students we conclude that:
- Current university students report lower values of overall life satisfaction than reference values of a population of the same age,
- University male students report insignificantly higher values of overall life satisfaction than university female students,
- University students report lower values of life satisfaction in the Health item than reference values of a population of the same age,
- University male students report significantly higher values of life satisfaction in the Health item than university female students.

In the context the present findings about current university students of education (future teachers) and in comparison with the students of physical culture and science we conclude that:
- The students of the Faculty of Education reported a higher level of overall life satisfaction than the students of natural science but a significantly lower level compared with the students of physical culture,
- The students of the Faculty of Education achieved the highest scores in the following components of life satisfaction: Partnership and Living,
- The students of the Faculty of Education achieved the lowest scores in the following components of life satisfaction: Health, Finance and One's own person,
- The highest values were not scored by the students of the Faculty of Education in any of the items of subjective assessment of health,
- In the subjective assessment of health the students of the Faculty of Education achieved the lowest values in the following items: Physical health, Mental condition, Physical condition and Pain frequency.

The present findings extend the knowledge about current university students. The results can be practically applied in everyday delivery of educational and psychological counselling in universities.

Acknowledgement

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Contact:
PhDr. Jana Kvintová, Ph.D.
Department of Psychology
Faculty of Education, Palacký University
Žižkovo nám. 5,
771 40 Olomouc
E-mail: jana.kvintova@upol.cz

Martin Sigmund, Ph.D.
Mgr. Hana Hřebíčková
Faculty of Physical Culture, Palacký University
Třída Míru 115
771 11 Olomouc
E-mail: martin.sigmund@upol.cz
E-mail: hana.hrebickova@upol.cz

Student Teachers Competence in Curriculum Development – A Case in Czech Universities

LIU Li, Jana Poláchová Vašťatková

Abstract

The purpose of this study is to explore what student teachers in general, English as a foreign language (EFL) student teachers in particular, competence in curriculum development is like in the current Czech context. Using the questionnaire survey, the authors investigated student teachers' knowledge and skills about using curriculum materials and implementation of a lesson. Findings indicate that student teachers to a large extent have positive attitudes to specific needs of learning English, followed by different resources, language teachers' different roles, and contexts during uses of curriculum materials. With regard to the implementation of a lesson, student teachers are more confident in using a lesson plan followed by the classroom management than in lesson planning followed by evaluation. The results also indicate that student teachers' pedagogical content knowledge and curriculum knowledge need to be further supported.

Key words: curriculum development, curriculum materials, curriculum implementation, teacher competence, student teacher, Foreign language teaching

Introduction

Research focusing on Czech novice teachers has pointed out that they experience problems during a period of novice-teacher professional adaption, such as lack of pedagogical skills, difficulties with the relationship with pupils and their parents and other teachers, etc. (Černochová, 2009). Some novice teachers do not perceive practicing teachers as flexible users of curriculum materials, viewing curriculum design as an inauthentic teaching task (Beyer & Davis, 2012). The growth in the pedagogical autonomy of Czech schools has brought increased demands on teachers' professionalism who has become the creators of school curriculum (Seberová, 2010). Each individual school has to develop its own School Education Programme based on the Framework Educational Programme for Basic Education (FEP BE). For a successful implementation, the organizational and practical considerations associated with curriculum development need to be taken into consideration. Nevertheless for some educational professionals, curricular development may be too hefty a burden. Lack of teaching aids and further necessary training to take on this new responsibility can often be seen (Green, 2008). Even though student teachers are often faced with situations in the classroom which cannot be planned or foreseen, too little assistance is provided for pupils to build up their professional knowledge and competence required for successful teaching practice (Mehlmauer-Larcher, 2012, p. 175), such as pedagogical content knowledge (Shulman, 1987), pedagogical design capacity (Brown, 2002), etc. The purpose of this study is to explore what student teachers[1] in general, EFL student teachers in particular, competence in curriculum development is like in the context of the Czech Republic.

1 Teacher competence in curriculum development

The concept of competence[2] dominated the management strategy literature of the 1990s, which emphasized "core competence" as a key organizational resource that could be exploited to gain competitive advantage (e.g. Campbell & Sommers Luchs, 1997). EU priorities for improving Teacher Quality and Teacher Education, as defined in the Conclusions of the Education Councils of November 2007, 2008 and 2009, recall the need to improve teacher competencies, as well as to promote professional values and attitudes, mentioning as examples the following teacher requirements (Council of the European Union, 2007, 2008, 2009):

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[1] In this study, the prospective teachers are referred to as "student teachers"; the learners in the school classroom as "pupils".

[2] According to Delamare-Le Deist and Winterton's (2005) research, "competence" generally refers to functional areas and "competency" to behavioural areas but usage is inconsistent. Besides, teacher capacities and teacher competences are used sometimes as synonyms (Francesca, 2011).

- a specialist knowledge of subjects
- pedagogical skills, comprising the following: teach heterogeneous classes; use ICT; teach transversal competences; create safe attractive schools
- cultures/ attitudes of reflective practice, research, innovation, collaboration, autonomous learning.

International scholarly consensus seems to converge on the concept of competences as basic requirements for teaching reflects increasing academic and policy interest (Francesca, 2011), which are articulated in knowledge, craft skills and dispositions (Feiman-Nemser, 2001), focusing the attention on the social responsibilities of teachers. Dispositions include beliefs, attitudes, values and commitment, focused on action. Generally, the term "competence" is increasingly used in a comprehensive way, as a dynamic dimension which goes beyond the original scientific connotations of containing and absorbing quantities. It focuses on the potentialities of continuous development and achievement, associated with aims and objectives in a lifelong learning perspective. The competence, as it is repeatedly suggested in relevant literature, should be viewed as a holistic concept – the dynamic combination of knowledge, understanding and skills (Francesca, 2011). Therefore, this study uses the term competence to highlight the dynamic and conative perspectives. It represents the knowledge and skills acquired through college/university based teacher programmes (Moreno, 2005), and indicates what student teachers know and can do (Moreno, 2005, p. 146) rather than "what teachers have".

The curriculum development is a generic concept which includes policy, design, implementation, technology, supervision, and evaluation (Pinar, Reynolds, & Slattery, 1995). Pinar et al. (1995) borrowing viewpoint form Decker Walker (1979), say that: the one term "curriculum development" covers at least three distinguishable enterprises: *curriculum policymaking*, the establishment of limits, criteria, guidelines, and the like with curricula must comply, without developing actual plans and material for use by students and teachers; *generic curriculum development*, the preparation of curriculum plans and material for use potentially by any students or teachers of a given description; and *site-specific curriculum development*, the many measures taken in a particular school or district to bring about curriculum change there. (Decker Walker, 1979, p. 269, as cited in Pinar et al., 1995. p. 665)

It is clear that three areas on curriculum development is identified by Walker (1979): curriculum policy, curriculum planning and design (generic curriculum development), and curriculum implementation (site specific curriculum development).

In the research on curriculum implementation, Snyder, Bolin, and Zumwalt (1992) list three major approaches: (a) *the fidelity approach* which confines curriculum to "a course of study, a textbook series, a guide [and] a set of teacher plans", (b) *the mutual-*

adaptation approach which regards curriculum implementation as a "process whereby adjustments in a curriculum are made by curriculum developers and those who use it in the school or classroom context" (Snyder et al., 1992, p. 410), and (c) *the enactment approach* which sets curriculum as a process "jointly created and jointly and individually experienced by pupils and teacher" (ibid., p. 428). According to Shawer's (2003) point of view, the mutual-adaptation approach and the enactment approach are considered two forms of classroom-level curriculum development. The adaptation approach leads teachers to become curriculum-developers who use various sources in addition to curriculum materials through curriculum adjustments. Teachers adapt existing materials and topics, add new topics, leave out irrelevant elements, use flexible lesson plans, respond to student differences and use various teaching techniques. Through this interaction, teachers turn curriculum from the institutional into the pedagogical level (experienced/enacted curriculum) (Doyle, 1992). Curriculum experts translate skills, knowledge, concepts and values into curriculum materials, whilst, teachers develop the second version by using curriculum materials (Ben-Peretz, 1990; Remillard, 1999). The enactment approach which leads teacher's role ranging from using, adapting and supplementing external curriculum to curriculum-making represents another form of classroom-level curriculum development (Shawer, 2003). The teachers have become curriculum-makers who assess pupils' needs to derive curriculum themes, use strategies of curriculum-planning, curriculum-design, material-writing and curriculum-free topics. In addition, they improvise and develop and use their pedagogic techniques.

The curriculum development as a process may occur in various areas of the curriculum, ranging from national and regional levels to schools and classrooms. At the micro level, teachers are involved in the process of curriculum development allowing individual pupils' needs to be met and promoting continuous improvement in practice, function as "user-developers" (Connelly, 1972) and "grass-root developers" (Ben-Peretz, 1980), etc. rather than just complying with imposed standards (Darling-Hammond et al., 2005). As Kirk and Macdonald (2001) claim, *"teachers' authoritative voice is rooted in the local context of implementation …"* (p. 565) which means that teachers' contributions are particularly important in respect of the local context, namely, the classroom or school.

1.1 Framework of student teachers competence in curriculum development

Based on the literature review of the existing knowledge base, which means reviewing the relevant studies about curriculum development, teacher's role in curriculum development and practicing teacher competences/knowledge, a framework of understanding student teacher competence in curriculum development was identified in this study (See Figure 1).

Figure 1

Framework of Student Teacher Competence in Curriculum Development
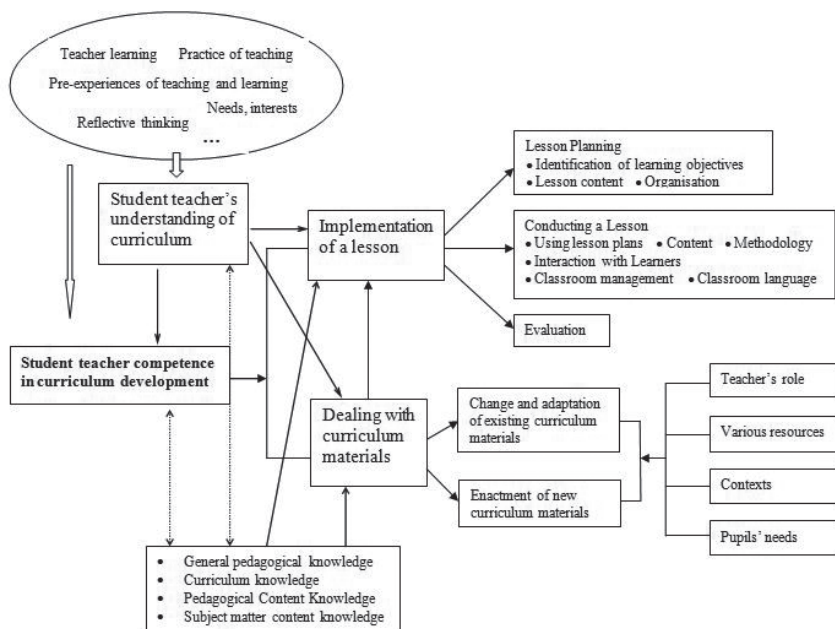
The scope and nature of teacher involvement with curriculum development varies from one curriculum area to the next (Carl, 2005). In this study, ***student teachers competence in curriculum development*** represents their knowledge and skills which acquired through university based teacher programmes about use of curriculum materials to implement a curriculum. As it shown in figure 1, student teacher competence in curriculum development in this framework is a construct which includes student teacher's competence to deal with curriculum materials as well as his/her competence to implement a curriculum during the process of teaching. In other words, this competence as a series of capabilities is expressed during the practice. In fact, teachers' use of curriculum materials and implementation of a curriculum are interactive activities in the process of their daily practice. The approaches of teachers to implement a curriculum depend on how they use curriculum materials (Shawer, 2010). Curriculum materials include lesson plans, teacher guides, textbooks, worksheets, etc. The use of curriculum materials involves the practices including the reduction, addition or adaptation of existing materials and enactment of new materials which based on the specific pupils' needs, contextual circumstances, and local goals and standards (Brown, 2009) as well

as student teachers' perception of various resources and teacher's role. Regarding implementation of a curriculum is a continuous activity which includes lesson planning, conducting a lesson, and evaluation. In addition, student teachers' understanding of curriculum may impact his/her comprehension of the curriculum intent (aims, goals and learning objectives), content, teaching strategies and instructional assessment (Cheung &Wong, 2002). That is to say, it influences the process of his/her use of curriculum materials and implementation of a curriculum. Moreover, student teacher competence in curriculum development is not a static, but rather a continuous and changing formation, integrating general pedagogical knowledge, pedagogical content knowledge, subject knowledge and curriculum knowledge, in Shulman's (1987) term. It evolves over time and across contexts along the teacher professional continue (Feiman-Nemser, 2001).

2 Research design and findings

This study aims to explore what Czech student teachers competence in curriculum development is like. To be more concrete, it can be described into two questions: a) what knowledge and skills do student teachers have about uses of curriculum materials, and b) what knowledge and skills do student teachers have about implementation of a lesson?

The research sample consisted of sixty one EFL student teachers, 11 males and 50 females, who were in the second year of two-year follow-up master's study programmes for preservice English teacher preparation at Palacky University in Olomouc, Masaryk University in Brno and Charles University. The questionnaire survey was conducted during the winter semester of academic year 2013/2014, after student teachers finished their one-month teaching practice at primary and secondary schools. Almost all the EFL student teachers at English department at the three universities participated in the survey; however the survey was on a voluntary basis. 18.0% of the student teachers were male while female student teachers were 82.0%, with the average age was 25 years old, five of them were more than thirty.

The survey instrument used for this study was developed based on established procedures in literature, especially inspired by the European Portfolio for Student Teachers of Languages- A reflection tool for language teacher education (Council of Europe, 2007). Actually, it could be seen as an adapted version of the EPOSTL. The questionnaire consisted of seven sections with 73-item. Section one contained demographic data. Section two concerned student teachers' understanding of curriculum. Sections three to six concerned student teachers competence towards various resources, contexts, pupils' needs and implementation of a lesson. Section seven was about student teacher's self-reflection of language teacher's role. A 5-point Likert scale was introduced in the main

body of questionnaire. Responses on the items ranged from: "1 = strongly disagree", "2 = disagree", "3 = neutral", "4 = agree" and "5 = strongly agree".

A panel of experts from curriculum and pedagogy and subject matter reviewed the questionnaire to determine its content and face validity. Moreover, one EFL teacher and one EFL student teacher were selected to conduct the field test in order to help clarify items. After then, a draft instrument was developed for the pilot test. Cronbach's alpha was applied to the data from the pilot study to establish a coefficient of internal consistency. The internal consistency reliability coefficient for the sections 2, 3, 4, 5, 6 and 7 was 0.70, 0.89, 0.87, 0.75, 0.91 and 0.88.

2.1 What knowledge and skills do student teachers have about uses of curriculum materials?

Curriculum materials are intimately connected to teachers' daily work, playing a vital role in how new ideas about teaching and learning find life or fail in classrooms. As discussed above, student teachers' uses of curriculum materials will be impacted by various resources, pupils' needs, contexts (including external requirements/ standards) and language teacher's role, therefore, this question is analyzed by synthesis of the results of these dimensions, as follows.

Survey results indicated that half of the respondents had positive position on all the items related to the resources in language teaching practice. 93.4% of the respondents agreed or strongly agreed with the item that represented the knowledge and skills of making use of ideas and materials included in teachers' handbooks and resource books. Over 88% agreed or strongly agreed with items which reflected the knowledge and skills of selecting texts and language activities from course books and designing learning materials and activities based on particular pupils. Regarding other items related to specific pupils' needs, interests and language level, 73.8% agreed or strongly agreed with that they could identify a range of course books /materials, however, 42.6% were neutral or disagreed with that they could recommend appropriate books to particular pupils. Moreover, over 78% agreed or strongly agreed with items which represented the knowledge and skills of using ICT and selecting materials to promote pupils' language skills of listening, reading and speaking. The results also indicated that the respondents were more competent in selecting materials to stimulate speaking activities.

Student teachers' responses to the statements towards the contexts are shown in table 1 below. Over 65% of the respondents agreed or strongly agreed with items 23, 24 and 25, which reflected that they could teach language within social and cultural contexts as well as create a supportive atmosphere to stimulate pupils' speaking. 55.7% agreed or strongly agreed with item 22 which represented their knowledge and skills of adapting teaching according to "the recognition of the organisational constraints and resource limitations" of school, whilst 6.6% disagreed and 37.7% were neutral about it.

Although a total of 54.2% indicated that they understood "the requirements set in the FEP BE" (item 20), only 27.9% indicated that they could design language courses around the requirements set in the FEP BE (item 21), more than 55% were neutral about it.

Table 1
Student Teachers and Context

Questionnaire Section IV Towards the Contexts	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N = 61 M	SD
20. I can understand the requirements set in the FEP BE (Framework Educational Programme for Basic Education).	6.6	47.6	31.1	13.1	1.6	3.44	0.87
21. I can design language courses around the requirements of the FEP BE.		27.9	*55.7*	*13.1*	*3.3*	3.08	0.74
22. I can adapt my teaching according to the recognition of the organisational constraints and resource limitations existent at my school.	3.3	52.4	37.7	6.6		3.52	0.67
23. I can relate what I teach to current events in local and international contexts.	19.7	49.2	22.9	8.2		3.80	0.86
24. I can relate the language I am teaching to the culture of those who speak it.	11.5	60.6	21.3	6.6		3.77	0.74
25. I can create a supportive atmosphere that invites learners to take part in speaking activities.	37.7	34.4	24.6	3.3		4.07	0.87

Note: Bold italics indicate that the percentages of neutral and disagreement were together over 50%.

As for student teachers' responses to the statements towards specific needs of learning English, an overwhelming opinion that the student teachers "understand the personal, intellectual and cultural value of learning English" becomes apparent. As for dealing with different motivations and pupils' affective needs in English teaching and learning, over 75% of the respondents agreed or strongly agreed with the statements. Whilst, 64% agreed with that they could think about pupils' cognitive needs.

Language teachers have a number of roles to play. Besides teaching subjects, they may need to promote the value of language learning to pupils (Newby et al., 2007). Altogether 80.3% of the student teachers reported that they could promote the value and benefits of English learning to pupils. 44.3% respondents indicated that they could use the theories to guide teaching, and 37.7% indicated that they could identify specific pedagogical/ didactic issues related to the pupils of teaching in the form of action research.

In accordance with the analysis above, it seems that most student teachers have positive attitudes about taking into account specific needs of learning English, differ-

ent resources, language teachers' different roles, and contexts during uses of curriculum materials, such as, pupils' language level, motivations and cognitive and affective needs, values of learning English, and social and cultural teaching contexts, etc. Previous research indicates that some teachers make productive changes to curriculum materials that support and enhance the intent of the materials while other teachers' selection and enactment of materials can and do vary in ways that can limit their efficacy (McNeill & Pimentel, 2010), even to fit their classroom contexts, may diverge from developers' intentions for materials (McNeill, 2009). In fact, teachers' uses of curriculum materials indicate their ability to mobilize personal resources (i. e., knowledge, belief, identities and orientations) as well as resources embedded in the materials themselves to make pedagogical decisions that accomplish particular instructional goals in light of affordances and constraints of their professional contexts (Brown, 2002). But in this study, only slightly over than 50% of student teachers indicated that they could adapt teaching based specific contextual constraints, and less than 30% indicated that they could design language courses around the requirements set in the FEP BE. As for other statements related to the use of pedagogical knowledge, more than 30% were neutral. Even for the understanding of the requirements set in the FEP BE, less than 55% of student teachers indicated that they could understand.
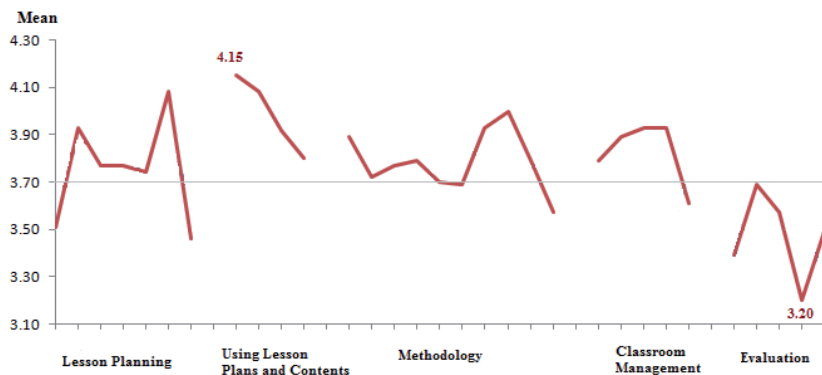
2.2 What knowledge and skills do student teachers have about implementation of a lesson?

Implementation of a lesson is a continuous activity. For the teacher the most important is to know why he/she makes a decision on which material to bring into the classroom and which activities to choose (Newby et al., 2007, p. 33). The decision is dependent on curriculum requirements and on specific groups of pupils. Teachers need to know how to transform aspects of the curriculum into transparent aims and objectives which can be understood by the pupils as well as need to take into account individuals' characterics and their prior learning to sequence activities in a coherent yet flexible way in class. Besides, in primary and secondary classroom, teachers are faced with issues that render the control of classroom challenging every day. Within the context of foreign language teaching and learning, it would be an error to over-generalize foreign language teachers' challenges with classroom management in an effort to introduce possible solutions without first considering the uniqueness of this particular teaching and learning environment (Evans, 2012). As indicated by previous research (Borg, 2006), one of the distinctive characteristics of language teaching and learning is the teaching methodology which focuses on how teachers can deal with the four main skills of speaking, writing, listening and reading and support aspects of language learning, such as grammar, vocabulary, pronunciation and written and oral communication. Furthermore, evaluation is one of core tasks of teachers by its very nature. Only if teachers

are able precisely to diagnose the pupils' learning process and adjust their teaching methods to the results of the assessments with a specific effort to consider the pupils' heterogeneity, instruction leads to higher student achievement. Figure 2 is a representation of the responses to these issues. Results showed that means for most statements were above 3.7 which indicated that most of respondents were competent in that. To be more concrete, respondents' reactions are discussed respectively as follows.

Figure 2
Student Teachers' Competence in Implementation of a Lesson

The results in table 2 below are on student teachers' knowledge and skills about lesson planning. The first three items are about identification of learning objectives, the last are about planning and selecting activities and content. Results showed that that over 60% of them indicated competencies in planning activities, especially to "link grammar and vocabulary with communication" (the agreement of item 36 was 88.5%), then to emphasise the interdependence of the four language skills (item 34, 64%) and of "language and culture" (item 35, 62.3%). As for the item 37, "I can plan to teach elements of other subjects using English (cross- curricular teaching, etc.)", less than 50% (strongly) agreed with it. With regard to other items, 82% agreed or strongly agreed with that they could "plan specific learning objectives for individual lessons and/or for a period of teaching" (item 32), 67.2% agreed or strongly agreed with that they could "structure lesson plans and/or plan for periods of teaching in a coherent and varied sequence of content" (item 33), whilst slightly over 50% (strongly) agreed with that they could "set learning aims and objectives suited to pupils' needs and interests according to curriculum requirements" (item 31). Furthermore, over one third of the student teachers were neutral about three items (31, 35 and 37), in which one is about student teachers'

understanding of curriculum requirements and specific pupils, the other two are about the characteristics of teaching language, namely and teaching culture.

Table 2
Student Teachers and Lesson Planning

Questionnaire Section VI Towards Lesson Planning	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N = 61	
						M	SD
31. I can set learning aims and objectives suited to my learners' needs and interests according to curriculum requirements.	9.8	41.0	39.4	9.8		3.51	0.81
32. I can plan specific learning objectives for individual lessons and/or for a period of teaching.	16.4	65.6	13.1	4.9		3.93	0.70
33. I can structure lesson plans and/or plan for periods of teaching in a coherent and varied sequence of content.	16.4	50.8	26.2	6.6		3.77	0.80
34. I can plan activities to ensure the interdependence of listening, reading, writing and speaking.	19.7	44.3	29.4	6.6		3.77	0.84
35. I can plan activities to emphasise the interdependence of language and culture.	13.1	49.2	36.1	1.6		3.74	0.70
36. I can plan activities which link grammar and vocabulary with communication.	21.3	67.2	9.9	1.6		4.08	0.61
37. I can plan to teach elements of other subjects using English (cross-curricular teaching etc.).	11.5	36.0	*42.6*	*6.6*	*3.3*	3.46	0.91

Note: Bold italics indicate that the percentages of neutral and disagreement were together over 50%.

On the student teachers' use of lesson plans and content, over half of the student teachers reported their competency in using lesson plans in practice, such as the necessary adjustments of the sequence of lesson and time schedule. 83.6% of the student teachers indicated that they could do necessary adjustments of the sequence of lesson as well as 78.7% indicated that they could flexibly work on the time schedule of the lesson plan in classroom teaching and learning. Also over 70% indicated that they could teach in light of pupils' knowledge and previous language learning experiences as well as different characteristics of individuals and groups learning.

Language teaching methodology is aimed at creating contexts for communication and maximizing student involvement (Borg, 2006). It appears from the data that over 60% of the student teachers were competent in 9 out of 10 statements of language teaching methodology. Over 70% reported that they could select different activities to help pupils to "use different text types (telephone conversations, transactions, speeches, etc.)" and "use new vocabulary in oral and written contexts", as well as select "writing

activities to consolidate learning (grammar, vocabulary, spelling etc.)" and "grammatical exercises to support learning and encourage oral and written communication". Over 60% reported that they could select "writing activities to help learners use appropriate language for different text types (letters, stories, reports, etc.)" and "post-listening tasks to provide a bridge between listening and other skills" as well as design or set different activities to practice and develop listening and reading strategies and socio-cultural competence, whilst over 24% of the student teachers were neutral about them. Concerning item about choosing teaching activities to make pupils aware of the interrelationship between culture and language, slightly over 50% agreed or strongly agreed with that they were competent in it, whilst 37.7 were neutral.

Over 70% student teachers reported that they could cater pupils' different learning styles and decide when to use or not use the target language and could use various strategies to facilitate pupils' understanding of the target language, also could encourage pupils to use English in their activities. Over 40% of the student teachers were neutral or disagreed with that they could plan how to use the target language including meta-language in the classroom.

One third of the student teachers were neutral or (strongly) disagreed with all the items relate to the evaluation and even over 55% were neutral or disagreed with 2 out of 5 items (table 3). As it shown, over 40% were neutral about whether they could "select valid assessment procedures appropriate to learning aims and objectives" and "help learners to set personal targets and assess their own performance" whilst the objections were 11.5% and 21.3%. Other three items which respectively represented their competence in using of in-class activities to monitor and assess pupils' participation and performance, assigning grades for tests and examinations through reliable and transparent procedures, and helping pupils to engage in peer assessment, about 30% were neutral about the statements, whilst slightly over 50% agreed or strongly agreed with them.

Table 3

Student Teachers and Evaluation

Questionnaire Section VI Towards Evaluation	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N = 61	
						M	SD
57. I can select valid assessment procedures (tests, portfolios, self-assessment etc.) appropriate to learning aims and objectives.	6.6	37.7	*44.2*	*11.5*		3.39	0.78
58. I can use in-class activities to monitor and assess learners' participation and performance.	14.8	45.9	32.7	6.6		3.69	0.81
59. I can assign grades for tests and examinations using procedures which are reliable and transparent.	13.2	44.3	31.1	9.8	1.6	3.57	0.90
60. I can help learners to set personal targets and assess their own performance.	8.2	24.6	*45.9*	*21.3*		3.20	0.87
61. I can help learners to engage in peer assessment.	11.5	39.3	36.1	13.1		3.49	0.87

Note: Bold italics indicate that the percentages of neutral and disagreement were together more than or equal to 50%.

Generally, survey results about Czech student teachers' knowledge and skills about implementation of a lesson indicated that student teachers valued each items to various degrees with means on a 5-point scale ranging from a low of 3.46 to a high of 4.15. It appears from the data that Czech student teachers value the using lesson plans and content, followed by the classroom management and the teaching methodology. It is obvious that most student teachers can take into account pupils' interests and needs and their prior language learning as well as different characteristics of individuals and groups learning to use lesson plans and content in a coherent yet flexible way in class. Moreover, most student teachers can cater pupils' needs and different learning styles to take on different roles and to manage individual, partner, group and whole class work. Regarding to target language usage, most student teachers have positive response and consider that they can decide when to use or not use the target language and can use various strategies to facilitate pupils' understanding of the target language, also can encourage pupils to use English in their activities. However, more than 40% of student teachers indicated that they were not sure or not competent in planning "how to use the target language including meta-language in the classroom". Further, it seems that most student teachers are good at teaching grammar, vocabulary, written and oral communication, and the four skills. As for teaching culture, such as pupils' socio-cultural competence, the relationship between language and culture, etc., more than 30% of student teachers indicated that they were not sure or not competent in it.

Concerning lesson planning, a crucial component of teachers' practice, it appears from the data that student teachers are good at planning activities to link grammar and vocabulary with communication and to ensure the interdependence of four skills. Also they can take into account the relationship of culture and language while planning a lesson. Besides, most of them are better at planning specific learning objectives for individual lessons or a period of teaching than structuring plans for lessons or periods of teaching in a coherent and varied sequence of content or setting learning aims and objectives suited to pupils' needs and interests according to curriculum requirements. Actually, only slightly more than 50% of student teachers indicated that they could set learning aims and objectives in light of specific pupils and curriculum requirements. As for the content of using English to teach other subjects' elements, less than 50% indicated they could plan it. However, when planning a lesson, teacher's knowledge of language learning theory, teaching methodology and learner activities are as important as knowledge of the individual pupils and curriculum requirements.

Lastly, about evaluation in language teaching, it appears that most student teachers' knowledge and skills need to be improved. For example, most student teachers were not good at selecting valid assessment procedures, such as tests, portfolios, self-assessment etc., and helping pupils' peer- and self-assessment. Even for using reliable and transparent procedures to assign grades for test and examinations, only slightly over 50% of student teachers indicated that they were competent in it.

2.3 Discussion

Based on the presented findings above, Czech student teachers competence in curriculum development could be summarized as: Czech student teachers to a large extent have positive attitudes to specific needs of learning English, followed by different resources, language teachers' different roles, and contexts during uses of curriculum materials. With regard to the implementation of a lesson, they are more confident in the using lesson plans and content, the classroom management and the teaching methodology than in the lesson planning and the evaluation. The survey results showed that only slightly over than 50% of student teachers reported that they could recommend appropriate books to particular pupils, select materials to stimulate pupil's language skill of writing, and adapt teaching based on specific contextual constraints. Besides, more than 40% of them indicated that they were unconfident about setting learning aims and objectives in light of specific pupils and curriculum requirements, planning the cross-curriculum teaching using English, etc., selecting texts and activities to make pupils aware of the interrelationship between culture and language, taking into account of different educational stakeholders' expectations and impact of English teaching and learning, as well as the usage of target language in the classroom, and the use of theoretical knowledge in practice. Even for the requirements set in the FEP BE, less than

55% reported that they could understand them, and less than 30% indicated that they could design language courses around the requirements. As for evaluation in language teaching, it appears from the data that most Czech student teachers' knowledge and skills need to be improved.

In addition, whatever target language usage, results show that lots of Czech student teachers are not competent; it clearly reflects the challenge with language teaching that teachers use language to teach language (Freeman et al., 2009). Another fact appearing from the data seems that Czech student teachers need to be further informed about teaching the relationship between language and culture. It closely matches the views of Byram (2012, p. 83) in that *"teachers with many years of experience often say that they do not feel 'qualified' to teach 'culture'... This is particularly the case for English... it is not surprising that teachers in preservice training or in the early stages of their career may feel even less confident".*

3 Conclusions

The primary purpose of this study is to explore what student teachers in general, EFL student teachers in particular, competence in curriculum development is like in the context of the Czech Republic. It has been proved that Czech student teachers need to be further informed of English pedagogical knowledge and curriculum knowledge. To be more concrete, it includes the following knowledge and skills:

- Knowledge and skills to keep the English teaching methodology up-to-date
- The theories of English learning and child development.
- Knowledge and skills of developing and constructing lesson plans, and systematic curriculum design skills (Huizinga et al., 2014)
- Formative and summative evaluation skills
- Knowledge about the current curriculum reform

The study is far from complete. Preservice teachers- students of teaching, unlike students of engineering or law or medicine, they do not approach their professional education feeling unprepared (Feiman-Nemser, 2001). Their personal histories such as elementary and secondary education experiences function as prior knowledge and filter information during preservice teacher preparation (Feiman-Nemser & Buchmann, 1986). Whether student teachers' preconcepts of curriculum have influence on their competence, as well as whether their gender and teaching practicum experience have the influence, and how teacher education support their competences' development, these questions need further research.

Acknowledgements

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Contact:
Mgr. LIU Li
doc. PhDr. Jana Poláchová Vašťatková, Ph.D.
Institute of Education and Social Studies
Faculty of Education, Palacký University
Žižkovo nám. 5
771 40 Olomouc,
Czech Republic
E-mail: liuli2011cz@gmail.com, jana.polachova@upol.cz

On the Issues of the Correct Vocal Tract Configuration in a Specific Voice Education Process

Petr Špaček, Tereza Sedláčková

Abstract

The elementary issue in a specific voice education process for future voice profession-als, including students from the Pedagogic Faculty, is a subjective perception of re-laxed mandible position with the correct position of the cervical spine. In a university research in 2013, the authors of the text tried to highlight the possibility of using the mentioned issue in a voice educational process in terms of pedagogical approaches. Camcorders and IT were used to eliminate the errors. The subjects tried to eliminate their errors by a self-reflection and by using a visualization of their profile positions. These problems come from their subjective perception of the vocal tract configuration during the phonation process.

Keywords: education, educator, subjectivity, research, voice.

Introduction

Voice, as a medium of communication, is used by almost every one of us. When we move our focus towards the field of specific musical education, we find out that the voice quality is a subject of greater demands. The systematic training of every adept of musical studies at the Faculty of Education helps to handle those demands and dif-

ficulties thanks to attending the Voice Education class or its modifications which belong to the students of pedagogic faculties, especially at music departments. During their studies, it helps them to gain a dominance over the coordination process (breathing, phonation, resonance, articulation), resulting in a beautifully sounding voice in its entirety. To achieve this, you need the proper vocal tract configuration. The elementary problem in the specific voice education process is a subjective perception of the vocal tract configuration vs. objective vocal tract configuration. In the current vocal pedagogy, this issue is solved only by an educator's visual inspection or by an audio analysis when the opinions are different from the student's feelings. This is often a subjective perception of feelings which do not correspond to the real situation.

One of the major problems of the correct vocal tract configuration is the relaxed mandibular position (including the temporomandibular joint opening) along with the correct cervical spine position. The main aim of this project is to focus on the voice education effectiveness, respectively, the influence of the objectively correct mandible and cervical spine configuration. The information technologies and a camera were used to eliminate the defects. The subject tried to eliminate the defects by using a self-reflection resulting from the perception of the correct vocal tract configuration during phonation. Then, thanks to using the profile position visualisation, it was possible to confront the subjective perception with the objective (visualized) mandible position and the cervical spine. The spectrogram (a part of VoceVista-Pro) was also used for the analysis.

Advantages:
- Objectivity
- Use of hardware/software – EGG/VoceVista-Pro for getting data evaluation of voice quality parameters (spectrogram)
- Elimination of the subjective perception of the vocal tract configuration

Disadvantages:
- Psychological burden
- Small set of subjects (15)
- EGG application (putting two sensors on the outer right and left side of the larynx area)
- chosen vocal exercises (may not be optimal for everyone)

1 The importance of voice for educators

The vocal tract is used daily by every educator as a way to communicate. However, most of them do not realize that an integral part of using something as obvious as the human voice requires some care. The care is called "vocal hygiene" which is a prevention

and a certain set of actions leading to a voice healthiness and the right function of the vocal tract. Maintaining or regaining the full functional voice condition is the main aim of a vocal hygiene application (Frostová, 2010, p. 70).

There is a special emphasis on the area of vocal hygiene during the educational process specialized for voice professionals and teachers (it is – according to the taxonomy established in 1979 by the Union of the European Phoneticians – the second class of voice professionals) which is a category consisting of a target group described in following lines of the project.

There is a concentration on a vocal improvement as a part of the vocal education for teachers. This improvement should be done in the field of speaking and singing voice (especially in the school program called: Music Education Focused on Voice Education). The relationship of qualitative parameters between speaking and singing voice has been demonstrated over a number of years. It is always an intentional coordination of breathing, phonation, articulation and resonation during a creation of the perfect vocal configuration, including relaxation and activities of muscles influencing each other. Harmonization of the process requires a lot of time and a highly individual approach based on the evaluation of the total trained operator's predispositions.

The Music Department of the Pedagogic faculty deals with this issue by using new study programs such as "Voice Exercises", "Speaking Voice Improving", "Voice Re-education", "Singing Education" etc. They are focused on a systematic way of transferring theoretical knowledge to practical skills. It is systematic voice cultivation with its subsequent transfer to practice.

The greatest task was probably the one of a voice teacher because of the responsibility for future voice professionals' education, including their level of vocal expression. The main task of every educator is to analyse and prove that: "any voice should be trained for perception and for clear vision of the right stress and relax proportion by using muscles. This complicated process extends from the first auditory perceptions through a wide range of tactile perception and subsequently to visual and spatial perception, all of which are associated with the auditory experiments that are eventually reflected in an artistically meaningful sound idea with a psychosomatic creative sound feeling" (Válková & Vyskočilová, 2007, p. 60).

2 The effectiveness of voice training – the purpose of the project

Streamlining of the second category professionals' voice lessons was the primary goal of the researched, financed by the Specific University Research of the Music Department belonging to the Pedagogic Faculty. For this purpose, the new interdisciplinary knowledge was used together with modern technologies in the fields of phoniatry, acoustics

and informatics including specialised EEG equipment and the software VoceVista-Pro (Miller, 2008) for detailed analysis determining the voice issues and its transfer to the teaching area.

The project was focused on the correct application of the elementary vocal tract configuration and its impact on quality parameters in the voice production created by voice professionals during the specific voice education process by using video technologies and IT. A pilot project, carried out by Švec (2008), scanned and proved the differences between the native and opera singing expressions through the use of MRI. There is a clearly identifiable difference of the vocal tract contributions and its space. It is not caused only by the velum position and the contraction of the tongue but also by an obvious and a significant reduction of larynx – about two and a half cervical vertebras lower. For this project, it was essential to concentrate on jaw tension release including temporomandibular joint opening and moderate downshifting towards the larynx, and also to emphasise the change in the centre of a skull by a slight spine straightening in the neck area (Švec at al. 2008).

This issue was highlighted as the main issue of the whole project and there was an effort to apply this information in the educational process to eliminate the trial and error method used in education. We concentrated on the method of objectively correct pedagogical leadership, the maximum elimination of subjective feelings, which in most cases result in a poor adjustment of the mandible and cervical spine.

At the same time, these effects were assessed by a meticulous technique and based on the evaluation and analysis of the collected data with scientific information, providing a feedback of the parameters that clearly declared a systematic progress in the voice quality. It was therefore the exclusion of individual subjective opinions assessing individual voice parameters which are in some cases seen from different points of view.

The hypothesis proved that the use of new IT technologies in education for voice professionals leads to the improvement and the modernization in the field of teaching methods. The target group, including 15 students of education, specialized on – the playing an instrument – solo singing, and music culture in education, etc. Quantitative methods were used to get the results. These methods used observational, experimental and comparative approaches and a questionnaire was used as a research tool.

The whole specific education process is not based only on the relationships: educator – student, student – educator (see Figure 1).

Figure 1

Including an active students' engagement and their creative activities – singing performance (see Figure 2).

Figure 2
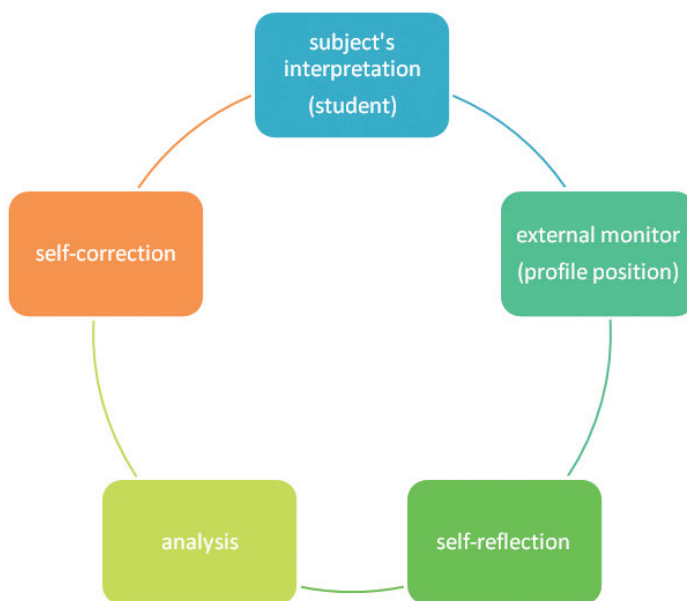
This is not a voice teacher's exclusion from the educational process but these are effectively connected polygons (see Figure 4). In this context, the great demands are put on the voice teacher and also on the audio analysis ability, observation and IT (EGG/ VoceVista-Pro understanding (see Figure 3), and evaluating of the overall voice quality parameters, as well as connections to the requirements for aesthetic parameters of the singing voice in the art.

Figure 3
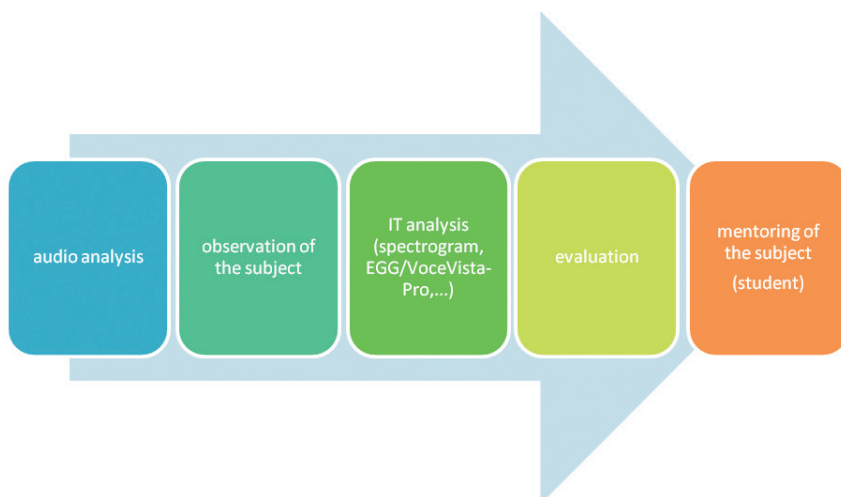
It means that the whole process has this form (see Figure 4).

Figure 4
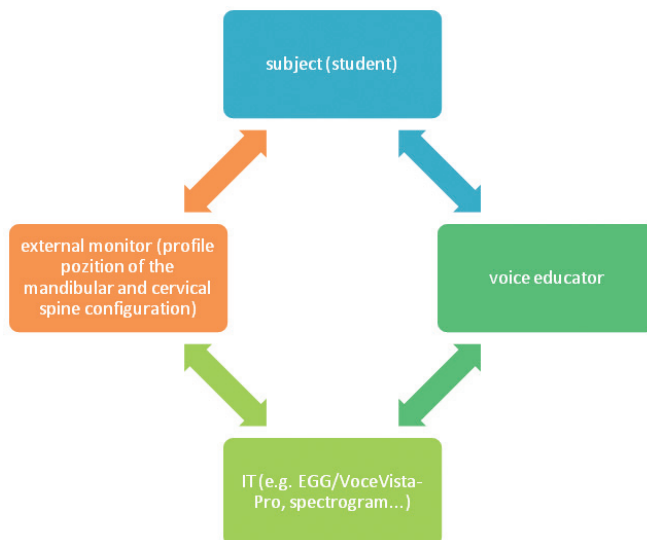
At the same time, these effects were assessed by a meticulous technique and based on the evaluation and analysis of the collected data with scientific information, providing a feedback of the parameters that clearly declared a systematic progress in the voice quality. It was therefore the exclusion of individual subjective opinions assessing individual voice parameters which are in some cases seen from different points of view.

2.1 A brief description of the project

Quantitative methods were used to get the results. These methods used observational, experimental and comparative approaches and there was a questionnaire as a research tool.

The tested group consisted of 15 subjects. These are the students of the Music Department, Pdf UHK. Seven of them completed a training of the Music School Conservatory and now they continue to study solo singing at the university. One of them graduated from the master's degree in another field of study. The others are graduates of a general secondary education (high schools, secondary pedagogical schools) with a voice education at the School of Music. The average duration of the vocal education is 11.4 years. The average age is 24.5 years. Each subject was given 30 minutes to the voice production. During this time, we expected a progress in the voice quality parameters.

The main aims of the project:
- elimination of errors caused by the subjective perception of the "correct" position and the ratio of tension and relaxation in the mandible and cervical spine
- objectification of the educational process by using AV, specific hardware and software in voice education
- self-qualitative parameters (spectrogram) in the interpretation of simple vocal exercises for voice professionals in real time
- effectiveness of the new teaching approaches in voice education

First, the subject filled the questionnaire No. 1 (pre-test) and subsequently interpreted the voice exercises No. 1. Data was collected via EGG, VV-P and recorded by camcorders. Everything was archived. Then the subject was shown the recorded performance with an explanation about the neck and back muscles' influence on the vocal tract configuration needed for the right singer's formant tuning (Švec at al. 2008, also MCcoy 2012).

Then the subject interpreted the same exercise which was visualized on an external monitor in real time. It was important both for the subject (because of a subject scanning from the profile angle - mandibular) and for the observer using the sw VoceVista-Pro. The subject's response was evaluated and recorded. Everything was based on the changes of the vocal tract configuration and on the analysis using a spectrogram (a part of VoceVista-Pro). In this manner, the sample was applied in several exercises. In

conclusion, the subject completed a questionnaire No. 2 (post-test). The comparison of data and recordings was statistically evaluated including the progress in subject's voice quality parameters.

3 Results

The project points to the use of the self-reflection and self-correction seen from the profile angle (camcorder was recording the subject's profile and it was visualized on an external monitor in real time). The result could be assessed objectively and measured via spectrogram, on which the subject is able to react in an almost real time. (MCCOY, S. 2012).

3.1 Spectrogram

As an example of the spectrogram use, there is a slide no. 1, where we can compare the qualitative parameters of one of the fifteen observed subjects. The B flat major scale was sung on the vocal "a". Below the picture: you can see the singing without using a proper neck spine configuration including the position of the mandible. Above: we can see the influence of the correct positioning in the cervical area by using a self-correction, or the use of correct singing posture, including the lower jaw and its influence on the singing tone.

There is highlighted 2 kHz band – 3.5 kHz in the particular area. It is a range of frequency where the strong resonance is situated. This frequency and its timbre are typical for opera singers (Švec, 2006). The comparison proves the ability of profile capturing to be helpful in the subject's education for the future voice professionals. In the picture no. 1 we can observe the intensification of the rich resonant frequency which is typical for opera singers. We can see it as a rich spectrum of harmonic tones.

Picture 1
Above: with the use of video and IT;
Below: without the use of video and IT.
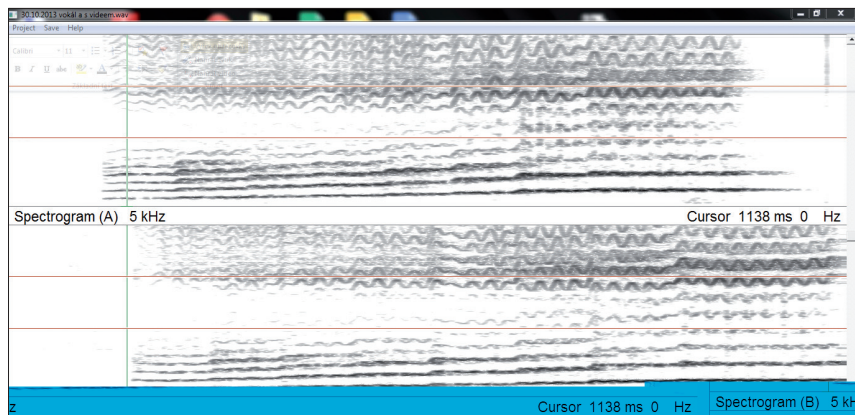
In the spectrogram, twelve of the fifteen examined subjects profiled the increased number of the harmonic tones. Three subjects would probably feel the change in a longer period of time. It should be noted that all three students have not completed a solo singing at the conservatory. The success within a richer spectrum of overtones, due to the self-correction profile using the visualization, is 80 % with a 30 minute time allocation.

3.2 Questionnaire survey

Use of this innovative method could support the view of subjects whose average length of education in voice education is 11.4 years. The research instrument was a questionnaire consisting of a pre-test and a self-evaluation post-test assessing the qualitative progress of the production and the innovative approach using IT. Total 100% of respondents answered that they were satisfied with the innovative teaching method and the same number answered the question about the benefits of the profile angle visualization.

There is an interesting discrepancy in opinions evaluating the effectiveness of the clarified issue. 100 % of respondents understand the topic more quickly, but only 80 % of them would use this method in a future training; 100 % of respondents are convinced of the impact on singing voice due to the mandible and cervical spine position. It is remarkable that during the innovative method 100 % of respondents felt change in the

location of the cervical spine position. Positive contributions within the vocal education were perceived by 87 % of them.

There can be seen the importance of using the objectification in the music education, when 53 % of respondents perceived the opinion different from the educator's one.

Chart 1
An Extract from the Questionnaire
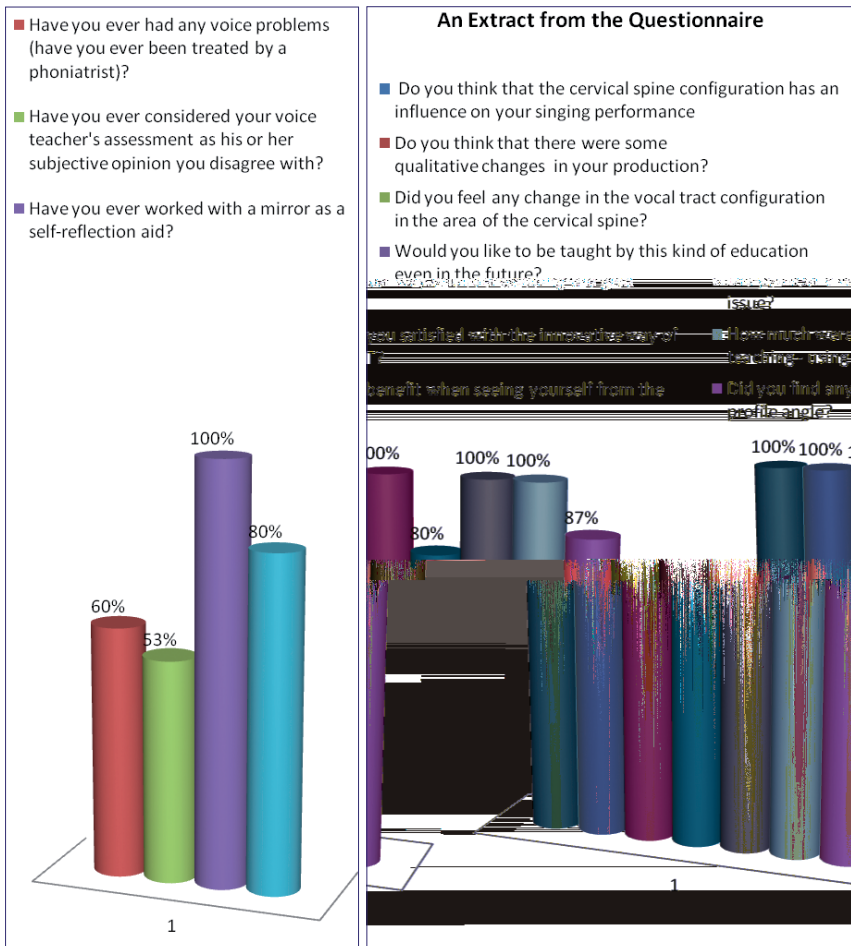
Conclusion

After analysing the collected data and information, it is possible to give learners the objective information about their qualitative parameters of voice production (by the visualization = the spectrogram) with a certain evaluation and a possibility to respond to them as well.

The expected elimination of the particular mistakes originating from a subjective perception of voice quality and the development in objective acceptance of qualitative parameters in voice production has turned out according to the mentioned results, and thus we may state that this current pilot project has been favourably accepted by the targeted group.

Thanks to this innovation the whole process of systematic education in this specific field of voice training can be more efficient. The described manner which uses the modern equipment, including IT in singing education, could lead to the optimization and modernization of methods not only in singing and voice problems, but also in the field of rehabilitation and voice re-education for voice professionals.

Finally, it is necessary to add a fact that this kind of education cannot replace the teacher's role in any way. A teacher's professional approach and excellent audio-analysing ability is irreplaceable! The respect to the voice teacher's role is described in a statement of a Czech phoniatrist O. Lacina: "An experienced and professional ear of an attentive listener to a melodically voice, professional singer or music teacher has not only the ability to distinguish gentle nuances in the methods of voice origin but also is capable to evaluate displays and traces of higher nervous activity within the voice and variable stages of emotions and mental statuses like feelings, moods, excitement, etc." (Lacina, 1977, 102; well as Frost, 2010, 87).

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Research, project

Specific Research 2013, number of the contract: 2132
„Využití EGG k reflexi kvalitativních parametrů u zpěvního hlasu. K objektivizaci pěveckého edukačního procesu."

Contact:
MgA. Petr Špaček, Ph.D.
Univerzita Hradec Králové, Pedagogická fakulta
Rokitanského 62, 500 03 Hradec Králové
E-mail: petr.spacek.2@uhk.cz

Bc. Tereza Sedláčková, DiS.
Univerzita Hradec Králové, Pedagogická fakulta
Rokitanského 62, 500 03 Hradec Králové
Tel.: (+420) 495 063 128
E-mail: tereza.sedlackova@uhk.cz

The Health Care University Lecturer as an Educationalist, Medical Specialist and Researcher

Elena Zheleva

Abstract

The university lecturer in his role as a medical specialist and a leader of the teaching process is a mediator between the theoretical course of lectures and the practical training sessions. He defines the objectives and tasks of each session and adopts the most appropriate role during it – that of a medical professional and an educationalist.

The scientific medico-pedagogical research practices at university level attempts to offer a solution to the problems related to the education and training of Health Care specialists. A characteristic feature of these research practices is the generation of new ideas and the acquisition of knowledge about the research object. They function as a process of obtaining information about the medical, social and pedagogical processes and phenomena. This information is used for their description, analysis and prediction.

Key words: Health Care Lecturer, University, Pedagogue, Medical Specialist, Scientific Medico-Pedagogical Research.

Profesor zdravotní péče jako pedagog, zdravotní odborník a badatel

Resumé

Profesor zdravotní péče na vysoké škole, jakožto zdravotní odborník a vedoucí subjekt výchovné vzdělávacího procesu, je mediátorem mezi přednáškovým kurzem a praktickým školením. Ten sám stanoví cíle a úkoly každé lekce. Musí během lekce pro sebe zvolit nejvhodnější úlohu jako zdravotní odborník a pedagog. Vědecký zdravotně pedagogický výzkum na vysoké škole je orientován na řešení problémů vzdělávání a výchovy odborníků v oblasti zdravotní péče. Základné charakteristikou tohoto procesu je generování nových nápadů a dosažení nových poznatků o zkoumaném objektu.

Klíčová slova: profesor zdravotné péče, vysoká škola, pedagog, zdravotní odborník, vědecký zdravotně pedagogický výzkum

Theoretical underpinnings

The accession of Bulgaria to the common European educational space and the new economic realities pose new demands to the Health Care lecturer at university level. The achievements in the area of medical sciences and practices call for an updating of the health and illness theories. The new challenges define the need for the training of medical specialists who are: able to think globally and comply with the specific conditions of the situation; ready to manage their own learning; able to take responsibility of their own destiny; live and work successfully with others. The tasks assigned to university lecturers are related to the updating of the educational content and to the introduction of modern technologies into the educational process [2, p. 31–35].

Through his effective medico-pedagogical activity the university lecturer develops the professional profile of the future medical specialist. This professional profile depends to a large extent to his personality, pedagogical activity, tact and competences, communication style and skills for managing the teaching and learning process. Playing a leading role in the process of interaction with students and acting in accordance with the conditions of the educational process the university lecturer has a number of important functions: to plan, organize, conduct, coordinate and control his activity and the activities of students; to provide opportunities for the acquisition and reinforcement of knowledge, competences and skills through the active involvement of students in the completion of cognitive and practical activities in real hospital environment; to supervise the acquisition of professional skills; to provide optimal conditions for increased participation and learner autonomy; to manage the formation and development of

the moral profile of students through skillful organization of the different activities and relations in the teaching and learning process; to provoke students' creativity on the basis of his tact and pedagogical skills; to direct students' attention to each of the situations emerging in the educational process; to organize and stimulate the cognitive autonomy of students and improve their skills for self-control and self-evaluation as a necessary prerequisite for the effective professional development of the future medical professionals [5].

The education and training of the Health Care specialists at university level involves the use of the following medico-pedagogical research studies by the lecturer: **fundamental research studies** /which provide information about the objective laws and regularities underlying the medical, social, and pedagogical phenomena and processes and which explain the concepts and terminology used/; **applied research studies** /which have a specific practical aim that is further developed to the level of a technology on the basis of the results of fundamental research/; **implementation studies** /which are related to the implementation of scientific results in the educational process at university level/; **empirical medico-pedagogical research studies** /which trace the changes and development of the personality as a result of different pedagogical practices/; **theoretical research studies** /where results are obtained on the basis of a summary of ideas governed by certain laws, and where theoretical frameworks that describe, interpret and predict the current state and future development of phenomena and processes are designed / [3, p. 9].

The successful development of a complete medico-pedagogical research study involves preliminary preparation which is followed by a diagnosis and analysis of the obtained results and their implementation in the practice. There are five distinct stages of the process of medico- pedagogical research studies: **Stage 1:** Research study design /planning, preparation and organization of the research study/; **Stage 2:** Conducting the research study /preliminary, main and concluding experiments/; **Stage 3:** Presentation and analysis of the results; **Stage 4:** Design and development of a research thesis; **Stage 5:** Trialing and implementation [3, p. 15].

The design of the medico-pedagogical research study is related to **the development of a research concept** /"clarifying the methodological approach, the content and the theoretical underpinnings of the study"[1]/ and **research organization** /"arrangement of elements, tasks and activities along the research timeline which leads to the successful achievement of the set objective …"/. The research concept has **three main functions**: explanation of the initial theoretical concepts and frameworks; development of a methodology and definition of the research methods; planning of the different activities [1, p. 102].

The concept of the empirical medico-pedagogical research studies carried at university level comprises of two interrelated parts – **methodological** /which encom-

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[1] All quotations in this paper are translated by the author unless otherwise stated.

passes a specific problem, the object and subject of the study, its aims and tasks, the research questions and hypotheses, the main terminology used/ and **methodical /** which includes the design of a plan, the choice of research instruments, the selection of a study sample, the choice of methods, criteria and research indicators/ [1, p. 102]. Each medico-pedagogical research study attempts to solve the problems related to the educational process at university level. The problem in the field of Health Care is a question or a group of questions to which the study has to give an answer.

The choice of a research problem is done on the basis of preliminary research and analysis of the literature and the medico-pedagogical practices. The **criteria** underlying the choice are: novelty and present day relevance, scientific significance and value, applicability, availability of sources of information, availability of research instruments, resources, etc. The topic of the medico-pedagogical research study, which is defined on the basis of the chosen problem, reflects the conception and the idea of the study. It has to be clearly stated so that it does not lead to ambiguous interpretations. Apart from that the topic has to comply with the specific characteristics of the study subject and to encompass a narrow set of problems, while at the same time its development should be motivated by practical and theoretical needs [3, p. 19].

Aims of the research

The aim of the current paper is to outline and highlight the organizational pedagogical conditions and factors for the professional development of the Health Care lecturer as an educationalist, medical specialist and participant in the scientific medico-pedagogical research studies conducted at university.

Hypotheses or research assumptions

The present research study focuses on the process and conditions which cater for the development of the Health Care lecturer as an educationalist, medical specialist and participant in the scientific medico-pedagogical research studies conducted at university. The university is the major centre for carrying out scientific research studies in the field of Health Care.

The object of the study is the Health Care lecturer as an educationalist, medical specialist and participant in the scientific medico-pedagogical research studies conducted at the Faculty of Public Health and Healthcare at the University of Ruse.

Methods

The research methods used include: a survey, targeted interview, observation and pedagogical experiment.

Findings and discussion

The analysis of the research findings showed that the university lecturer plays a key role in the training of the medical specialist because he is the person who: creates the conditions for the development of professional knowledge, skills and competences; facilitates the development of students' professional clinical thinking; helps in the development of habits for solving independently scientifically oriented practical tasks; trains students to be disciplined and to bear responsibility for their education and professional experience; develops learners' readiness for continuous self-control and self-assessment; develops and maintains the high professional and cognitive interest of the future medical specialists and reinforces their motivation.

All research participants claimed that a well-organized and well-conducted training session is linked to the easy understanding of the discussed problem which leads to the achievement of the aims and the completion of tasks as a result of the active participation of both the lecturer and the students.

The university lecturer plays a leading role in raising students' awareness about the aims, tasks and formative role of the educational process in the training of the future medical specialists.

The research carried showed that the university lecturer applies common principles and requirements, as well as a clearly defined system of knowledge, skills, actions, approaches and qualities valid for the educational process at university level. He has to possess the following competences: pedagogical and andragogical knowledge; knowledge about the characteristic features, principles, methods, forms and techniques underlying the educational process; ability to link theory to practice in the implementation of a specific pedagogical activity; educational and practical skills; qualities such as: ability to work with people and win their respect, supportiveness, determination, enthusiasm, imagination, ability to promote enthusiasm in others, willingness to work diligently, analytical skills, ability to integrate a variety of tasks and flexibility when managing different situations.

It was established that the university lecturer in his role as a medical professional and educationalist has not only main functions such as: formative, educational, instructive but also subsidiary functions such as: evaluative, motivating, stimulating, communicative, informative, corrective, regulative and controlling.

   The research study proved that the profession of the university lecturer has an educational purpose and is linked with the most complex object … the student and his development as a medical specialist. A characteristic feature of the future medical specialist is the dynamic nature of his development during the course of training. The university lecturer needs to be equipped with the relevant competences to be able to respond to the challenges which the present day educational process poses. These challenges a ect the teaching pro le, characteristic features, status, position, professional behaviour and activities of the university lecturer. He exerts his professional duties in the context of ongoing reforms in the Health Care sector and has to demonstrate a humane attitude towards the patient.

   The medico-pedagogical research study found out that the university is a centre for medico-pedagogical research conducted by Health Care specialists. Each one of the future medical specialists, who is an author of medico-pedagogical research paper, publishes the results of his studies, developed theoretical frameworks and ndings in relevant scienti c journals and conference volumes. His works are ue nced and guided by the ndings of all researchers in the eld. Every researcher has a quick and convenient access to the scienti c medical literature published globally.

   It was established that the research topic developed by young researchers at universities can be chosen or d ned by the research supervisor, while with more experienced young researchers it can be a follow-up of the ideas developed in previous research studies. It is advisable that the research topic is up-to-date and socially signi cant. Moreover, it should add additional insights to the Health Care theory and practice.

   It was discovered that the methodology of the scienti Health Care medico-pedagogical research includes: a clear sequence of stages, timeline and available resources for its completion. It is necessary to have a draft plan for its development. The groups which will be used in the study /experimental and control groups/ are formed on the basis of the chosen strategy. This is followed by a decision on the ways12

achievements in order to find new regularities, to expand his teaching experience and activities and to transfer them to the future medical specialists.

He has a formative effect on students in his attempts to develop them as good professionals and people with specific intellectual, moral, esthetic and health culture. The medical specialist would not be able to develop without the help of the university lecturer. Moreover, it can be said that there is hardly a more valuable product than the educational work of the university lecturer and his effect on the development of the future medical specialist.

The motivation and active participation of the Health Care university lecturer in research activities carried in and outside the classroom is a prerequisite for the implementation of an educational process based on scientific medico-pedagogical research studies. Such an educational process improves the quality of education of the future medical specialists and their professional and personal development.

All this suggests that the Health Care university lecturer is an educationalist, medical specialist and participant in the scientific medico-pedagogical research activities conducted at the university.

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The Role of Doctoral Study in the Professional Path of Academics

Yanyan Li, Jana Poláchová Vašťatková

Abstract

To prepare the next generation of academics is considered the primary function of doctoral education. This study attempts to identify the role of doctoral study on the path of academics. The data were collected by the in-depth interview of Ph.D. graduates who had achieved their doctor degree of education successfully at Palacký University Olomouc in the past decade. The life stories of seven interviewees were included in analyzing by coding process. Six categories were generalized under three themes based on the grounded theory.

Keywords: doctoral study of education, professional path, Ph.D. graduates, life stories, grounded theory

1 Introduction

The doctoral degree is necessarily needed for most of the academic positions at the university or research institutions. Although there are a range of roles for Ph.D. graduates based on the doctoral study programme of education, the academic is the primary pursuit. Graduate education is considered as the period of "anticipatory socialization" (Van Maanen, 1983). The socialization that occurs during graduate education contrib-

utes to how faculty members understand their work and assume their professional roles (Austin & McDaniels, 2002). The Ph.D. students are experiencing several socialization processes simultaneously: socialization to the role of graduate student, socialization to the academic life and the academic profession, and socialization to a specific discipline or field (Staton & Darling, 1989). Through formal and informal opportunities, the socialization occurs as doctoral students learn knowledge and skills required for work in the field, interact with faculty and student peers, and integrate into the activities of their fields (Weidman & Twale & Stein, 2001).

However, the study experience is not planned in a way that specifically prepares for professional development of identity. On the one hand, doctoral education is characterized by a lack of systematically and developmentally organized preparation experiences (Austin & McDaniels, 2006). On the other hand, the Ph.D. students fail to receive feedback to clearly explain their performance (Lovitts, 2004). The nature of academic career is lack of attention in the process of Ph.D. study (Golde & Dore, 2001). Therefore, the previous research findings raised the essential concern about the preparation process and efficiency of doctoral study on the path to the professoriat for Ph.D. students. However, qualitative, ethnographic studies, especially ongoing and longitudinal investigations, have been overlooked in the field of graduate education research (Malaney, 1988). Future research on graduate education would benefit from the inclusion of a variety of voices and perspectives both inside and outside of higher education (Wulff & Austin, 2004). This study presents the role of doctoral study on Ph.D. graduates' career path of academics with specific attention on the subject of education.

As the aim of the doctoral study programme of education at Palacký University, this programme is to prepare qualified specialists of scientific research and independent creative activities to solve theoretical and practical problems in the field of education. And the Ph.D. graduates might work as qualified teachers at universities as independent creative workers in educational research, etc. It is obvious that the focus of the doctoral study is not only to improve the knowledge of methodology but also on extension the theoretical outlook in the field of educational research. Therefore, the mastery of knowledge and ability is essentially centralized as the cognitive domain as well as the value of professionalism as the emotional domain on the path to the academics. In the previous publication of the author, the emotional impact of doctoral study of education was already deeply investigated especially on the professional value and self-cognition of Ph.D. graduates (Li, 2014). In the article, three identity effects brought from the doctoral study of education are listed as the cognition of education as a subject of science, identification of themselves as an educational researcher, and confirmation of doing research as a life style in Ph.D. graduates' academic career. And the author emphasized that these three aspects are connected and interacted with each other through the proceeding of doctoral study. Hence, the knowledge and ability were concentrated on in this study which was interpreted from the doctoral study of education by the Ph.D.

graduates on the path to the academics. Moreover, the theory was conducted on the basis of these two domains including the cognitive and emotional impact of doctoral study on the Ph.D. graduates' academic path.

2 Methodology

The study addresses Ph.D. students' experience of the doctoral study programme of education particularly on their perspective of the role in their path to the academics. Two research questions are mainly focused on. What was learned cognitively by the Ph.D. graduates from their doctoral study? What is the impact of the doctoral study on the Ph.D. graduates' professional path to the academics?

The respondents of this study are Ph.D. graduates who finished the doctoral study programme of education from Palacký University Olomouc during the last ten years. As English speakers with C1 level, ten graduates were invited and seven of them were interviewed. Five out of seven of them are currently employed as academic staff at the university and the other two respondents are researchers at other educational institutions in the Czech Republic.

The specific scheme follows seven stages of an interviewing process which includes thermalizing, designing, interviewing, transcribing, analyzing, verifying and reporting (Kvale, 1996). The respondents were told clearly the purpose and process of the interview firstly. The interview outline was settled by a set of topics based on the CIPO (Context-Inputs-Process-Outputs) model (Scheerens, 1990) and been divided into three areas, the experience before the doctoral study of education, the experience during the doctoral study of education and the experience after the doctoral study of education, with differences brought from the doctoral study process. Based on the framework of three periods of experience, the lightly-structured outline of inquiry was generalized in the depth interview (Wengraf, 2001, pp. 111–113). The whole interview was recorded and transcribed then from taped into the written form. The experience and perception of the Ph.D. graduates is generalized as their life stories.

On the basis of the grounded theory, the analysis process was inductively developed (Glaster & Strauss, 2006; Pidgeon & Henwood, 2004). Firstly, the transcribed materials of each graduate were analyzed initially with open coding by two independent and experienced researchers in the first circle and discussed with each other in the second circle. Two analytic procedures are fundamental for generalization of the concepts in the coding process, including the "making of comparisons" and "asking of questions" (Strauss & Corbin, 1990, pp. 62–63). The categories were developed in terms of their properties and dimensions to recognize the relationship between the categories and subcategories systematically. Secondly, axial coding was developed in an organizing scheme including conditions, actions/interactions, and consequences (Strauss & Corbin,

1998, p. 128). However, the frame may extend or limit the vision (Chamaz, 2006, p. 61). By means of the paradigm model, the subcategories are linked into a category in a set of relationships above. Thirdly, the grounded theory was built upon the core categories at a higher, more abstract level of analysis by selective coding. A new life story of the Ph.D. graduates of education is recreated with centralized concern of a general descriptive overview of the study experience (Goodley, et al., 2004). The theory was laid out with the foundation of the combined relationship between categories as well as their properties and dimensions.

3 Findings

The researchers intended to uncover the experience of the Ph.D. graduates during their doctoral studies and after graduation. Being analyzed by open coding in the first circle, axial coding in the second circle and selective coding in the third circle, the categories were generalized as three main activities including "learning methodology of research", "teaching basic subjects of education" and "research for the dissertation" to show the process of learning in the doctoral study programme of education. Furthermore, the model of impact of doctoral study on the professional path of academics is formulated in three themes including "theoretical learning", "pedagogical practice", and "academic research" under two domains of "professional ability" and "scientific disposition".

3.1 Learning process in the doctoral study programme

The experience of studying in the doctoral study programme is generalized in the following chart to show the result of analyzing. The subcategories are related by the scheme including "conditions", "action/interactions" and "categories". And the subcategories are concluded through the coding process of the life stories especially on the studying experience of the doctoral programme of education (see Chart 1). Additionally, the content of interview will be written in italic type in the following explanation of the scheme.

Chart 1
The Scheme of Categories

	Conditions	Actions/Interactions	Consequences
Research for the dissertation	• Primary planning in application process of doctoral study • Compulsory needs to have publications for credits • Supervision by the tutor	• Learning the theory and methodology in need • Consultation with experts specialized in the related area • Attending academic conferences to get feedback	• Anticipated outcomes in publication • Ability to conduct a research project • Getting approved by the committee in the final defence
Teaching basic subjects of education	• Compulsory needs to teach for credits • Limited guidance from experienced teachers • Lack of evaluation system	• Preparing the teaching independently • Cooperating with other colleagues • Learning to behave as a teacher	• Mastering the theory deeper through teaching • Access to the staff community • Preparation of experience for future job
Learning methodology of research	• Compulsory needs to pass the exam for credits • Needs to write dissertation • Lack of knowledge and experience in research • Limited courses and seminars on methodolgy	• Self-learning from literature • Trial-and-error method • Consultation from internal and external teachers • Discussion with other Ph.D. students on the forum of conferences	• Acquiring appropriate methodology of dissertation • Getting approved by the committee in the state exam • Critical thinking of the research project • Finishing the dissertation easily

Category 1: Learning methodology of research

During the studying of the doctoral programme of education, there are several exams to pass for each of the Ph.D. students. One of them is "research methodology". *"The most difficult one was methodology. But I think the most important thing we did was reading a lot of books for what I need for my study."* The study is concentrated on and guided by the needs of dissertation. As the lack of knowledge and experience of research, it is the hardest exam for the students in general. *"It would be much easier if I knew something in advance, because I had to spend a lot of time studying in the library."*

Although some courses are provided in the study programme, it seems to be insufficient for them. *"We didn't have much methodology as Ph.D. students. In the doctoral studies, there was only a one-semester methodology course. The courses were held once in fifteen days. That's all."* The seminar helps simultaneously. *"We had some seminars on research methodology and one subject called 'Methodology'. There was a person who finally came to you and said that you were not good and needed to think more about it. It was the best and only one we had about the methodology. That was the exact date when I started to go the library and read books to find how to do it about methodology actually."* However, the students have to study by their own most of the time. *"The examiner always only gave us some basic information of subjects. It was up to us if we would like to learn more or not."* And the way of learning turns to be self-learning and the trial-and-error method. *"We really had to look for books to read and learn by ourselves. I think 80% of what I learned about methodology was from books. I thought all of us had little knowledge about methodology, so we made a lot of mistakes in our research. We tried every way we found and gave up the wrong ones gradually. That's how we found the right one actually. It was not an easy job. I changed my dissertation at least twice completely."*

In addition to independent learning, the Ph.D. students consult other internal and external teachers specialized in the related areas as well. *"I tried to discuss my project with other teachers of the institute. And they helped me indeed. I always tried to ask them if they had time to discuss with me and they did… So I had to try to contact people at another university and asked help from some people teaching there who focused more on … But the teachers working there didn't really like to help me and they just asked me to read this book and that book. And that's all."* The opportunity to attend the academic conference is also a way to get feedback from the experts and other students. *"We had to go to some conferences. They gave me a lot of feedback but without much information or positive suggestion. They just told me that it could be good or bad but they never know, and it could be good but you will find more things if you think more about it. I think they never tell you directly their opinion about the work. And there were usually seminars for Ph.D. students at the conference. It was great."*

The mastering of methodology increases in proceeding ways of learning. *"I was quite scared about my study at the third time. I was afraid that it would be bad again because it was the final decision. I would stop my studies if it was bad again. However, they said it*

was great on my state exam. I think it was quite easy to answer their questions for me." It is verified to be a positive end of the learning process at least for the dissertation. *"The last year's study and the final defence of my dissertation were quite easy for me to find the right way and do the research as I planned."*

Category 2: Teaching basic subjects of education

For the second category of "teaching basic subjects of education", it is another compulsory task of the Ph.D. students in the doctoral programme of education. *"And we had some task to teach courses for bachelor and master students at the faculty as Ph.D. students. I taught master students of Pedagogy for a whole semester and some other subjects for two hours sometimes". "It was part of the deal to receive the scholarship I think. All of the Ph.D. students taught at least one seminar on other subjects."* In preparing their teaching, the guidance is provided by an experienced teacher of the specific subject. *"In teaching the statistics, the professor gave us the syllabus and we didn't change so much. He told us what to teach and gave us materials he was using in teaching. We used the book written by him. We prepared it each week with his guidance. And we also tested the students at the end of the semester to get passed or failed."* However, there is not always such guidance. *"I prepared the teaching, taught what I wanted, and examined them by myself. Everything was fresh for me so that I had to find a topic, collected all of the information of it and prepared the presentation even I had learned it before."* It is a time-consuming task for Ph.D. students. *"We tried to do what he would do because we didn't have time or experience or knowledge to prepare anything else. So we were rather happy that he gave us all the materials to teach. The teaching was once a week, maybe a 50-minutes lesson. I have to spend at least 50 or longer to prepare it."*

An important change of self-cognition happens during the teaching experience. *"In these three years' study, I experienced a big change of the role from a student to a teacher at the university at least in my mind. At that moment, I knew I had to teach as a Ph.D. student. It was a big problem for me to change my role from a student to a teacher, because I had to be act like a teacher. I was a student as well as a teacher in a period. Although it took a long time to learn how to behave as a teacher, I learned when I started to teach. I started to feel that I was a teacher at the university when I studied the doctoral programme. The experience made you feel like a teacher."* It becomes a prior practice for the future job. *"I think it was necessary to teach at the university as a Ph.D. student studying Pedagogy, because it was only good to have doctoral studies when you wanted to work at the university. So you should try teaching as well. I think we should have some competency in teaching but there were always problems because it doesn't mean you are a good teacher when you are a good researcher."*

However, the result of teaching is lack of evaluation in the doctoral study programme of education as it has not been concluded in the assessment system of the achievement of the Ph.D. students. *"In our programme, we had to prove that we were*

good in research by publication and dissertation. But you didn't have to prove that you were a good teacher without any evaluation system in the programme. Nobody came to my class and evaluated it. I could do what I want. Nobody knows what you do there, even if you did nothing. There was no evaluation system of teachers' performance in teaching. I think the students were upset sometimes because they were always expecting a professional teacher in the class. But we never knew whether we were good or not. We should be qualified and it is extremely important to have good teachers at the university in my opinion."

Category 3: Research for the dissertation

For the third category of "research for the dissertation", the process of connection is presented from the condition of "primary planning in application process of doctoral study" firstly. *"I wrote a plan of my thesis with the aims of my research, what I was trying to do, why it was important to do this research, the theory of it and other aspects. I sent it to the commission. I think they were glad to see my project what was something new and interesting for them. It was an original and new topic for them. They believed that I had to change it because there were a lot of problems in the proposal that was not perfect. But they thought I could make it better. Finally they accepted me easily because it was good to give me a chance to do it and my supervisor had accepted me as her student yet."*

There are some basic subjects of education that have to be examined compulsorily and optionally besides "research methodology", such as the "philosophy of education", "psychology of education", and so on. The Ph.D. students learned the theory and methodology which is related to their own project of dissertation from diverse perspective of these subjects. Additionally, the publication of research outcomes is compulsorily required to get the credit each school year. *"The requirement of publication pushed me to publish works but I would still try to do that even without the requirement. There was no problem for me to finish all of the tasks in publication because I wrote them as my free time activities. I enjoyed it. I think it's necessary to get articles published in journals which would provide some evidence to the academic committee to make the judgment of your research. It was also important for the university that would get money for the publication. For the students, you could really learn how to write academic articles correctly before your dissertation."* It is important for students to do research and get it published under the guidance of a supervisor. *"I always asked my supervisor where to send the article when I finished. That's what we discussed mostly about." "I always sent my articles to my supervisor to ask for her comment. And she usually gave me some suggestions and modified my articles."* There is also research on which they cooperated with their supervisors. *"I had a cooperated article with my supervisor which connected her dissertation and my thesis in the master programme together. We used the same questionnaire and I just combined the result from her schools and mine. It was quite easy to do that because the data were similar thanks to the same questionnaire."*

3.2 Impact of the doctoral study on professional path of academics

Based on the life stories generalized preliminarily from the experience of Ph.D. graduates, two domains are categorized under three themes of the doctoral study of education. On the one hand, the domain of professional ability is the visible identity in which concludes the knowledge and skill achieved from the doctoral study. On the other hand, the domain of scientific disposition is the invisible identity including the character and value acquired from the doctoral study. Meanwhile, three themes are specifically the responsibilities of the Ph.D. students involved in the doctoral study programme of education. Firstly, the learning responsibility is basically required through the process especially on self-learning. Secondly, the teaching experience is necessarily needed within the study programme as Ph.D. students as well as university teachers. Thirdly, the academic research is essentially concentrated on conducting the dissertation. The theory is provided as follows to show the impact of the doctoral study programme of education on the perspective of the Ph.D. graduates.

Chart 2
Model of Impact on the Professional Path of Academics from the Doctoral Study of Education
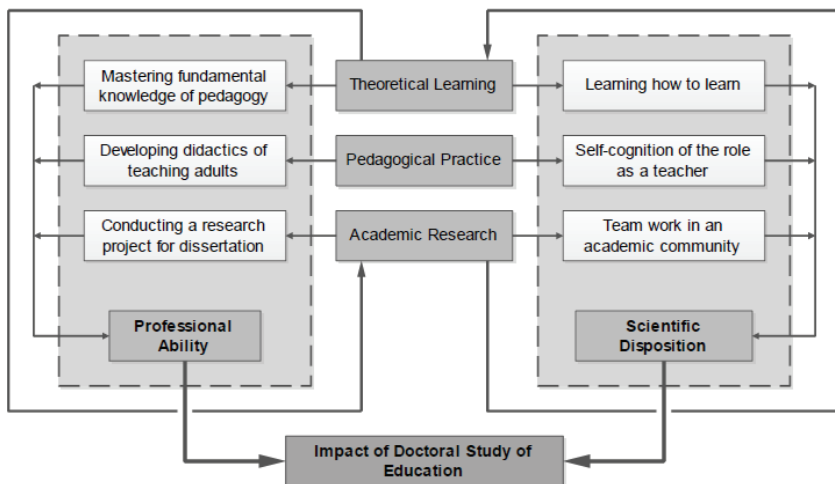
There are two distinct stages in most doctoral programmes: coursework and dissertation (West et al., 2011). For the doctoral study programme of education, there is

another important process involved which is the teaching experience. In processing the three responsibilities of learning, teaching and writing the dissertation, there are three contents of study including the "theoretical learning", "pedagogical practice" and "academic research" in the doctoral study programme of education. Under the theme of "theoretical learning", the professional ability of "mastering fundamental knowledge of pedagogy" is one essential category in evaluation of the impact of the doctoral study while the scientific disposition of "learning how to learn" is the other identity. Under the theme of "pedagogical practice", the categories are the ability of "developing didactics of teaching adults" and the disposition of "self-cognition of the role as a teacher". Besides, the criteria of evaluation are concerned with the ability of "conducting a research project for dissertation" and spiritual character of "team work in an academic community".

The two domains show the visible and invisible identities brought from the doctoral study programme of education to the Ph.D. students and then reflected in their career path to the professoriate. It is the advanced period of evaluation the impact of doctoral study programme on the perspective of the Ph.D. graduates compared with the concept of "academic match" defined by Hoskins and Goldberg which is compared to the correspondence between "student goals and reasons for pursuing the degree" and "the program focus and the curriculum" (2005, p. 183). It is also proved to be an appropriate way to evaluation of the doctoral programme of education.

4 Discussion

In the previous research, the Ph.D. students of education are believed that they have little formal training in education research before they started their doctorate, with their educational background in other disciplines or on educational practice (Labaree, 2003). In this case, the concept of "doctors of education" is defined as stewards of both the field of study and the enterprise of education (Richardson, 2003). This study is consistent with the assumption that the doctorate is primarily for research training. The doctoral candidates should be expected to do creative scholarly work and outline what they feel are the psychological, theoretical-methodological, and institutional contexts required for creative work (Bargar & Duncan, 1986). Centralized by the aim of preparing the future academics, the knowledge, ability and value are supposed to be devoted in cultivating the Ph.D. students as well as the educational researchers.

The key objective was identified by three core activities including learning, teaching and research. In each of these three responsibilities, the significance was emphasized on learning of research methodology, teaching of basic subjects of education, and research for their dissertations based on the life stories of Ph.D. graduates. Therefore, the process of learning in the doctoral study programme of education was explained from the "condition", "action/interaction" and "consequences" specifically during the

"learning methodology of research", "teaching basic subjects of education" and "research for the dissertation". Firstly, "learning methodology of research" is one of the most significant parts of the doctoral training process. The emerging literature on preparing doctoral students in education emphasized methodological sophistication as the key to improving education research. Based on a collection of anecdotes and experiences, simplistic approaches to methodology hinder deep understanding of what it means to make and justify a claim about educational phenomena (Schoenfeld, 1999). Secondly, doctoral persistence increases within the programmes that recognize the challenges associated with transitioning from structured coursework to unstructured dissertation writing by building a connection between coursework and skills needed to execute the dissertation (de Valero, 2001; Spaulding, L. S. & Rockinson-Szapkiw, A. J., 2012). Mullins and Kiley found that for examiners there was a tacit link between candidates' knowledge of the field and their ability to do substantive, well-justified research (2002). Back to the basic assumption of this study, the doctoral dissertation is the capstone to formal academic training of the doctoral study programme of education. There is an emerging consensus that the perceived lack of quality in education research stems from problems with doctoral preparation. And it is essential to improve the quality of doctoral preparation by increasing the efficiency of connection and transformation from the learning activities to the research outcomes.

As a conclusion, the doctoral education is a key means of preparation of academics. This study suggests criteria and formulates a model to evaluate the impact of the doctoral study of education and reports the result that examined the perspective of the Ph.D. graduates of education at Palacký UniversityPalacký University Olomouc. It turned out that the Ph.D. students are required to develop deep understanding of pedagogy as a discipline, to recognize their role as teachers as well as researchers. And the self-cognition process prepares the Ph.D. students on the way to be the academics in balancing the responsibilities of teaching, research and others. Based on the empirical research, the impact of the doctoral study of education is formulated by means of six major and interrelated categories which significantly influenced the professional path of the Ph.D. graduates: mastering fundamental knowledge of pedagogy, developing didactics of teaching adults, conducting a research project for dissertation, learning how to learn, self-cognition of the role as a teacher, team work in an academic community. The first three categories are the criteria of professional ability while the others are the criteria of scientific disposition. The impact of the doctoral study of education is evaluated by these two domains under three themes as the conclusion. In the following research, the model will be the fundamental criteria in evaluation the perspective of other stakeholders involved in the doctoral study programme of education. The longitude interview of the Ph.D. graduates is expected to verify and modify the model in the future research.

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Contact:
Mgr. Yanyan Li
doc. PhDr. Jana Poláchová Vašťatková
Institute of Education and Social Studies
Faculty of Education, Palacký University
Žižkovo nám. 5
771 40 Olomouc
E-mail: liyanyan.up@gmail.com; jana.polachova@upol.cz

Joined-up Linear Handwriting in Elementary Grades in the Context of Postponed Compulsory School Attendance

Martina Fasnerová

Abstract

The paper presents a long-term research study carried out in primary schools in Olomouc. The author introduces only a single part of this extensive research study performed in 2009 – 2013. The paper presents an assessment of joined-up linear handwriting in the context of postponed school attendance in selected quality-based categories.

Keywords: joined-up linear handwriting, postponed school attendance, primary school, teaching of handwriting, quality features of handwriting.

Introduction

One of the typical human means of capturing, analysing and transferring information and one's own experience to other people is handwriting. This is a human product without which the human race would not have reached such development in the society. Even today, through preserved written relics we can learn about new civilizations, analyse human and world progress and at the same time learn about ourselves. Through handwriting each individual acquires education and extends their own knowledge.

With respect to the fact that handwriting has an indispensable role in the development of literature as such, it is also a part of the level of education of each nation and expresses the nation's identity. Handwriting is even introduced to very young children. Handwriting is determined by graphomotor movement. Functional coordination of handwriting is ensured by the central nervous system and thus it can be assumed that certain mental aspects of an individual are identically projected into the graphical form of language, i. e. handwriting. It is not an intention of this paper to analyse handwriting in terms of graphology and assess handwriting in the context of the mental condition of an individual because such diagnostics can only be performed after complete mental maturation of an individual, i. e. in adulthood. The aim of the paper is to focus on current issues associated with the handwriting of primary school pupils, i. e. factors that can have an influence on their success in this area.

1 Effect of postponed school attendance on the handwriting of primary school pupils

One of the factors that we encountered and that could influence the handwriting of primary school pupils is postponed compulsory school attendance by one year. In the Czech Republic, enrolment in basic schools is governed by Act No. 561/2004 Coll. on preschool, basic, secondary, higher professional and other education as last amended (hereinafter referred to as the Education Act). As far as legislation is concerned, postponed school attendance is covered by the Education Act, namely by Sections 36–38, Clause 1 of Act No. 561/2004 Coll.

Postponed school attendance by one year is very important as this is a preventive measure that should protect a child that is immature for education against academic failure (Klégrová, 2003).

Prior to school enrolment a child should be well equipped with competencies in many areas of development including the areas of motor skills and graphomotor skills that have a significant effect on the level and training of elementary handwriting in grade one of basic school. In this context, we were interested in the ways postponed school attendance influences the success of elementary grade pupils in practicing joined-up linear handwriting.

The purpose of the present paper is to perform an analysis of current linear joined-up handwriting taught to elementary grade pupils in the context of postponed school attendance by one year. Pupils acquire experience in the writing technique or writing automation during classes in primary school. The basics of graphomotor skills are built already during pre-primary education. The aim of the paper was to compare and analyse the factors that have an effect on the quality of pupils' handwriting. These factors

include for example the level of graphomotor skills acquired in kindergarten and the effect of postponed school attendance on problem-free enrolment in basic education.

As far as handwriting is concerned, various letters or numerals consist of one or more elements that differ not only in their shape but also in their graphical execution. For these reasons it is of vital importance for a beginning writer to first learn these elements of numerals and letters and only then the whole shapes and their linkage.

"Handwriting originates as a trace of hand movement, which is in essence circular." (Penc, 1968, 24) This movement produces circles that are prolonged in various ways to produce ovals.

In case of joined-up linear handwriting quality-based and quantity-based handwriting elements can be assessed. In this paper we will not deal with quantity elements, i. e. handwriting speed because this category appears irrelevant in terms of our research. Instead, we will describe selected elements of quality handwriting features, i. e. only those that appeared topical for the purposes of our assessment in comparison with a different handwriting model, i. e. Comenia Script, which is included in a wider research intent whereas this paper presents only partial research outcomes.

2 Quality-based handwriting features

Penc (1968), Křivánek, Wildová (1998), Fabiánková, Havel, Novotná (1999) as well as Mlčáková (2009) refer to the following quality-based handwriting features:
- Letter shape,
- Handwriting size,
- Proportionality of handwriting size,
- Regularity of handwriting size,
- Joined-up nature and linkage of handwriting,
- Handwriting inclination,
- Handwriting density and rhythmization,
- Neatness of written documents.

Jarmila Wagnerová (1998) adds pressure exerted on the writing pad.

Proportionality of handwriting size

According to Křivánek and Wildová (1998, 73) *"the ratio between letters of medium height (i, e,…), upper length (l, h,…) and lower length (y, j,…) should be 1 : 1 : 1."*

This is a height ratio between letters. It can be assumed that the size of upper and lower loops is identical with the medium letter height.

Beginning writers tend to prolong upper or lower loops. Mlčáková (2009, p. 26) ranks handwriting proportionality and regularity among the categories for quality assessment. *"Regularity is understood as maintaining identical heights in the same handwriting types".*

On the contrary, Penc (1968) classifies letter regularity as an independent handwriting quality.

Regularity of handwriting size

Handwriting regularity is understood as maintaining the same height ratios between letters.

Most authors (Hřebejková, 1987, Křivánek, Wildová, 1998, Doležalová, 1998, Mlčáková, 2009) who deal with initial writing recommend to provide auxiliary lines at a height of 5–6 mm for the medium letter height in the elementary grade in order to improve the training of handwriting regularity. However, this is not recommended for all pupils, only those with difficulties.

Joined-up nature and linkage of handwriting

The joined-up nature of words has been present throughout the whole period of development lasting for a thousand years. To increase the effectiveness of handwriting in the gothic period writers tried to develop practical ways of joining letters. Connectedness or joined-up nature and linkage of letters present a significant requirement in order to preserve legibility and neatness. Almost all lowercase letter can be written using a single stroke. Only the letter "x" requires two strokes. In the uppercase alphabet, all letters except "K, T, X, F" are also single-stroke. The mentioned uppercase letters are written using two strokes, the letter F requires three strokes.

Doležalová (1998) deals with the issue of writing letters with diacritical marks. The author recommends immediate writing of diacritical marks, i. e. interrupt the word, write a diacritical mark and continue with the word. As suggested by the author, however, the linkage of the word can be disrupted. Therefore, at first, writers must be taught to write words without diacritical marks, only after movement automation easier linkage takes place.

On the contrary, Mlčáková (2009) is inclined to think that writers should first learn to write the whole word and only after that check its correctness by means of autodictation. Interrupting the linkage of letters with diacritical marks is recommended by the author only in case of dysgraphic pupils.

Křivánek, Wildová (1998) recommend not to overestimate the linkage of words. Especially in beginning writers (grade one of basic school) they recommend to approach

this issue on an individual basis. Under no circumstances should writers be forced to maintain the joined-up nature of the whole word to the detriment of further motivation.

Some letters can be classified as connecting, some as non-connecting. Uppercase hand-written letters are always connected from the right-hand side as they are used to begin a word or a sentence. The letters T, F, P are non-connecting. For letters that end with a left stroke (letter B), connecting to another letter is performed using the so-called back (cover) strokes (Penc, 1968). Back strokes do not deform writing; on the contrary, they contribute to improved legibility.

Neatness of written documents

Overall neatness of written documents should be held in mind by writers. Beginning writers who still tackle the writing technique, as suggested by Křivánek, Wildová, (1998) Doležalová, (1998), Mlčáková (2009) should maintain handwriting from the beginning to the end of the line so that their handwriting is legible and neat. With increasing age of a young writer and with more writing experience the neatness of written documents tends to decrease. This is especially apparent by implementing the elements of block letters into handwriting. In her surveys, this fact was observed by the graphic designer Radana Lencová during the development of Comenia Script handwriting, which was proposed as an alternative to the existing handwriting in 2010.

3 Definition of research area

Since 2010 primary schools providing basic education have been able to use a hand-writing model for elementary training of handwriting named Comenia Script. In this context we defined the research area, i.e. whether the previous standard of joined-up linear handwriting is suitable for pupils in primary school. And also, to what extent is the prescribed standard observed by elementary grade pupils with respect to postponed school attendance by one year.

3.1 Research preparation

During the first stage of the research we prepared a theoretical basis by studying Czech as well as foreign literature on this topic. The study of relevant research summaries revealed that recently there has not been a research study in the Czech Republic that would assess quality-based features of joined-up linear handwriting by means of quantity-based research methods. For these reasons we defined the criteria according to which the research was carried out.

3.2 Formulation of research problem

Based on a literary review and having revealed the absence of empiric results the research area was narrowed down and the main research problem was formulated: Is joined-up linear handwriting a suitable model for teaching elementary handwriting to primary school pupils?

This paper does not describe the whole extent of the research in this area but rather a single part thereof, i.e. assessment of quality-based handwriting features in the context of one variable. i.e. postponed school attendance by one year.

3.3 Objectives of research study

The main objective of the research study was to assess and analyse the degree of observance the presented handwriting standard during an assessment of quality-based features of joined-up linear handwriting by means of quality-based research methods.

Therefore, the key question of the research study was whether the current model of joined-up linear handwriting is suitable for today's pupils and whether it corresponds with the requirements of today's day and age. This question was further particularized by partial questions that served as a specific guidance for the selection and modification of research tools and analysis of the data obtained:

· Does postponed school attendance influence the legibility of pupils' handwriting?

3.4 Research hypotheses

Based on the formulation of the research objective and partial objectives the following hypotheses were formulated.

Material hypothesis No. 1: The joined-up nature and connectedness of various graphemes in the handwriting of an individual with postponed compulsory school attendance by one year shows greater errors than the joined-up nature and connectedness of various graphemes in the handwriting of an individual without postponed compulsory school attendance by one year.

$2 H_0$: The joined-up nature and connectedness of various graphemes in the handwriting is not dependent upon postponed compulsory school attendance by one year.

$2 H_A$: The joined-up nature and connectedness of various graphemes in the handwriting is dependent upon postponed compulsory school attendance by one year.

Material hypothesis No. 2: Proportionality and regularity of various graphemes in the handwriting of an individual with postponed compulsory school attendance by one year shows greater errors than the joined-up nature and connectedness of various

graphemes in the handwriting of an individual without postponed compulsory school attendance by one year.

3 H_0: Proportionality and regularity of various graphemes in the handwriting is not dependent upon postponed compulsory school attendance by one year.

3 H_A: Proportionality and regularity of various graphemes in the handwriting is dependent upon postponed compulsory school attendance by one year.

Material hypothesis No. 3: Individuals with postponed compulsory school attendance by one year report a higher degree of neatness of written documents than individuals without postponed compulsory school attendance by one year.

4 H_0: The degree of neatness of written documents is not dependent upon postponed compulsory school attendance by one year.

4 H_A: The degree of neatness of written documents is dependent upon postponed compulsory school attendance by one year.

3.5 Preliminary research and development of research tools

The primary research method was a test probe carried out through a non-standardized interview with teachers of randomly selected schools. During 2005–2007 when teachers started to prepare for the development of School educational programmes, a group of teachers was formed in Olomouc that attempted to address the issue of handwriting of primary school pupils. The data acquired through interviews with basic school teachers during one year were included in the analysis only as a sort of an input probe (screening) serving to reveal the opinions about and attitudes to the research issue. These findings were used for easier orientation in the issue and in order to develop a group of teachers and pupils for a longitudinal research study, the aim of which was to assess the handwriting of specific pupils by means of quality-based handwriting features that present the basic research tool.

We addressed teachers from 10 basic schools who were also the coordinators of the development of School educational programmes and who taught in primary school. To improve the teaching process and to follow the School educational programme, their objective was to assess written documents of their pupils in their classes. As there were numerous problems and issues, a team of teachers was formed to deal with the assessment of quality-based features of various letters and written documents of pupils on a systematic basis for a period of 5 years (i. e. the whole primary school attendance).

For purposes of objectiveness of assessment of joined-up linear handwriting of pupils, the assessors were selected by the snowball technique. According to Hendl (2008) this is a popular selection method in quality-based research, during which a researcher selects a few individuals for assessment and these individuals add on other

assessors until there is a group of selected individuals who are in agreement in terms of assessment.

A total of 10 handwriting samples of pupils were originally assessed by 3 assessors whose task was to observe individual groups of handwriting, i. e. specifically determined categories. Based on the snowball technique principle, eventually four assessors were selected, all teachers in primary school.

The assessed written documents were also considered for other aspects that have crucial importance with respect to the research. These aspects were also used as category variables in the hypotheses of the research. One of these variables was postponed compulsory school attendance by one year, i. e. issue addressed by this paper.

The data for the assessment of quality-based features of handwriting of primary school pupils were processed by the **Mann-Whitney U-test** quantity-based statistical method.

For the formulated null and alternative hypotheses we calculated a test criterion used to confirm or disprove the hypotheses. Significance testing was performed at a significance level of $\alpha = 0.05$.

To determine the degree of agreement the **Kendall's coefficient of concordance** was applied. The Kendall's coefficient uses values from 0 to +1. The higher the values the more agreement there is between the ranks compared (Chráska, 2007).

In assessing and processing multiple results it was necessary to well 'represent' the measured values, i. e. characterize them in an apt and brief way. For these purposes we used the **arithmetic mean** and **median**. Through the median we ranked the values by their size and the sample was divided into two parts. In case there was no statistical data significance, the results were further interpreted using the median.

The obtained data were analysed and processes using the Excel and Statistica 12 programmes and converted into graphs and tables.

3.6 Research sample

To assess the obtained data it is necessary to outline factual data used during the process of assessment.

In the research we worked with 98 respondents (of elementary grades), whose average age was 7.5 years. The youngest respondent was 7 years old; the oldest respondent was 8 years and 4 months old. Out of the total number of respondents, 53 were girls, i. e. 54.08%, and 45 were boys, i. e. 45.92%

Table 1
Age of respondents

| Category | All Groups Frequency table: pohlavi (Data Fasnerová.sta) | | | |
	Count	Cumulative Count	Percent	Cumulative Percent
D	53	53	54,08163	54,0816
CH	45	98	45,91837	100,0000
Missing	0	98	0,00000	100,0000

Another variable was **postponed school attendance** by one year. Out of the total number of 98 respondents, 11 pupils had postponed school attendance, i. e. 11.22%, and 87 were without postponed school attendance, i. e. 88.77%, the total number of respondents being 98.

Table 2
Postponed school attendance

| | All Groups Frequency table: Odklad (Data Fasnerová.sta) | | | |
	Count	Cumulative	Percent	Cumulative
11	11,22449	11,2245	A	11
98	88,77551	100,0000	N	87
98	0,00000	100,0000	Missing	0

3.7 Hypothesis proving

The formulated hypotheses were verified for statistical significance and the results were commented on in detail.

Material hypothesis No. 1: The joined-up nature and connectedness of various graphemes in the handwriting of an individual with postponed compulsory school attendance by one year shows greater errors than the joined-up nature and connectedness of various graphemes in the handwriting of an individual without postponed compulsory school attendance by one year.

Table 3

Handwriting size, proportionality and regularity, joined-up nature and connectedness versus postponed school attendance by one year by grades

variable	Rank Sum A	Rank Sum N	U	Z	p-value	Z adjusted	p-value	Valid N A	Valid N N	2*1sided exact p
Mann-Whitney U Test (w / continuity correction) (Data Fasnerová.sta) By variable Odklad Marked tests are significant at p <,05000										
VP1	520,5000	4330,500	454,5000	-0,264475	0,791414	-0,29642	0,766912	11	87	0,789911
VP2	537,0000	4314,000	471,0000	-0,078780	0,937208	-0,08773	0,930089	11	87	0,938079
VP3	561,0000	4290,000	462,0000	0,180068	0,857099	0,20089	0,840787	11	87	0,859049
VP4	614,5000	4236,500	408,5000	0,782171	0,434115	0,85899	0,390347	11	87	0,435983
VP5	564,0000	4287,000	459,0000	0,213831	0,830679	0,23428	0,814767	11	87	0,832969
UM1	564,5000	4286,500	458,5000	0,219458	0,826293	0,24924	0,803172	11	87	0,824314
UM2	614,5000	4236,500	408,5000	0,782171	0,434115	0,86500	0,387038	11	87	0,435983
UM3	648,5000	4202,500	374,5000	1,164816	0,244094	1,28817	0,197688	11	87	0,245499
UM4	592,5000	4258,500	430,5000	0,534577	0,592942	0,58941	0,555588	11	87	0,593774
UM5	566,5000	4284,500	456,5000	0,241967	0,808806	0,26759	0,789015	11	87	0,807067
J1	511,5000	4339,500	445,5000	-0,365764	0,714542	-0,88079	0,378431	11	87	0,714035
J2	478,5000	4372,500	412,5000	-0,737154	0,461029	-1,29826	0,194199	11	87	0,462796
J3	467,5000	4383,500	401,5000	-0,860951	0,389266	-1,42042	0,155486	11	87	0,391223
J4	518,0000	4333,000	452,0000	-0,292611	0,769820	-0,34102	0,733089	11	87	0,772853
J5	527,0000	4324,000	461,0000	-0,191322	0,848273	-0,21857	0,826982	11	87	0,850338

Based on a statistical calculation according to the Mann-Whitney U-test and the Kendall's coefficient of concordance, it can be concluded that in terms of the joined-up nature and connectedness in the context of postponed school attendance by one year, there was no statistical significance by various grades (grade 1 to 5). In this case the null hypothesis H_0 is accepted and the alternative hypothesis H_A is rejected. The joined-up nature and connectedness of various graphemes in the handwriting of an individual with postponed school attendance by one year does not show greater errors than the joined-up nature and connectedness of various graphemes in the handwriting of an individual without postponed school attendance by one year.

The results of assessing the joined-up nature and connectedness of pupils' handwriting were very positive in relation to postponed school attendance by one year. The median oscillated around the value of 1. The boxplot was also around 1 in both assessed groups. In pupils without postponed school attendance the variance of respondents was around 1–3 but in pupils with postponed school attendance the variance was around 1. With a large degree of probability, the joined-up nature and connectedness does not present any problems in handwriting to primary school pupils, quite the contrary. In this category of assessment they achieved the best results. Also in this case it can be confirmed that postponed school attendance by one year clearly facilitates their readiness for school load.

Material hypothesis No. 2: Proportionality and regularity of various graphemes in the handwriting of an individual with postponed compulsory school attendance by one year shows greater errors than the joined-up nature and connectedness of various graphemes in the handwriting of an individual without postponed compulsory school attendance by one year.

Table 4

Handwriting inclination, density and rhythmization and neatness of written documents versus postponed school attendance by one year by grades

variable	Mann-Whitney U Test (w/ continuity correction) (Data Fasnerová.sta) By variable Odklad Marked tests are significant at p <,05000									
	Rank Sum A	Rank Sum N	U	Z	p-value	Z adjusted	p-value	Valid N A	Valid N N	2*1sided exact p
Sk1	554,0000	4297,000	469,0000	0,101288	0,919322	0,134144	0,893289	11	87	0,920438
Sk2	592,0000	4259,000	431,0000	0,528950	0,596840	0,683513	0,494283	11	87	0,601507
Sk3	510,0000	4341,000	444,0000	-0,382645	0,701983	-0,467439	0,640186	11	87	0,705757
Sk4	545,5000	4305,500	477,5000	0,005627	0,995510	0,006475	0,994834	11	87	0,991146
Sk5	542,5000	4308,500	476,5000	-0,016881	0,986531	-0,018901	0,984920	11	87	0,982292
H1	543,5000	4307,500	477,5000	-0,005627	0,995510	-0,006164	0,995082	11	87	0,991146
H2	457,5000	4295,500	402,5000	-0,379636	0,704216	-0,418850	0,675326	10	87	0,703986
H3	517,0000	4334,000	451,0000	-0,303865	0,761231	-0,340737	0,733302	11	87	0,764364
H4	548,0000	4303,000	475,0000	0,033763	0,973066	0,038984	0,968903	11	87	0,973441
H5	534,0000	4317,000	468,0000	-0,112543	0,910393	-0,129619	0,896868	11	87	0,911631
Upr1	553,5000	4297,500	469,5000	0,095661	0,923790	0,116024	0,907633	11	87	0,920438
Upr2	515,0000	4336,000	449,0000	-0,326374	0,744142	-0,381969	0,702484	11	87	0,747468
Upr3	589,0000	4262,000	434,0000	0,495188	0,620468	0,591314	0,554310	11	87	0,624966
Upr4	559,0000	4292,000	464,0000	0,157560	0,874804	0,183125	0,854700	11	87	0,876520
Upr5	538,0000	4313,000	472,0000	-0,067526	0,946163	-0,076989	0,938632	11	87	0,946911

Based on a statistical calculation according to the Mann-Whitney U-test and the Kendall's coefficient of concordance, it can be concluded that in terms of neatness of written documents in the context of postponed school attendance by one year, there was no statistical significance by various grades (grade 1 to 5). In this case the null hypothesis H_0 is accepted and the alternative hypothesis H_A is rejected. Again it can be stated that the median of the respondents' results was around the value of 2; the boxplot was rather between 1–2, both in individuals with postponed school attendance by one year and individuals without postponed school attendance by one year. Again it can be concluded that handwriting proportionality and regularity does not present any problems to the pupils. Again, after postponement of school attendance by one year the pupils are ready in terms of this category.

Material hypothesis No. 3: Individuals with postponed compulsory school attendance by one year report a higher degree of neatness of written documents than individuals without postponed compulsory school attendance by one year.

Table 5

Handwriting inclination, density and rhythmization and neatness of written documents versus postponed school attendance by one year by grades

variable	Rank Sum A	Rank Sum N	U	Z	p-value	Z adjusted	p-value	Valid N A	Valid N N	2*1sided exact p
Sk1	554,0000	4297,000	469,0000	0,101288	0,919322	0,134144	0,893289	11	87	0,920438
Sk2	592,0000	4259,000	431,0000	0,528950	0,596840	0,683513	0,494283	11	87	0,601507
Sk3	510,0000	4341,000	444,0000	-0,382645	0,701983	-0,467439	0,640186	11	87	0,705757
Sk4	545,5000	4305,500	477,5000	0,005627	0,995510	0,006475	0,994834	11	87	0,991146
Sk5	542,5000	4308,500	476,5000	-0,016881	0,986531	-0,018901	0,984920	11	87	0,982292
H1	543,5000	4307,500	477,5000	-0,005627	0,995510	-0,006164	0,995082	11	87	0,991146
H2	457,5000	4295,500	402,5000	-0,379636	0,704216	-0,418850	0,675326	10	87	0,703986
H3	517,0000	4334,000	451,0000	-0,303865	0,761231	-0,340737	0,733302	11	87	0,764364
H4	548,0000	4303,000	475,0000	0,033763	0,973066	0,038984	0,968903	11	87	0,973441
H5	534,0000	4317,000	468,0000	-0,112543	0,910393	-0,129619	0,896868	11	87	0,911631
Upr1	553,5000	4297,500	469,5000	0,095661	0,923790	0,116024	0,907633	11	87	0,920438
Upr2	515,0000	4336,000	449,0000	-0,326374	0,744142	-0,381969	0,702484	11	87	0,747468
Upr3	589,0000	4262,000	434,0000	0,495188	0,620468	0,591314	0,554310	11	87	0,624966
Upr4	559,0000	4292,000	464,0000	0,157560	0,874804	0,183125	0,854700	11	87	0,876520
Upr5	538,0000	4313,000	472,0000	-0,067526	0,946163	-0,076989	0,938632	11	87	0,946911

Mann-Whitney U Test (w/ continuity correction) (Data Fasnerová.sta) By variable Odklad. Marked tests are significant at p <,05000

Based on a statistical calculation according to the Mann-Whitney U-test and the Kendall's coefficient of concordance, it can be concluded that in terms of neatness of written documents in the context of postponed school attendance by one year, there was no statistical significance by various grades (grade 1 to 5). In this case the null hypothesis H_0 is accepted and the alternative hypothesis H_A is rejected. Neatness of written documents of individuals with postponed school attendance is not dependent upon the grade of the pupil. Despite the fact that the results do not show statistical dependence, the median of the category of neatness of written documents of pupils in grades 1 to 5 has the value of 1. In grades 1 and 2 no differences in handwriting performance was observed. In grades 4 to 5 the boxplot of individuals with postponed school attendance by one year is between the values of 1 and 2, whereas the boxplot of individuals without postponed school attendance by one year is between 1 and 3. These results imply that postponed school attendance by one year clearly helps pupils in coping with school load.

Conclusion

As suggested by the above specified evidence of the hypotheses formulated in the research, we arrived at very interesting conclusions and findings. Our assumptions and generally accepted opinions about weak performance of pupils in primary school in the area of handwriting considerably deviating from the standard level have not been confirmed. We analysed joined-up linear handwriting from more perspectives, however, for the purposes of this paper we focused only on the assessment of selected quality-based categories with respect to postponed compulsory school attendance by one year.

In our research survey we verified our hypotheses using the STATISTICA 12 programme according to the Mann-Whitney U-test and the Kendall's coefficient of concordance as described in the methodology part. In most cases we accepted H_0, i.e. the null hypothesis because there were no significant differences in the statistically verified hypotheses.

The results of the research study imply that the joined-up nature and connectedness, proportionality and regularity and neatness of handwriting are not dependent upon postponed school attendance by one year. The fact that in some categories there is a statistically significant result, i.e. a problem for the pupils with training joined-up linear handwriting, has not been confirmed.

However, our assumption has been confirmed that the model of linear handwriting need not be changed because most primary school pupils are within the standard or slightly deviate from the standard. This suggests that the methods of teaching handwriting in basic schools according to the linear handwriting model need not be changed.

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Contact:
PhDr. Martina Fasnerová Ph.D.
Department of Primary and Pre-primary Education
Faculty of Education, Palacký University, Olomouc
Žižkovo nám. 5
779 00 Olomouc
Telephone: 00420-585 635 110
E-mail: martina.fasnerova@upol.cz

Reviews and short reports

Access and Quality of Special Educational Needs Service Delivery in Nigeria by prof. Florence Banku Obi

James E. Olayi

In Ajobiewe, T. A., & Adebiyi, B. A. Eds. (2013). *Access and quality of special educational needs service delivery in Nigeria.* Ibadan, Nigeria: Glory-Land Publishing Company.

Prof. Florence Banku Obi is a scholar of great repute. A professional special educator, who holds the views that 'what is worth doing is worth doing well'. This philosophy of hers is boldly articulated in the content of this paper.

In line with the global best practices and current trend in

Educational service delivery for persons with disabilities around the world, the writer explored the world wide clarion call to increase access and quality of education for the Nigerian special needs persons in particular and the world in general. She acknowledged the role of parents as stakeholders in the education sector as well as key players through the taxes they pay.

The global trend with regards to the need to increase access and quality in the provision of special educational services to millions of special needs children across the world is an urgent task and an obligation to nations that aim and mean well for their children and leaders of tomorrow. Referencing to Education For All declaration and the Salamanca Statement and Framework for Action, (UNESCO, 1994), the author presented a debatable ground to stakeholders in the education sector looking at the

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James E. Olayi

Nigerian scenario on the access to quality of educational service delivery and special needs children in Nigeria.

Forecasting into the future of access and quality in the provision of special education needs in Nigeria, she presented to readers a background to the educational policies and philosophy as they relate to education of Nigerian special needs children. The view of the author as portrayed in this article is that the philosophy and policy of special needs education in Nigeria sees education as 'instrument par excellence' for effecting national development (NPE, 1981, 1988, 2004). To buttress her point, the author provided an extract of a section of the policy which pictures the nation's philosophy of education with regards to special needs education. For instance, she observed that section 1 subsection 4 c of the 1988 and 2004 policy documents stated that "every Nigerian child shall have a right to equal educational opportunities irrespective of any real or imagined disabilities, each according to his or her ability". Whereas section 1 and section 5c of the philosophy states that "the Nigeria philosophy of education shall be based on the provision of equal access to educational opportunities for all citizens of the country across board both in and out the normal school system". Beautiful and promising as the philosophy appeared to hold for all Nigerians including the special needs children, the author noted some flaws with particular regards to implementation and observed some reservations on the sincerity of Government especially in Nigeria and her agencies responsible for the implementation of these well articulated policies. With pessimisms, the writer remarked that the policy and philosophy of Nigeria education is a laudable one and shall be a welcoming development if and whenever this shall be actually implemented upon for the benefits of Nigerian disabled children.

Again, presenting readers with more details on the education policy and philosophy of Nigeria, the author applauded the contents of sections referring to the special education services and programmes in Nigeria. The paper insisted that the contents of the policy are marred with several contradictions particularly to inclusion, integration as well as the use of special units and classes in regular schools.

Perhaps as a personal opinion or based on evidence in the field and professional experience, the author queried with indignation the idea by which Nigeria and many African countries education policies are informed and influenced by external drives rather than internal considerations and variables that may be stemming from the context of our own culture and social orientation.

On the current trend and best practices, the writer agreed wholeheartedly to the fact that inclusive education is the ideal option of making education accessible to the special needs children for better academic and social integration thereby opting out of segregation and institutionalization.

Other pertinent issues raised and ironed out in the paper included question of access and quality, the issue of best practices in special and general education, forging a collaborative partnership in special education service delivery, Virtual library and ac-

cess to special needs service provision, Technologies and persons with special needs, Legislation and access to special education service provision, Government efforts at access and quality among others.

In rounding off this discourse, the writer expertly drew the attention of all readers and professionals of the noble field of special needs education to the fact that the question of access and quality in the provision of special education services to the special need children is never synonymous with building more special schools or expanding existing ones nor merely placing special needs children in regular schools and classrooms but rather a total rethink, careful planning, adequate and appropriate funding, provision of basic infrastructure and material, Removal of all forms barriers, An access library, Access to appropriate technologies and a competitive curriculum that would eventually earn for the special needs child a recognition in the society.

Finally, the author sounds a note of warning to all on the danger of politicisation of these vital issues at the detriment of the teaming population of special needs children waiting to better their lives from this approach to educational service delivery.

Contact:
James E. Olayi
Institute of Special Education
Faculty of Education, Palacký University
Žižkovo nám. 5
771 40 Olomouc
Czech Republic

Social Inclusion and the Challenges/ Opportunities Facing Persons with Special Needs in our Community by A. I. Ajobiewe

Ewa James Abua

A. I. Ajobiewe, Ph.D is a lecturer at the Federal College of Education (Special), Oyo, Oyo State, Nigeria. She has published many articles at Local and International Journals.

In this write up, the author without mincing words x-rayed the fact that the special needs persons over the years have been excluded to a greater extent from many facets of the societal organizations, gatherings or in the decision making processes. Also, they (the special needs persons) do not get equal attention as compared to the non disabled in terms of education provision, adequate and appropriate personnel, facilities, training and/ or job placement. Therefore, the idea of social inclusion is a bold step at arousing the consciousness of stakeholders, professionals concerned with services provision, non- governmental organizations, religious and philanthropic bodies toward enhancing/ensuring the wellbeing of the special needs persons in our communities.

The author upholds that social inclusion emphasizes on issues such as access to services, good social network networks in terms of relationships, interactions and transactions, decent housing, adequate information and supports, as well as the ability to exercise basic rights. Hence, working for social inclusion implies working towards pro-

viding equal opportunities for everyone. The author then pointed out that a person or group of individuals is/are said to be socially excluded when they experienced any or all of the following:

- Unemployment
- Ignorance/negative attitudes
- Inadequate income
- Difficulties in participating in decision making situations such as community groups, local committees, at local and national government as well as disfranchisement.

The author bare out her mind that the special needs individuals in the Nigerian communities are beclouded with poverty, unemployment, ignorance/negative attitude, lack/inadequate and/or inappropriate educational facilities, poor public health care facilities and many other issues which help to promote social exclusion in the society.

The author identified the agents of social inclusion to include: The government; the family; the religious bodies; the school and professionals which she implore should promote social inclusion through their various programmes and by ensuring that the special needs persons are not only granted the opportunities for good education or appropriate rehabilitation and training, but should also be given the opportunity and encouragement to participate, as well as utilized all the skills acquired for their wellbeing and for the development of the society.

This according to the writer can be attained through:

- Adequate funding of special needs education programmes.
- Adequate provision of social/recreational facilities.
- Passing the employment policy into law which makes it paramount for government providing jobs for the special needs persons.
- The National Policy on Education should be given a legislative backing that will make it mandatory for the government to provide all the required services/facilities and as well ensure the services so provided get to the appropriate consumers (the special needs persons).

Contact:
Ewa James Abua
Institute of Special Education
Faculty of Education, Palacký University
Žižkovo nám. 5
771 40 Olomouc
Czech Republic

Conference Report
"Current Issues of Education
in Ph.D. Students' Researches X."

Lucie Hrachovcová

The tenth annual international conference "Current Issues of Education in Ph.D. Students' Researches X" was held of the Scientific Board of Ph.D. studies in Education and the Institute of Education and Social Studies by Palacký University, Olomouc on 27 and 28 November 2013. The conference was intended for Ph.D. students in the field of education. The main purpose was to provide the opportunity for starting researchers to present and receive feedback on their dissertations and research. The conference was attended by important personalities of pedagogy and students in doctoral programmes from the Czech Republic, Slovakia, Poland, Slovenia and China.

The opening session of the conference included keynote speakers, contributions of the three prestigious personalities of pedagogy. Professor Eliška Walterová, from the Institute for Research and Development of Education in Faculty of Education at Charles University Prague, delivered a paper "Language of Education". Professor Jan Průcha referred to the phenomenon of educational attainment and its educational and other interpretations. The third contribution was presented by associate professor Miroslav Dopita, the Institute of Education and Social Studies, Palacký University Olomouc, concerning the position of questionnaire in educational research.

The programme of the conference took place in six thematic parallel sessions, in which a total of 69 papers were presented. Their attention was paid to school and teachers from the perspective of history and present, higher education pedagogy, lifelong learning, both visual and artistic education. There were also themes of general didactics

and selected professional didactics. The contributions focused on the man from the perspective of social and special education.

Within the conference, two methodological workshops were given on 28 November 2013. The first one was led by Dr. Piotr Mikiewisc, Department of Education, University of Lower Silesia, Poland, and it was focused on the educational system from the view of international perspectives, where participants compared the particular education systems in different countries. The following seminar led by Dr. Petr Knecht, Institute of School Education of Pedagogic Faculty, Masaryk University in Brno. The seminar dealt with unethical publishing practices, the goal was to inform the participants of the most common exposures of breaking the publication ethics, and thereby to increase the researchers' sensitivity to violations of these rules.

The participants appreciated the conference as inspiring, especially the students in doctoral programmes, who had the opportunity to present their projects of dissertation theses and get feedback. The next conference will take place in 2015.

Contact:
Mgr. Lucie Hrachovcová
Ústav pedagogiky a sociálních studií
Pedagogická fakulta Univerzity Palackého v Olomouci
Žižkovo nám. 5
771 40 Olomouc
E-mail: Hrachovcova.L@seznam.cz