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Introduction

Dear readers,

even though according to some analyses our society is divided, for the second year Czech schools, teachers and special educators have been trying to meet the requirements of the amendment to the Education Act which contains rules on inclusion related to changing the approach to children with special needs. Leaving aside the discussion about the material and personnel assurance of the process, the very essence of accepting differences remains the priority. This does not concern only pupils with disabilities, it also concerns gifted children and children at risk of social exclusion, which is not caused by the health or physiological nature of the problem, but by varying degrees of individual or social failure. Such a failure may be caused by a difficult situation of lone parents or single mothers, a problematic situation of women returning to work after parental leave or families with children at the poverty line.

What should be the cultural transformation of society in the context of inclusive efforts? Above all, it is necessary to focus on supporting teachers who meet the implications of inclusion in their every-day practice. It is necessary to allow the teachers to work quietly and be focused in the classroom through adequate interventions, such as well-timed diagnostics of the pupil with special needs, assignment of teacher's assistant for the required time, professional counselling and support for activities of the multidisciplinary team. It is clear that ensuring the above-mentioned actions is economically demanding, yet necessary. As the articles published in this issue demonstrate, there is a high quality theoretical background given by the research tasks. There are texts that correspond to the issues of inclusion in contemporary Czech schools, questions of didactics or health education and the use of ICT (not only) in working with gifted children. These findings and contributions are available to use in everyday practice.

The basic prerequisite for inclusion, however, remains to teach people ways to accept differences and to handle the issue within inter-personal relationships. Only that way the divided Czech society might come together again respecting diversity, mutual tolerance and helping children in need.

Editors

Articles

Opportunities for Dialogue in Counselling with the Special Education Students

Petra Jurkovičová

Abstract

In the article presented, we sum up the information and research conclusions collected, confronting them with theoretical knowledge in the field of dialogue approach, using dialogue to create the space for understanding, help and change. We open the discussion for using the dialogue approach in teaching the special education students in order to increase their competences for working with clients.

Key words: dialogue, counselling, special needs education.

Prostor pro dialog v poradenské (spolu)práci se studenty speciální pedagogiky

Abstrakt

V tomto článku prezentujeme shromážděné informace a výzkumné závěry, které konfrontujeme s teoretickými znalostmi v oblasti dialogického přístupu. Pomocí dialogu vytváříme prostor pro pochopení, pomoc a změnu. Otevíráme diskusi o využívání dialogického přístupu při výuce studentů speciální pedagogiky s cílem zvýšit jejich kompetence pro práci s klienty.

Klíčová slova: dialog, poradenství, speciální pedagogika.

Introduction

As Bakhtin stated in his famous quote: "For the word (and consequently for the human being) there is nothing more terrible than a lack of response." (Bakhtin, 1984)

In the situations of personal crisis, when a person cannot solve their issues in their own usual way and the problems restrict or absorb them, the dialogue in its complexity may be the only rescue. We will focus on describing the space needed for the dialogue, created by the dialogue itself and the method whereby it is transforming the space. We understand the term space as the synonym for time, place, content, communication method, reflecting the personality, subjective historical and ethical experiences of both communicating persons. Their ideas, expectations, the feelings of threat or pressure, influence of relatives ones, internal and external dialogues, communication skills and habits. And still, the dialogue is not only the speech, information exchange. We understand it as a complex of all communication forms, including the cultural and local habits reflected in the perception, production and understanding of such communication.

1 Dialogue in Counselling – Research Methodology

In the counselling work, dialogue is one of the most important methods. It enables to create and accept the primary contact of both persons and subsequent mutual creation of meanings of all that has been said. It is the mutual meeting and connection that enables to understand and cope with the difficulty of the situation.

In such case, keeping a dialogue and using its complexity depends on the abilities and skills of both participants. In the text below, we will take a closer look at this method of counselling through comparing the theory and results of the educational experiment.

1.1 Goals

The primary goal of the research was to define the process of acquiring skills for involving dialogue in counselling for the special education students. When analysing the theoretical basis for the dialogue and collaborative approach and during the research itself, we were dealing with many questions refining and steering our research.

a) How to adapt the educational space and content to enable the students to experience the dialogue approach?
b) What dialogue-related skills can be applied in reading and which have to be transmitted through personal experience?
c) What attributes define the space for dialogue and enable acquisition of the skill to work in a dialogue way?

Over two years, in the teaching focusing on counselling in special education, we have adapted the work content and methods and applied the dialogue and collaborative approach.

We have divided the conclusions of the analysis by using the grounded theory method into three conflict areas reported by students in their statements, actions and activities.

1.2 Understanding versus Expertise

The university environment itself and the educational process puts pressure on the students to become experts in the issues, clients, diagnoses. This results in an intense pressure on the beginner counsellors to be experts in their field. However, this is often meant as expertise in the client's situation and the ability to assess the problem within the shortest possible time and to offer an efficient solution. The variety of issues and specific expressions of such issues in clients in special education counselling increase both the information and emotional difficulty of the counselling work. How should the expertise be really viewed by the counsellor and what conflicts do the beginner counsellors come across in the contact with client?

Within the research, the students received the task not to focus on their ideas of the issue, to refrain from the need to "give advice" for as long as possible. Instead, they were supposed to listen to the client's talking and try to understand them the best way possible. This was difficult for most of the students. In spite the assurance that the process will be assessed rather than the result, the students got very tense. The reason was a frequent feeling that if they fail to evaluate the situation quickly and give an advice, they will not be assessed as good counsellors, i.e. they will fail their task. In theory, the counsellor should be an expert regarding the knowledge about clients, the issues and crisis situations they can possibly solve. On the other hand, they should have the skills to professionally use the tools for evaluation and intervention (Dryden, 2008, Jurkovičová, Regec, 2013).

However, in consideration of the cooperating approach and creating the space for dialogue, this knowledge and skills are only the basis, the lead that should help to understand the client's individual situation, experienced and assessed very subjectively.

For the dialogue approach, it is more typical to emphasise the understanding of the client's view than the expert assessment of the situation with respect to an acknowledged expert theory.

Anderson (2009) describes this relationship of expertise and understanding in two basic assumptions postulated for the collaborative practice. In the first one, he mentions the need *to remain sceptical* in situations when the dominant discourses, expert knowledge, theories and research data may appear as indisputable and definite. When meeting the client, Anderson invites counsellors to be prepared to get to know the

other person in their subjective complexity. The strong need of a good result lead the students as the beginner counsellors to excessive generalisation of the client's issues, suppressing the importance of individual specifics. In the reactions, we could often hear the consequences of prejudice, traditional understandings and repeated universal truths. The rate of complex perception was decreasing and the area of topics, the client was gradually steered, was narrowing down. Anderson (1997, 2009) states that if we think about the client's issue based on a generalised, dominant knowledge, we think more frequently in categories, types or classes that as a result continue to suppress our ability and need to learn and explore the uniqueness of each person. Consequently, we perceive clients and the events in their lives as something known, experienced, identified, instead of unique, worth exploring. Such cognition leads us to procedures based on theoretic knowledge without being confronted with the actual situation. This results in depersonalisation of people and inefficiency of both the mutual meetings and proposed solutions.

On the contrary, in the situations where the students were able to provide freedom and did not identify the importance of any of the topics brought up by clients, the situations were perceived as relaxed and positive (regardless of the severity of the topic). The clients were experiencing the feeling of acceptance and understanding, the feeling of interest in both themselves and in the problem. The tension caused by the situation, pressure for performance as well as the chosen session topic was releasing faster and more efficiently.

From the teacher's point of view, it was also demanding to provide an open space and remain patient. It was difficult to let the students to learn their own openness through the experienced openness. Therefore, the requirement to replace the expertise by understanding was equally important both for the teacher and students. Thereby, the space for release of tension from the performance and assessment originated. For the client in counselling practice, this provides the same benefit, i.e. peaceful environment providing trust and safety regardless of the severity of the issue and options for solution thereof.

1.3 Empathy versus Professional Distance

The most frequent response of students about how a counsellor should be is "emphatic". In spite of the fact that empathy is most frequently connected with personality traits, in counselling, we see it as the process consisting of many attributes. Šiffelová (2010) describes empathic understanding as the experience of "deep understanding helping to remove the feeling of loneliness, encouraging to risk the expression of thoughts and feelings" (p. 62). According to Merry (2004), empathy is the result of deep tuning in to the client's inner relationship frame and openness to own feelings springing from the current presence with the particular person. In his words, empathy is the trait originat-

ing in a relationship. Šiffelová (2010) further writes that the empathic process is unique and unsystematic, not given by a logic sequence of steps. It originates an intimate "familiarisation" (p. 63) in the client's subjective world. The counsellor's reactions are not only the responses or reactions following after the client's monologue. They spring from the deep connection and sense of mutual meeting and influencing. The empathic reactions are rather intuitive, since they not only react to what has been said but also include a complex evaluation of the client's existence. (Merry, 2004) Rogers himself considers the empathic understanding as follows: "I don't try to reflect on the feelings. I try to find out whether my understanding of the client's world is correct – if I see it the way they experience the particular moment. Each one of my answers contains an unspoken question. 'Is this how you feel it?'"

If we considered empathy from the dialogue point of view, it is a holistic exchange of attention, understanding and feedback. Bakhtin (1986, p. 68) writes: "Any understanding of live speech, a live utterance, is inherently responsive… Any understanding is imbued with response and necessarily elicits it in one form or another: the listener becomes the speaker…" And the speaker himself is oriented precisely toward such an actively responsive understanding. He does not expect passive understanding that, so to speak, only duplicates his or her own idea in someone else's mind… Rather, the speaker talks with an expectation of a response, agreement, sympathy, objection, execution, and so forth… (p. 69) Therefore, in the theoretical framework of counselling, the topics such as active listening, the ability to ask questions and show interest, reflect, make sure the understanding is correct and providing feedback were crucial.The goal was to provide the students with an experience that the level of empathy increases through the feeling of understanding. From the practical point of view, the students were supposed to improve their skills for phrasing statements in compliance with the client's natural vocabulary, for the creation of new mutual meanings of the situations, each of them perceives differently. The task was aimed at supporting the ability to accept different positions, opinions and their meanings flexibly and humbly for each participant.

Together with the students, we often experienced stiffness and a certain "technicality" in their efforts for empathic reactions. In their efforts to apply empathic understanding, the students tended to create the process of two mutually interconnected monologues using the "techniques" instead of a dialogue reflecting the emerging relationship. The reason was frequently the distance felt either towards the particular client or a certain topic. The topics the students usually perceived as problematic were the ones they have come across in a certain way in person. In their reflections, they expressed the worry to be too personal, to bring more of their own personal experiences into the understanding of the problem than the client's.

The students who got rid of this worry and fear and at the same time were able to adhere to the "show your interest" requirement, created the empathic understanding

much more successfully. They also felt less chaos and more clarity and insight into the client's situation. On the clients' part, they also received confirmation of their empathic understanding and shift in decoding their own situation referred to in the follow-up dialogue.

Another determinant resulting from the mastery of the empathic reaction, was a more open expression of the counsellor's emotions with regard to the current experience and getting closer to the client. This phenomenon is also described by Seikkula (in Seikkula, Trimble, 2005) when defining the healing attributes of a dialogue. The authors talk about a powerful mutual emotional attunement and from the client's position, they call this experience the feelings of love. Within our research, we might talk about a supporting cooperation and conversation between the counsellor and client. In spite of the brief one-off consultation, a more personal relationship was gradually emerging, that could result in a greater responsibility both of the counsellor and client for the issue resolution.

The students' needs were described during joint reflections of the students and teachers.The tension felt and the technicity of the students' reactions was changing significantly if they had the opportunity to experience empathic understanding and see the actual specific examples of the "healing" factors (Seikkula, Trimble, 2005) in the teacher's work. The ability to show interest and reflect on the perceived in connection with the congruent expression of the counsellor made a liberating impression. The fear of assessment was reduced and the need to ask "the right questions" was replaced by honest interest and the need of common exploration.

2 What is more important, the result or the process? – personal expectations

Counselling is usually used as the synonym for giving advice, help, support rather than a complex process. Of course, in the personal crisis situations, experiencing difficulties in life, the clients expect quick understanding and efficient solution. They are lead by the need to mitigate the suffering, fear or chaos brought up by their situation. The tension emerging intensifies the most in the cases when the result is uncertain in a long term or repeatedly and the client has no option to create a real image of the future.

Many helping professionals, including counsellors and special pedagogues or social workers are directly confronted with the feelings of suffering and deadlock situations. The tension occurring when meeting the clients intensifies proportionally to the complexity of the particular problem and the options of solution the expert is able to offer and the client is able to accept.

The ability to cope with other person's suffering requires a lot of personality traits we could sum up under the phrase "strong personality". However, in counselling, even

a strong personality is constantly confronted by the request of help by an expert and the need of help from the client. As a matter of course, the tangible manifestations of help, such as a particular advice, applicable technique, financial aid, etc., are the best result of counselling. However, for the offered solutions to be efficient, certain time and space is needed. The actual solution has to reflect any determinants both on the client's and counsellor's part, or on the part of the counselling institution, where the help should be provided. In some cases, the determining factors are very clear, specific and quickly detectable. At the same time, there are only a few of them.

In a majority of cases, it is necessary to know the wider context of the client's life and the reasons as well as consequences of the issue, in order to adequately suggest help. In the decision making, a great role is played by the client's and counsellor's personal expectations, which do not have to be implicitly expressed.

One of the examples may be the meeting with the client, Ingrid, described by Seikkula. (in Seikkula, Trimble, 2005) In the process of team meeting with the client suffering from a certain psychiatric diagnosis, there were many shifts mainly in the field of releasing emotions, healing of relationships, etc. Individual participants of the meeting, who were in some kind of relationship with the client, reflected positively on the development as well as result of the meeting. The only negative feedback was provided by the social worker. "She was dissatisfied that such strong emotions had been aroused with no concrete decisions being made for how to go on" (p. 464).

However, the authors assessed the result of this as well as other examined cases as successful based on the development of understanding, empathy, openness and in particular the existence of dialogue contributed to by all the participants.

When analysing our meetings with students, the direction towards a particular result was perceived very strongly. Subconsciously, the unspoken expectations of clients lead the counsellors to structure the process more expressly. Communication was showing the signs of a monologue rather than a dialogue. The shorter the time the counsellor was able to keep the space of open exploration, the more frequently the pauses appeared. Working with silence was used by the counsellor predominantly to think through the following question and had no potential of supporting the internal dialogue and exploration.

However, some counselling conversations were more efficient in the creation of dialogical space. In the reverse analysis of the process, we found out that the individual expectations of the counsellor and the client were the determinants significantly influencing the process.

If the counsellor felt a strong interest in the topic and it was attractive for them, they were more attentive and their reactions were exploring, extending the space for different views of the particular issue.

Another example was represented by the meetings where the counsellor was currently solving a similar issue and had yet to make up their own idea how to solve it. In

such case, the discussion between the counsellor and the client reminded of a dialogue of two colleagues contemplating what strategy to choose and what wiles or help could they expect. In such case, the counsellor's expectation was also based on personal benefit. Joint consideration of the problem has brought them a lot of important information needed for decision making.

Based on our research, we could mark the clients' expectations as less stable, adaptable if the counsellor's reactions and approach to the client as a person were filled with interest and respect.

In his basic assumptions for collaborative practice, Anderson (2009) introduces the "Knowledge as an interactive process" as the third assumption. He explains that even if the knowledge is anchored in the particular systems and theoretical frameworks, it is produced within and through the discussion in the society. Knowledge has an interactive nature and needs an interpretative process, in which all the participants influence the creation, maintenance and modification of knowledge. Therefore, knowledge as well as an advice or procedure, cannot be simply installed into the thinking process of someone else. Through the dialogue confrontation of every person with the content of knowledge, a space emerges for the understanding accepted as personal ownership.

Conclusion

Interest is the essence of the dialogue approach in counselling. This comprises the interest in the client and their issue, interest in getting to know and understand them, interest in the position and importance of the person of counsellor in the modification process.

The described conflicts were taking place in the moments when the students or teachers were not sure if they may fully express their interest in the given situation and how to do it correctly not to harm the client.

Clarification of these conflicts in every particular situation incites the internal dialogue and is also carried out through the dialogue with client. Interconnection of these two entities enables a complex, dialogue and cooperating (collaborating) process in counselling.

Practically, we could postulate the following recommendations for the university education practice:

– **Space and time** available for education has to be sufficiently **flexible** and **wide**. Theoretical knowledge may be passed on in a classical form of teaching, e.g. in form of a lecture, however, the effect of the information acquired is several times more intense if the theory "only" complements the practical skills practising.
– **The practice** itself has to be as **natural as possible**. In this regard, **willingness** of the students and the teacher to **think and talk openly** about personal experiences

and topics is necessary. In this case, role-playing does not enable the increase of the empathy skills because there is always a part of information which is only a made up theory without the leading emotions.

– **The skills** to be passed on to students must be presented by the teacher in an extent and quality to be **clear**, **repeatable** and **open to discussion**. This does not comprise a practice of possible techniques but a way of personal input, personal decision on the action and approach to others. The teacher has to be **congruent** in their actions in practical demonstrations.
– **Final assessment** of the students' work within the subject has to be strictly separated from the "counselling results", i.e. from the success rate of individual students in practising the skills since the very beginning. Within the introductory discussion, the requirements for the subject evaluation as well as the expectations towards the students' work during the teaching process shall be clarified. Subsequently, this ethical viewpoint of the education organisation may serve as the lead for transferring the skills and knowledge from teaching to the counselling practice.

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Successfully Defended Dissertation at the Faculty of Education, Palacký University in Olomouc

Cross-cultural perspectives on pedagogical leadership in schools providing compulsory education

Danping Peng

The main aims of this study are exploring the concepts of pedagogical leadership, its dimensions from different perspectives, and the factors influencing it in educational practice. The researcher adopted a qualitative paradigm, and collected data through semi-structured interview and written interview. Grounded theory approach was applied to analyze the qualitative data, and to develop theories that can further interpret the reality and offer new insights into the development of pedagogical leadership.

Based on the data collected, the researcher summarized the current situation of pedagogical leadership in selected Czech schools, and outlined the characteristics of pedagogical leadership from different perspectives. The dimensions of pedagogical leadership, the characteristics of the good actors in pedagogical leadership and the challenges faced by the development of pedagogical leadership were elaborated.

Having illustrated the current situation of pedagogical leadership in selected schools. Barriers and facilitators which were found in the two coding paradigms of PL have been summarized. The barriers included: (1) financial limitation of school, (2) conflicts between various roles, (3) low social recognition of teacher's profession, (4) massive administrative work, (4) teacher retention and recruitment. The facilitators comprised: (1) appreciation of the teaching profession, (2) supportive management team, (3) supports from family, (4) supportive pedagogical leader. In the final part, recommendations have been proposed, including: (1) to offer trainings for different stages of school leaders, (2) to improve the diversity of implementation of pedagogical leadership.

Social Acceptance of the Integrated Students in Regular Elementary School

Eva Lörinczová

Abstract

The integration of the students in the school is accompanied by a number of problems, not only with academic success rate of the individual, but also with his inclusion in the team of peers. A minor part of the issue is dealing with the social dimension of the educational process. The contribution is therefore oriented towards the acceptance of the individual, which we examined in the domain of the integrated 398 adolescents regular elementary school. Through the Questionnaire on social acceptance (Juhas, 1990), we measured the degree of acceptance of individuals, their view of the team, the emotional, families and school classes experiencing relationship and relationship to classmates. We found significant differences in the view of the individual to the team class and Emotional survival of the individual in a school class considering to integrated and intact students. These results suggest a subjective view of the individual to the collective of peers. As well, this can be attributed to the small development of social skills integrated individuals, as it indicates the detected a statistically significant difference in the emotional experiences of the individual.

Key words: emotional survival, integration, collective classes, social acceptance.

Sociálna akceptácia integrovaných žiakov v bežnej základnej škole

Abstrakt

Integrácia žiaka do bežnej školy je sprevádzaná viacerými problémami, ktoré nesúvisia len s akademickou úspešnosťou jednotlivca, ale aj s jeho sociálnym začlenením do kolektívu rovesníkov. Menšia časť tejto problematiky sa zaoberá sociálnou dimenziou výchovno-vzdelávacieho procesu. Príspevok sa preto orientuje na doménu akceptácie integrovaného jednotlivca, čo sme skúmali na 398 adolescentoch bežnej základnej školy. Prostredníctvom Dotazníka sociálnej akceptácie (Juhás, 1990) sme zisťovali mieru akceptácie jednotlivcov, ich pohľad na kolektív triedy, emocionálne prežívanie, vzťah rodiny a školy a vzťah k spolužiakom. Signifikantné rozdiely sme zistili v premenných Pohľad jednotlivca na kolektív školy a Emocionálne prežívanie jednotlivca v školskej triede vzhľadom na integrovaných a intaktných respondentov. Takéto výsledky naznačujú subjektívny pohľad jednotlivca na kolektív rovesníkov. Rovnako, to môže priamo súvisieť s malým rozvojom sociálnych zručností integrovaných jednotlivcov, tak ako to naznačuje zistený štatisticky významný rozdiel v emocionálnom prežívaní jednotlivca.

Kľúčové slová: emocionálne prežívanie, integrácia, kolektív triedy, sociálna akceptácia.

Introduction

A number of parents and experts agree that the current school is the best choice for individuals with special needs. The biggest advantages of the do not speak of only the academic benefits, but also the positive benefits of socialization (Frederickson, Dunsmuir, Lang & Monsena, 2004). Those associated with the opportunity to develop positive relationships with their peers and individual to integrate into the social life (Scheepstra, Nakken & Pijl, 1999). On the other hand, international studies have repeatedly shown, that the inclusion of students with special needs does not lead automatically to increase friendship between these individuals and their peers (Buysse, Davis Goldman & Skinner, 2002; Guralnick, Neville, Hammond & Connor, 2007; Pavri & Luftig, 2000). Therefore, the fundamental question and the problem is social acceptance of an integrated individual in the regular class, to what extent has created social relationships between peers, as perceived by an individual, and last but not least the integrated classes for his emotional survival in the collective of their peers.

1 Socialization of students with special needs

In the link to a small social group, class, stresses in particular the relationship component of social system made up of three categories: personality – interaction – sociall environment. In the school environment, individuals need to understand that others have unique characteristics, which differ from each other. They also need to understand that the others separately think, feel and know different things. However, such information can only be obtained in its social context or environment, which are to be regarded as a necessary condition to man as a biological creature to become social beings, capable of interpersonal communication. Social group affects to a large extent attitudes, judgements, opinions and attitudes of other individuals, peers and teachers themselves. Therefore, the main advantages of an inclusive education include the heterogeneity of the learning environment. Lechta (2010) is of the opinion that this diversity is very important from the point of view, but also in terms of developing transdidactics intact individuals. On the other hand, it may also become a risk environment, and not only in terms of educational success of individuals with special needs, but also in terms of the development of the intact individuals.

On the second level of elementary schools is important for individuals to be part of the community, were somewhere, and had been the favourite friends, because in the period between the ages of 13 to 15 years of rising need for friendship and intimacy, which is confirmed by Čerešník & Dolejš (2015), who reported that during this period, individuals are more inclined to frends group. During the last stage of the basic walking to school are individuals in the period of adolescence, where physiological changes that produce changes in the emotional and social stage. Period of adolescent is characterized by a number of changes, but we focus on the individual crisis, in which the personality is characterised by internal tendencies, and lack of conflicts externally. It is also known that an individual going through different social roles, which are associated with certain standards and values and often interacts with the other members of the group, where he creates new social roles, thus shaping their social awareness, creating a troupe in the collective impact of group classes and override the influence of adults, including the rovesníckej starts with the parents. Therefore, the school environment represents the best form of the creation of new relationships and friendships. On the other hand, it can lead to social exclusion in the school environment in a complete isolation in social life. The lack of social contact with friends, the low rate of control of social skills and negative sebapoňatie leading to problems that may occur up to aggressive behaviour, social anxiety, and in some studies with depression (Jordan, 2013; Suchá & Dolejš, 2016) and stress. Fry (1998) considered to be the core of these factors, interpersonal relations, which create an atmosphere of trust and acceptance. In may a young man to experience and express their doubts and insecurities, can get the courage to search and examine the values and objectives that it can provide meaningful, fulfill-

ing, and which are not. Langmeier & Krejčířová (1998, 156) state that: "…*in this period, the young people have a tendency to be assessed, in particular, by the reactions of others to themselves and pursuant to what they themselves think about how others see them*."

In the link to the issue of an integrated individual referred to the sentence they receive more importance. For example, research Guralnicka, Neville & Hammond et al. (2007) describes how friendships play a central role in relations, as to a large extent affect the mutual relations and provide the complex development of the personality of the individual. Friendships formed during early childhood and school age constitute a valuable context for learning social skills that are necessary for the social, communicative and emotional development of the individual. To social inclusion occurs if every person in your individuality by accepted and has the opportunity to fully participate in it (Anderliková, 2013). Differences and deviations are taken in the context of social inclusion as enrichment for the Group and the company, or does not, or not (maybe rarely) for an exception. The right to participate in the companies justifies social ethics and applies to all areas of life in which they can all move around without restriction. The most important principles of inclusion, integration Seidler, Beliková, Dufeková (2013) are considered ethical principles. Concrete humanity, extraordinary, in which case the welfare of each other, and about the welfare of others, and unknown. Consequently, as stated in the Zimanová (2014) as editor, a new education portal that inclusion is a great chance for our education: *"I think elementary school is the perfect place for children to learn that people are miscellaneous, have different talents, abilities and limitations, and yet together they know work can be friends, they know one another's help. This should be the task of the school of the future, not only to the children of the print the bounty of knowledge. Diversity should be considered as an asset, not a problem*."

2 Acceptance of students with special needs in the regular school environment

As indicated above, the inclusion of a pupil into the main stream education does not guarantee its full commitment and acceptance of his person from the perspective of his peers. By Zbortekovej (2012) are integrating individuals in daily contact with their fellow students are confronted with loneliness, a sense of intact everolimus tablets, repeated expressions of indifference, or even decline. Lack of social integration may be seen as a serious problem, which can complicate the formation of the identity of the individual. Considering to the sociologic component inclusion it should be mentioned that at present, people with disabilities, to some extent, but rather it is a biggest community tolerated some form of integration, as a full inclusive trend (Leonhardt & Lechta, eds., 2007). There is, therefore, in school and out of school, often referred to hidden discrimination and paradox: the inclusive education in turn establishes a (hid-

den) social discrimination. Very pregnantne in this context, the implementation Požár (2006). Kročanová (2012) declares that the social interaction of individuals with intact everolimus tablets as a basic measure of the success of social integration, is related to age, gender, with differences of individuals, which are reflected in the social interindividual and language competence, level of skill, in a rabbit play in verbal skills, social contacts, experience in adapting to social rules and conventions intact, in the degree of adoption of methods applicable to peer games in frends group in the participation in the activities of a group of peers, in the sense of ourselves as part of the normal frends of the group. The ability of intact individuals participate in the inclusion of individuals with special needs impacts (ibid): social perception; social skills; the social experience of peers without handicaps; verbal abilities; motivation; intuition. These capabilities will be the effectiveness of the inclusion of individuals in a social group, or, in our terms, in the class.

It follows that, in the school environment between individuals and individuals with special needs intact everolimus tablets is in the process of social learning, where they have the opportunity to develop their social skills (Sollárová, 2008). Foreign studies draw attention to the social learning with an emphasis on the elements of emotional survival (Chien & Harbin, 2012; Delate-O'Connor & Farley, 2012), where schools and various organizations are looking for ways to effectively integrate social learning in the schools and their curricula. For example, the Child Trends focuses on the social skills that help individuals to manage their emotions, behavior, persevere toward your goals, change the value of learning to know work with others and to believe in their own accomplishments. The very emotional experience to interpersonal relationships, their formation and the way how bad interpersonal relationships and negative emotions threaten the physical and mental health of individuals.

The current modern world is full of conflicts, frustrácií, a burdens and risks. If education in the period of adolescence can't handle emotional personality, then a lack of emotional intelligence will issue an individual high risks (from depression or raw behavior to drug use, or eating disorders). Of that, of course, negative feelings, such as dissatisfaction, unhappiness, sadness, loneliness, the inability to experience pleasure, to suicide (Gajdošová & Herenyiová, 2002). It is necessary to take into account the skills that are critical to the well-being of the individual and personal success for the harmony of the society. Emotional intelligence concerns the competences and skills, which substantially affect success in school, a man of social and intimate relationships. It consists of the seven qualities or abilities: awareness of self, self motivation, perseverance, control impulses, the regulation of mood, empathy, hope or optimism (Goleman, 1995). Referring to the above we want to compare the degree of social acceptance and integrated at the same time formulate the hypothesis of intact individuals and differences in the degree of emotional survival of individuals and the perspective of the individual to the collective of classes due to the intact individuals and individuals with special needs.

3 Research methods

Questionnaire social acceptance (Juhás, 1990); (hereinafter DSA), the Slovak version released Psychodiagnostic in Bratislava, was established on the basis of a long-term examination of options for changes to the conduct of the individual in the group through active social learning. The questionnaire was developed in several stages. The number of items was gradually lowered by for maintaining the reliability of the questionnaire. Items in the final version of the questionnaire meeting the criteria of relative independence from the other items and meaningfulnessi in the examined issues. The questionnaire is composed of 4 variables – I. *The Relationship of the individual to peers*, II. *The view of the individual to the team of the school class*, III. *Emotional survival of the individual in the school class*, IV. *Evaluation of the relationship of the family environment and the school*. The value of the Cronbach alpha for individual variables are: I. variables 0.55, II. variables 0.79, III. variables 0.95 and IV. variables 0.92, for a total for the whole questionnaire is 0.95.

In the framework of the variable I. *The Relationship of the individual to peers*, is detected, the extent to which the respondent depends on the opinion of his classmates, as well as assessed satisfaction with how your individual's peers shall be weighted, whether frends with their classmates and outside the class and has a with them the same interests. Items are are heading off also on the popularity of the individual among peers, faith in the fact that his classmates will help, for his opinion on the inclusion of the in any of the groups in the class and in his opinion, to the fact that they have the best ones in the class who are kept in seclusion.

In variable II. *The view of the individual to the team of class*, is detected, to what extent would a person in another class, he felt better, that will be remembered for life in his class in a good way. Furthermore, the items are focused on determining the extent to which the individual is afraid to express their views in the class, the extent to which an individual gets along with his classmates well and to the appearance before the collective classes, to the good understanding of peers, on the seizure of their class, and last but not least, if an individual knows to share their achievements with classmates.

In variable III. *Emotional survival of the individual in a school class,* is the focus of the items on the individual towards those who do not want to make the most, for the application of even stricter methods to absence individual honest a friend in the class. Subsequently, we ascertained whether in the class will find also those peers who are to respondent behave neúprimne, when meeting with some classmates bothers him his clumsiness, in his class an individual is evaluated by marks and not by its properties. As well, if an individual believes that his classmates are better than he and ashamed when something fails, it is sensitive to various cues from the side of classmates.

In variable IV. *Evaluation of the relationship of family and schoolclass*, through the items we find peace individual fear, as a degree of concern that the parents are aware

of it. As well, we want to find out the degree of volition of the individual, the parents were proud, he agrees to peace depend on.

4 Research sample

Representative research sample is made up of 398 adolescents aged 14 to 15 years, of which 194 boys (48.62 %) and girls (51.38 %). The reason for the choice of individuals 9 year is considered the most effective, because individuals are located in a transit period of go to school, where you can finally find their readiness for social adaptation to the new environment continued school. The research sample is the regular elementary school studnets in Slovakia in the Nitra, Bratislava, Banská Bystrica, Prešov, Trenčín, Trnava, Žilina and Košice region in the percentage distribution, which corresponds to the size of the population. The research sample meets the criteria of representativity according to approximation of Morgan & Krejcie (1970).

Respondents were categorised according to integration into two groups:

– the first group consists of individuals without special needs, with the number of intakt individuals (81.40 %);
– the second group consists of individuals with special needs, integrating individuals with the number 74 (18.60 %).

5 The results

Statistical analyses were carried out in the IBM SPSS statistics 20 (Statistical Package for the Social Sciences) and STATA 13. For a description of the research data, we used the methods of descriptive statistics (Tomšik, 2016). To determine the normality of the distribution of the research data file has been used Kolmogorov-Smirnov (R) coefficient. Due to the fact that the data do not meet the criteria for further analysis of the commonality were elected by the nonparametric tests. The results of the statistical analysis are presented in tables 1 and 2.

Table 1
Descriptive statistics and research data normality

Factor	Respondents	N	Min	Max	M	SD	SK	KU	R	p
The Relationship of the individual to peers	without special needs	324	10	32	20.99	3.311	–0.160	0.304	1.384	0.043
	with special needs	74	11	28	20.69	3.741	–0.253	–0.434	1.178	0.124
The view of the individual to the team class	without special needs	324	11	35	22.48	3.271	–0.206	1,306	1.773	0.004
	with special needs	74	13	30	21.49	3.672	0.058	–0.248	0.740	0.643
Emotional survival of the individual in a school class	without special needs	324	10	37	20.06	4.650	0.811	0.788	2.283	0.000
	with special needs	74	10	36	22.42	5.279	0.330	0.146	0.847	0.470
Evaluation of the relationship of family and school class	without special needs	324	7	18	12.47	2.131	–0.113	0.019	1.937	0.001
	with special needs	74	7	20	12.05	2.739	0.612	0.599	1.521	0.020
Social acceptance	without special needs	324	51	104	76.00	8.514	–0.112	0.582	1.267	0.081
	with special needs	74	54	97	76.65	9.940	–0.029	–0.257	0.608	0.853

* Note: N – number; Min – minimum score in the category concerned; Max – maximum score in the category concerned; M – average; SD – standard deviation; SK – skewness distribution; KU – kurtosis of a data set; R – Kolmogorov-Smirnov factor; p – Statistical significance Kolmogorov-Smirnov test for normality

The comparance research groups with regard to the type of respondents, we found a statistically significant difference at the level of the following variables: *Emotional survival in the class* of the DSA questionnaire individuals (U = 8451.000; p = 0.000) and *The view of the individual to the team class* (U = 9837.000, p = 0.015. Significant differences were detected at the level of the entire DSA questionnaire. Beholding the values in Table 2, a greater degree of social acceptance of individuals with significant demonstrated without special needs for each variable obtained by difference, in addition to *Emotional survival of the individual in a school class* and *Evaluation of the relationship of family and schoolclass. The view of the individual to the team class* have reached about M = 0.99 of a point above the average score (without special needs M = 22.48; with special needs M = 21.49), and in *Emotional survival in the class* about M = 2.36 points (without special needs M = 20.06; with special needs M = 22.44). The overall average *Social acceptance* students without special needs have reached about M = 0.65 points, compared with individuals (without special needs M = 76.65; with special needs M = 76). Given the differences between the variables view of *The view of the individual to the team class* ($r_s = 0.213$) and *Emotional survival of the individual in a school class* ($r_s = 0.280$) with regard to the type of respondents (without special needs and with special needs) confirmed the correlation analysis, where the relationship was detected on the levels

of 0.01. *The Relationship of the individual to peers, Evaluation of the relationship of family and schoolclass* and in the overall Social acceptance of significant difference was found.

Table 2
Comparison of the level of social acceptance due to students without special needs and iwith special needs

Factor	Respondents	N	M	SD	SEM	df	U	p
The Relationship of the individual to peers	without special needs	324	20.99	3.311	3.311	394	11 519.000	0.598
	with special needs	74	20.69	3.741	3.741	394		
The view of the individual to the team class	without special needs	324	22.48	3.271	3.271	394	9 837.000	0.015
	with special needs	74	21.49	3.672	3.672	394		
Emotional survival of the individual in a school class	without special needs	324	20.06	4.650	4.650	394	8 451.500	0.000
	with special needs	74	22.42	5.279	5.279	394		
Evaluation of the relationship of family and school class	without special needs	324	12.47	2.131	2.131	394	10 274.500	0.052
	with special needs	74	12.05	2.739	2.739	394		
Social acceptance	without special needs	324	76.00	8.514	8.514	394	11 640.500	0.697
	with special needs	74	76.65	9.940	9.940	394		

* Note: N – number; M – average; SD – standard deviation; SEM – standard error of the mean; df – degrees of freedom; U-Mann-Whitney U test; p – Statistical significance

6 Discussion and conclusion

As part of our research, we have focused on the degree of social acceptance of individuals under conditions of students without special needs and with special needs elementary school. School inclusion under based on Ainscow, Dyson & Booth eds. (2006) in three dimensions that can be objectively and empirically examined: the presence of pupils in school; participation, active participation, degree of involvement; achievement. In this model, it is the participation of the parent concept of performance, academic success. Social relationships are creating identity, creating a network of us human interactions that inevitably we need for living together in any social group. In our study we found statistically significant differences *The view of the individual to the team class* (U = 9837.000, p = 0.015) and *Emotional survival of the individual in a school class* (U = 8451.500, p = 0.000). For the other variables, as well as in the overall *Social acceptance* has not been found between students without and with special needs. The results can be interpreted on the basis of facts, that the individuals are afraid to express their views more integrated in the class can be based on well with his classmates, as

suggested by the difference in *The Relationship of the individual to peers*, but on the other hand, may have a problem with posing in front of the group and just does not like to share your success stories with classmates. This fact is confirmed by research, Frostad, Pijl & Flem (2008), where it is stated that the integration of individuals are less popular and have a problem inside the relationships with their classmates. In the class it may exhibit poor communication or asertivitou by individuals with special needs.

Furthermore, we believe that these individuals do not want to be the center of attention, and for this reason I prefer to pull back, and their opinions, attitudes in the class are not reflected. A number of studies (Lörinczová, 2016; Scheepstra, eds., 1999; Soresi & Nota, 2000) draw attention to individuals with special needs and a smaller degree of social skills, which are associated with a lack of making relations between the members of the group. With that is directly related to their emotional survival, which is an integral part of its identity. The sheer emotional survival is linked to its ability to manifest their opinion with others of the class and its ability to nehanbiť ahead of classmates to say something. The same relates to his emotional intelligence and social skills that are directly linked studies Elliotta, Maleckie & Demaray (2001); Kavala & Forness (1996); Maleckie & Elliotta (2002). The results repeatedly show that social skills are important for the successful socialization and academic success for all students, and the authors consider them to be important in the prevention of negative reviews from the other.

In conclusion, that the level of social acceptance because of the intact and integrated individuals achieved positive results, which suggest that the classification of individuals with special needs and inclusive education issues gradually leads to the coexistence of all individuals. On the other hand, some cracks and the possible problems from the perspective of individuals, we integrated the collective view of the class itself and its emotional survival. Therefore, we should focus on improving social skills, such as social skills training. The aim should be to develop and maintain contacts, relationships and friendships among peers, the Elimination of social exclusion, aggressive speeches or low sebapoňatia. As the results show, that in the period of adolescence is a significant orientiert to support individuals I in a positive sense, to support his self-esteem, but also respect for other people. Social skills develop overall social and emotional intelligence of individuals, and thus support their healthy development (Lörinczová & Žovinec, 2016). A number of studies (Elias, 1995; Jordan, eds., 1991), that such programs are based on the social and emotional aspects of indicating a solid basis of social skills aimed at helping individuals cope with the multiple challenges in your life.

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Children with Orofacial Clefts in School

Miroslav Meier

Abstract

The paper presents results of a research that dealt with the issue of acceptance of children with orofacial clefts in kindergarten and elementary schools from the point of view of parents of children with orofacial clefts. In addition, it was investigated what kind of support for education in the kindergarten and elementary school would be welcome by parents of children with orofacial clefts.

Key words: children, kindergarten, orofacial cleft, support, preschool age, parents, elementary schools.

Děti s orofaciálními rozštěpy ve škole

Abstrakt

Příspěvek přináší výsledky výzkumu, který se zabýval problematikou přijímání dětí s orofaciálními rozštěpy v mateřských a základních školách z pohledu rodičů dětí s orofaciálními rozštěpy. Dále bylo zjišťováno, jakou podporu při edukaci v mateřské, resp. základní škole by rodiče dětí s orofaciálními rozštěpy přivítali.

Klíčová slova: děti, mateřské školy, orofaciální rozštěp, podpora, předškolní věk, rodiče, základní školy.

Introduction

Children with various types of handicaps can be encountered more and more frequently not only in "special" schools but also in "normal" schools. The research presented in this text was focused on children with orofacial clefts in kindergartens and elementary schools. The research was carried out within the project of the Student Grant Competition of the Faculty of Science, Humanities and Education, Technical University of Liberec titled Children with Orofacial Clefts in Schools (SGS 21205). Despite increasingly better complex care provided to children with orofacial clefts in developed countries currently, some of these children have clearly visible differences or others not visible at first sight that may cause trouble when attending kindergartens or elementary schools. Visible differences include mainly scars in their faces and anomalies in their teeth. Invisible differences are caused by different life style of children with orofacial clefts to a great extent (in comparison with intact population). They spend much more time in various medical facilities where consequences of orofacial clefts are treated. This is not the only thing that can influence the development of these children's personalities. The particular extent and impact of the differences are naturally dependent on the type and degree of handicap, on personal as well as social specifics of each child.

1 Definition of terms

Orofacial clefts can be characterised as congenital developmental abnormalities affecting the hard parts dividing the oral and nasal cavities or the palatopharyngeal sphincter (Sovák in Lechta et al. 2003, p. 115). The logopedic dictionary says that cleft lips and cleft palates can be typical or atypical. Typical clefts can be one-sided or two-sided and of various degree – from microclefts through mild, incomplete or complete. Clefts may appear in: lip, jaw, hard palate, soft palate. There can also be various combinations – e.g. cleft soft palate and lip. Atypical clefts are so-called macrostomies, cleft lower lip etc. Further, there are cleft palatine uvulas and cleft tongues (Dvořák 1998, pp. 146, 147), (Škodová, Jedlička et al. 2007, p. 230).

Cleft palates are a developmental defect – i.e. they are results of organs not joining during the intrauterine development of human face parts. Causes of orofacial clefts have not been clarified completely so far; they are related to internal as well as external factors (Škodová, Jedlička et al. 2007, pp. 218, 226). Despite this fact, the causes of orofacial clefts identified most frequently are the influence of harmful substances in the first trimester of pregnancy, fetus developmental disorders and heredity (Vrbová et al. 2015, p. 16).

Palatolalia, a speech sound disorder, can be found in children with orofacial clefts. Speech sound disorders are one of the types of distorted communication ability. Palato-

lalia is characterised by resonance changes (open mumbling) and distorted articulation. Children with palatolalia frequently have retarded speech development. Disorders of facial expression, intake, swallowing and breathing can be present in them; further anomaly of jaws and teeth, hearing impairments (Vrbová et al. 2015, p. 16). Palatolalia is induced by non-operated orofacial cleft, or when sufficient palatopharyngeal sphincter has not been formed (Jehličková 2015, p. 20).

The prognosis of children with orofacial clefts depends not only on the type and severity of their orofacial cleft but also on the fact whether there is another handicap (e.g. sensual, mental) present in the particular child. Vohradník (in Škodová, Jedlička et al. 2007, p. 251) mentions that people with orofacial clefts enter into marriage less frequently but achieve a higher level of education. Children with orofacial clefts achieve worse results in socialisation tests and are less assertive. Psychological help is more frequently sought by those who suffer, besides the orofacial cleft, from communication disorder, or those who have feelings of inferiority.

This part of the text can be concluded with a statement that people with orofacial clefts can meet specialists from the fields of surgery, dentistry, communication, social psychology etc. when solving their problems throughout their lives, depending on the type and severity of their handicap. This is why both people with orofacial clefts and their families should be active and equal partners for the mentioned specialists. The best results can be expected then (Lechta, et al. 2005, p. 85).

2 Research design, research sample

Beside other things, the research was motivated by a student of the blended form of study at our department who is a mother to a child with orofacial cleft. Problems and troubles encountered in care of her child so far led her to the decision to write her diploma thesis on Children with Orofacial Clefts. She deals, among others, with otherness of children with orofacial clefts and its influence on acceptance of these children by school mates. This student participated in obtaining necessary data for the research described here. The following research objectives were formulated on the basis of consultations with the student and her contacts with the community of parents to children with orofacial clefts:

- To find whether school mates more frequently accept boys with orofacial clefts than girls with orofacial clefts.
- To find whether school mates more frequently accept preschool children than school children with orofacial clefts.
- To find what parents of children with orofacial clefts consider being the hardest issue of these children's kindergarten or elementary school attendance.

- To find what parents of children with orofacial clefts consider being the hardest issue in these children's "common" – out-of-school life.
- To find whether parents of children with orofacial clefts would welcome some support – "in general" and in relation to school attendance – and of what kind.
- To find on what support for children with orofacial clefts in kindergardens or elementary schools should be focused.

Fulfilment of the said research objectives could improve the situation of children with orofacial clefts and make the situation of their parents easier.

Data necessary for fulfilment of the research objectives were obtained by means of an anonymous online questionnaire designed for parents of children of children with orofacial clefts. The questionnaire consisted of 39 items. These were closed, semiclosed and open questions.

The research sample was 55 parents of children with orofacial clefts – while there was a condition that the children attend kindergarden or elementary school. There were 47 women and 8 men among the respondents. The most represented age group was that of respondents aged 36 to 45 years of age (54.5 %), followed by respondents of 36 to 35 years of age (30.9 %), the least represented group was respondents aged 46 to 55 years of age (14.5 %). There was the majority of university educated respondents (56.4 %), followed by respondents with secondary education with school-leaving exam (32.7 %); the remaining respondents had secondary education without school-leaving exam (7.3 %) and higher vocational education (3.6 %). Kindergarten was attended by 28 children, elementary school by 27 children.

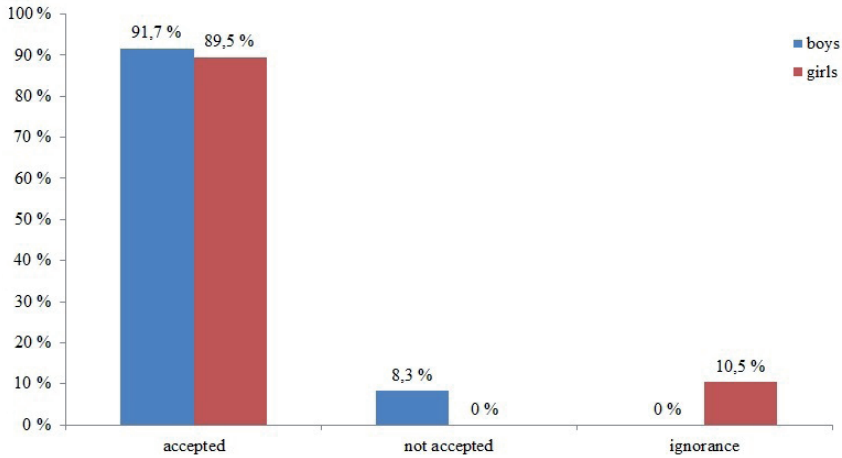
3 Research results

With regard to the amount of obtained data and the space at our disposal, our presentation will be limited to data related to the research objectives.

Objective 1: To find whether school mates more frequently accept boys with orofacial clefts than girls with orofacial clefts.

There were 36 (65.5 %) boys and 19 (34.5 %) girls among the children with orofacial clefts. Details on accepting or non-accepting of children with orofacial clefts in school can be found in Chart 1 – it is evident that there are only minimal differences between accepting boys and girls in school.

Chart 1
Acceptance of children with orofacial clefts in school

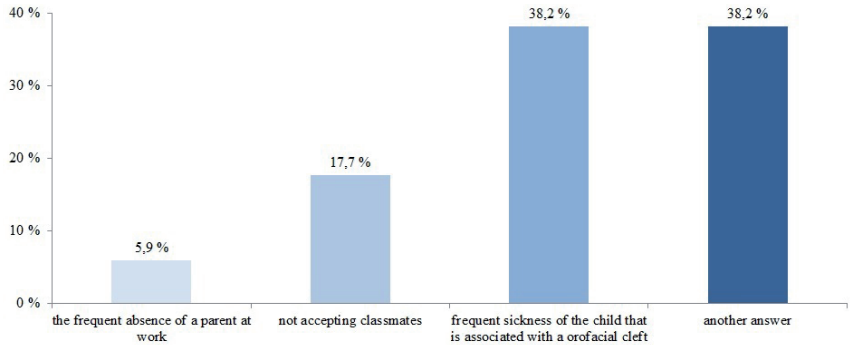


Despite this, chi-square for contingency table was tested by means of the test of independence in order to find whether the observed differences are statistically sifnificant. The test criterion chi-square was calculated under the critical value mentioned in statistical tables (the significance level used here and below was 0.05). It was confirmed that there are no statistically significant differences in accepting girls and boys with orofacial clefts. It was assumed that consequences of orofacial clefts will have a greater influence in girls than in boys. This thesis was not confirmed – what can be understood as positive. Acceptance of boys and girls is similar.

Objective 2: To find whether school mates more frequently accept preschool age children than school age children with orofacial clefts.
25 % of the respondents stated that acceptance of children with orofacial clefts was more difficult in preschool age; on the contrary, 75 % of the respondents expressed their opinion that acceptance was more difficult in school age. The difference in accepting children with orofacial clefts in preschool and school age is considerable. The goodness of fit test chi-square was used for evaluation of the question whether the differences are statistically significant. It was found that the differences are statistically significant. The finding can be a result of e.g. the fact that kindergarten teachers have more intense and frequent contact with children in comparison with elementary school teachers, and thus they can control children more and influence children's undesired manifestations more strongly.

Objective 3: To find what parents of children with orofacial clefts consider being the hardest issue of these children's kindergarten or elementary school attendance.
This objective was to show what issues should be targeted when working with families of children with orofacial clefts.

Chart 2
What are the hardest issues in school attendance



The respondents reported high sickness rate of children with orofacial clefts (38.2 %) and non-acceptance by school mates (17.7 %) as the most difficult problems; significantly less parents' absence from work (5.9 %) – see Chart 2. Other answers (38.2 % in total) included e.g.: ADHD, lax approach of teachers in school. The above facts imply that what should be taken into consideration when educating children with orofacial clefts is especially consequences of the high sickness rate in these children and related problems.

Objective 4: To find what parents of children with orofacial clefts consider being the hardest issue in these children's "common" – out-of-school life.
The respondents reported quite a wide range of various "troublesome" fields. Worse communication, the children's distorted communication ability were mentioned at the first two positions by a wide margin. These were closely followed by time demands etc. related to medical therapies and medical examinations and check-ups and the induced lack of time for common activities with children (playing, etc.), need to explain the necessity of medical interventions and check-ups to the children. The third position was taken by integration into peer groups. This was followed by improper looks, reactions and offensive questions of the intact part of population; together with speech therapy of poor quality and high sickness rate.

The above mentioned findings show clearly that the greatest attention should be paid to communication skills in children with orofacial clefts. Further formulation of e.g. recommendations considering explanation of the need of medical interventions to the children with orofacial clefts. It is not possible to omit the intact part of population either who should be informed of people with handicaps – including children with orofacial clefts – in an adequate way. The intact population's reactions, approach could be better then.

Objective 5: To find whether parents of children with orofacial clefts would welcome some support – "in general" and in relation to school attendance – and of what kind. Specific support would be welcome by 58 % of the parents of children with orofacial clefts (the opposite opinion was expressed by 42 % of the parents). Such support in common – out-of-school life should be focused mainly on better information of orofacial clefts (including better information provided right in maternity hospitals and better information for outpatient physicians) according to the respondents. Activities in organizations and groups of parents of children with orofacial clefts were mentioned as frequently as above-mentioned information was. Speech therapy of good quality followed closely. Further financial support – e.g. for drugs necessary for children with orofacial clefts, nasal shells, scar creams, tooth implants, dental braces.

According to the respondents, support during kindergarten attendance should be focused mainly on better information for kindergarten teachers; closely further on adequate information for intact school mates and their paretns and on speech therapy. What was further mentioned were assistant teachers, psychological support, a smaller number of mirrors in kindergarten buildings etc.

According to the respondents, support during elementary school attendance should be focus above all on information for intact school mates and their parents and on assistant teachers (both mentioned with the same frequency). The following was mentioned by a wide margin: speech therapy, better information for teachers, better surveillance during breaks, greater interest – involvement of teachers, school psychologist etc.

Most parents of children with orofacial clefts would welcome such support. They very often mentioned information for both laid public (what is relatively understandable) as well as specialists (physicians, teachers) – this is less understandable, and it should be an appeal to educators training these specialists. Better information for laid public is a task for a wide range of experts (for all pedagogues, educators in the really broad sense of the word). This confirmed what is mentioned about families with other types of handicaps, namely that communication, information, cooperation within "community" – within organizations, groups of parents of children with a similar type of handicap – are considered very important for parents of these children.

Objective 6: To find on what support for children with orofacial clefts in kindergartens or elementary schools should be focused.

Support for children with orofacial clefts in kindergartens should be focused mainly on speech therapy. It is followed by a wide margine by: beter information for intact school mates and their parents, suitable group supervision not emphasizing differences among children (inclusion into the group, communication), instruction of teachers, psychological and social support for children with orofacial clefts and emphasis on spiritual values (not to evaluate only "with one's eyes"), frequently missed classes, fine motor schills, assistent teachers.

Support for these children in elementary schools should focus mainly on formation of groups without emphasizing differences among children (prevention of bullying). The following was mentioned with equal frequency: instruction of teachers, adequate information for intact school mates and their parents, speech therapy. These were followed by a call for kinder teachers and their balanced evaluation of their children and psychological support.

Speech therapy was clearly preferred in kindergartens – what is understandable with regard to the developmental specifics of preschool children. It is desirable to have speech therapy of good quality what was frequently emphasized by the respondents. Another fundamental issue in both kindergarten and elementary schools is information for intact school mates and their parents and related formation of groups without emphasizing differences among children. This is a task for teachers who should provide adequate information of specifics of children with orofacial clefts to intact school mates and their parents and take care of ensuring the minimum of inopportune phenomena in groups in kindergartens and elementary schools.

Conclusion

Children with orofacial clefts form a relatively specific as well as internally differentiated part of the children's population. Excessive attention is usually not paid to them – people with other types of handicaps, disadvantages are usually covered by the media. However, this does not mean that children with orofacial clefts and their parents do not face a number of problems. The above described research was to find how children with orofacial clefts are accepted by their school mates in kindergartens and elementary schools; what is considered most difficult by their parents in their "common" as well as "school" life and what should be targeted by support for these children in kindergartens and elementary schools etc. (for details see the project objectives).

It was found out that there is no statistically significant difference between accepting boys and girls with orofacial clefts. On the contrary, there are statistically significant differences in acceptance of children with orofacial clefts by school mates in kinder-

gartens and elementary schools – acceptance by school mates is definitively more difficult in elementary schools. The most difficult features when attending kindergartens or elementary schools are the high sickness rate in children with orofacial clefts and non-acceptance by school mates by a wide margin. In common life, the respondents identified poorer communication – distorted communication skills in children with orofacial clefts, and time demands of medical inverventions and check-ups by a wide margin. Most parents of children with orofacial clefts would welcome specific support focused on their children. Such support should be mainly: better information of orofacial clefts (for physicians, teachers, intact school mates and their parents); activities of organizations and groups of parents of children with orofacial clefts; speech therapy and appropriate choice of groups of children in schools.

We, trainers of teachers, should find indications in the stated findings how to shift our work further, update and change it. The prevailing majority of children with orofacial clefts is educated in "common" schools (with exception of children with more serious handicap) – thus, teachers, usually without complex special pedagogical qualification, encounter them. This is why it is desirable to educate future teachers (as well as current ones in the best case) in such a way that they are adequately prepared for educative work with children with orofacial clefts, for specifics brought by working with these children.

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Career Aspirations as Part of Vocational Guidance for Persons with Hearing Impairment

Ivana Horváthová

Abstract

Currently, there are new trends and possibilities on the labour market, which has an effect on the ideas of today's students, both intact and those with hearing impairment. In thinking about their future careers, students naturally decide based on their values, self-confidence or ever various features of sub-cultures, which also include persons with hearing impairment. This fact can significantly affect the aspiration of students with hearing impairment. The paper attempts to identify the degree of influence of elementary schools, teachers and other factors on career aspirations in students with hearing impairment in consideration of their disability. In this case, career aspirations are considered part of vocational guidance and preparation for future careers. The data were obtained in the framework of the following project: "Teaching Staff as a Key Factor in Inclusive Education", which was conducted at the Faculty of Education, Palacký University Olomouc under Ref. No. PdF_2016_026 and co-funded by a specific university research scheme.

Keywords: Career aspirations, vocational guidance, person with hearing impairment, teacher.

Kariérna aspiracia ako súčasť odborného poradenstva pre osoby so sluchovým postihnutím

Abstrakt

V súčasnom dianí sa objavujú nové trendy a možnosti v uplatňovaní sa na trhu prácu a tomu podliehajú aj predstavy dnešných žiakov ako intaktných, tak aj žiakov so sluchovým postihnutím. Pri premýšľaní o budúcom povolaní sa žiak prirodzene rozhoduje na základe hodnoť, sebadôvery či dokonca znakoch subkultúry do ktorej patria aj osoby so sluchovým postihnutím. Práve tento fakt môže výrazne ovplyvňovať ašpirácie žiakov so sluchovým postihnutím. Článok sa zaoberá identifikovaním miery vplyvu základnej školy, pedagógov a iných faktorov na profesijné ašpirácie u žiakov so sluchovým postihnutím s prihliadnutím na ich postihnutie. Profesijné ašpirácie v tomto prípade berieme ako súčasť profesijnej orientácie a prípravu na budúce povolanie. Dáta boli získané za podpory porojektu „Pedagogičtí pracovníci jako klíčový faktor inkluzívního vzdělávaní", ktorý bol riešený na Pedagogické fakulte Univerzity Palackého v Olomouci pod číslem PdF_2016_026, za podpory prostriedkov specifického vysokoškolského výskumu.

Kľúčové slová: Profesijné ašpirácie, profesijná orientácia, osoba so sluchovým postihnutím, pedagóg.

Introduction

Vocational guidance is based on the aspirations of each individual. Aspirations express what a person would like to achieve. The gap between aspirations and the actual level is relatively stable, but largely depends on the degree of self-confidence, characteristics of the group to which an individual belongs, the nature of the society and the qualities of the relevant subculture as well as the whole culture (Velký sociologický slovník, 1996).

The term aspiration comes from the Latin word aspirare, which means to contribute, to strive for something. Aspiration is a deliberate action with a specific purpose. Aspirations are closely linked with external and internal aspects such as for example personality traits of an individual, value orientation, predispositions or culture.

It is something that a person hopes to do and achieve. It is also understood as a desire for something. Aspiration represents a degree of demands placed in the present or in the future on oneself, one's own self-actualization and self-development, one's own position in personal life and in the society (Boroš, 1997).

According to Trice and Hughes (1995), career aspirations are also affected by parents' jobs and their satisfaction at work. Research suggests that students who see their parents' satisfaction at work have two to three times higher career aspirations compared

with those who believe that their parents are dissatisfied at work. There are also other social conditions that affect career aspirations. Another issue investigated by the authors was the difference between fathers' and mother' influence on career aspirations. They concluded that career aspirations in boys and girls were consistent with mothers' careers; this was not confirmed in the case of fathers' careers.

As was mentioned above, there are more aspects that influence career aspirations in students. They are as follows: student's gender, parents' career, type of school studied, size of the student's place of residence, computer skills, scientific knowledge, household equipment.

In his research, Katrňák (2006, p. 183) added other factors such as parents' academic degree, cultural capital of the family, availability of educational resources and the child's cognitive abilities.

1 Aspiration level

A part of career aspirations is the aspiration level, which represents all expectations and demands concerning one's own future performance. Aspirations reflect the desired performance and therefore might have a motivating potential. This level is different in each person and also varies by individual activities (Buchtová et al., 2003).

A low aspiration level inhibits activity and attention, decreases interest in performance, and weakens the ability to overcome obstacles. Inadequately high aspirations might cause frequent failures caused by an inability to achieve the set objectives, which might lead to disappointment and disgust. On the other hand, they can also induce undesirable egocentrism, excessive efforts to excel, overestimation of oneself, as well as inconsiderateness in enforcing oneself (Klindová, 1985).

According to Janoušek (2006), the functioning of the aspiration level has four stages:

- During the first stage the initial reference performance is achieved;
- During the second stage, based on the experience with one's own performance in the first attempt, the person estimates the performance level in the next attempt – the aspiration level for the next performance is defined;
- During the third stage the next attempt is performed;
- During the fourth stage the person reacts to the new performance with satisfaction or dissatisfaction based on self-assessment.

In the Czech Republic, a curriculum was developed for a separate course called Career Choice (Horská, Zemánková, 2001), which is, in a limited extent, used in practice. The objective of the course is to support the students' career aspirations and a responsible attitude in selecting their careers.

2 Vocational guidance of students with hearing impairment

In the last grades of elementary school students start to choose their future careers, which is the time for vocational guidance and career aspirations. Choosing a career by students with hearing impairment is more difficult because the specifics of their disability need to be considered.

Despite the new and perspective opportunities on the labour market there are still numerous factors that influence career choice in students with hearing impairment. These factors have a considerable effect on the students' ideas and aspirations, their professional preparation and eventually their chances on the labour market. Therefore, the ideas of persons with hearing impairment are not linked with their personal aspirations but rather to adapting to the limitations caused by their disability. These include not only a limited selection of further education, both in terms of practical availability and selection of courses in special schools, but also an insufficient number of jobs suitable for persons with hearing impairment. These persons' interests and motivations are seldom taken into account.

2.1 Aspects that influence vocational guidance

The most significant aspects that influence students' decisions concerning their career choice include the family, educational institution represented by the class teacher, educational counsellor, as well as classmates and friends. In general, students' opinions and ideas are influenced by a narrower and wider social environment. The effect of the family, small peer groups, teachers and various personalities on the life of an individual depends on the possibilities and requirements of the social environment (Čáp, 1979).

This is confirmed by various studies focused on sociological issues. Walterová, Greger and Novotná (2009) performed a questionnaire-based research aimed at the influence of various actors on vocational guidance. They asked both parents and students. The research study suggests that the greatest influence on career decisions is attributed to students themselves followed by their parents. As far as parents are concerned, a greater influence is attributed to mothers. Other influences included teachers, friends and counsellors at various institutions; siblings came last. The responses of parents were almost identical. Parents were followed by friends, teachers, siblings and counsellors. However, the effect of the family does not change in any way from the perspective of students or parents.

These results are also confirmed by other studies performed by Kniveton in the UK. Similar studies were also performed in the Czech Republic by Friedmann, Hlaďo, Knoll or in Slovakia by Vendel, who focused on the resources that students use to find out information about further study.

The causes of preferring parents' opinions are generally known. For the parents it is usually financially demanding if their child studies far from home or if the child commutes several kilometres to school; therefore, they choose a school close to their place of residence. Families who have children with hearing impairment also consider teaching methods and communication in school. School selection also depends on the culture of persons with hearing impairment. Fields of study designed for students with hearing impairment are preferred by those parents who also have hearing impairment.

Another significant aspect that influences the selection of a particular study field is the teacher. According to Fontana (2010), every teacher is also an educational counsellor. This applies especially to class teachers, who are involved in career counselling and organize and control vocational guidance in their class. They are also involved in providing information in the process of career preparation. They also provide individual consultations to parents as well as students. On the basis of students' plans they help develop their career desires and objectives.

To better understand students' behaviour, teachers must be familiar with the students' families. The family has a considerable influence on the student and sometimes the teacher is unable to affect their behaviour, relationships to oneself and other people, or their attitude to their future career. For teachers it is impossible to improve students' academic performance without cooperation with the parents. They need to be active and encourage their children for study (Hartl, 1999).

If teachers are familiar with students' backgrounds, they become appropriate counsellors in the process selecting a secondary school. Another significant aspect in providing information is the teacher-student interaction. This requires mutual trust, a sense of responsibility and positive relationships (Helus, 1982). If there is no teacher-student feedback, the teacher loses control over the situation.

If these preconditions for a quality relationship are achieved, students will likely identify with the teacher. This leads to a relationship based on trust, which is essential in the process of selecting a secondary school. The teacher must consider the student's interests and opinions, and possibilities of the family. It is also necessary to take into account the abilities and possibilities of the student. These should be neither overestimated nor underestimated. This requires a long-term educational activity on the part of the teacher, trust, ability to give advice, and knowledge of the region, available schools and academic requirements. This also places considerable requirements on the teacher's qualification and personality.

Despite these facts, in the area of career counselling the teacher's guidance is sought for sporadically, especially by students with special educational needs (Friedmann, 2011). The research suggested that only 1 % of students were influenced by the teacher. We believe this can result from poor awareness of students concerning career counselling provided by teachers, or students' distrust.

3 Description of the research

3.1 Objective and Methodology

The main objective of the present study is to identify the effect of external factors on career aspirations in students with hearing impairment.

The main approach is a quantitative analysis, the objective of which is to identify the current career aspirations in students with hearing impairment. The research instruments used to achieve the objective of the study and to verify the research hypotheses was a questionnaire.

3.2 Research sample

The research sample consisted of 48 students of schools designed for students with hearing impairment in the Czech Republic. For the purposes of the present paper the authors randomly selected the following schools:

- Secondary, elementary and nursery school for the hearing impaired, Olomouc,
- Nursery school and Elementary school for the hearing impaired, Brno,
- Elementary school and Nursery school for the hearing impaired, Plzeň
- Elementary school and Nursery school for the hearing impaired, Hradec Králové
- Secondary school, Elementary school and Nursery school for the hearing impaired, Radlice – Prague 5.

Students with hearing impairment

The target group of students with hearing impairment was selected on the basis of their career aspirations that influence their selection of future education and competitiveness on the labour market. According to Vágnerová (2005), the crucial age group is mid-school age to the beginning of pubescence. During this age, maturing takes place. In the context of the educational system, this includes students in grade eight and nine of elementary school. Kuric (2000) claims that these individuals start to think about problems they had not dealt with before. They try to structure their future, think about their future education and career, and form their opinions about the world.

3.3 Data collection methods for the quantitative part of the research

The suitability of the questionnaire was first verified on a small sample of students with hearing impairment and only then was applied to the whole research sample.

The quantitative part of the research was based on an anonymous **questionnaire of own design**. The questionnaire included open-ended (non-structured), closed (structured) and semi-closed (semi-structured) items.

Quantitative data analysis

For the purposes of a quantitative analysis of the questionnaire-based data, the methods specified below were used.

Prior to the analysis the questionnaires were sorted. The analysis also included questionnaires with unanswered items up to 20 % of missing answers. Any other questionnaires were excluded from the research. The data from the questionnaires were statistically processed. The data were transferred from the questionnaires to an electronic form using Microsoft Excel.

Statistical hypotheses were tested at a level of statistical significance of $\alpha = 0.05$. For each statistical test the achieved level of significance was calculated (p-value). The zero hypothesis was rejected if the achieved level of significance was lower than the predetermined level. The calculations were performed using Microsoft Excel 2010.

For the purposes of statistical processing the data were stored in a Microsoft Office Excel 2010 spreadsheet and checked for correctness. For the descriptive part of the analysis the author used basic mathematical characteristics, i.e. frequency, relative frequency, and arithmetic mean. Statistical testing of the hypotheses was performed by the *Chi-square test of independence for a contingency table* in order to verify the significance of the predetermined distribution of probability of quantities.

Questionnaire distribution and return rate

The questionnaire was distributed between April and June 2016. For the purposes of the research a total of 48 questionnaires were produced and distributed to students with hearing impairment in grades 8 and 9 of elementary school.

Socio-demographic characteristics of the respondents

The research involved 20 boys (42 %) and 28 girls (57 %). Another socio-demographic indicator of both groups of respondents was their age. The research involved 31 respondents (64.6 %) aged 14–15 years, 15 respondents (31.2 %) aged 16–17 years, and 1 respondent (2.1 %) aged 18 years. Of the total number, one respondent did not answer.

Another important aspect for the assessment of the hypotheses was the type of hearing impairment. Of the total number of participants (n = 48), 18 students (37.5 %) were hard of hearing, 22 students (45.8 %) were deaf, and 2 students (4.2 %) were unable to answer. 6 respondents (12.5 %) did not answer.

3.4 Results of the research study

According the authors' assumption, the selection of study fields is often performed by parents; therefore the following question focuses on whether the respondents consulted the selection of a secondary school with their parents. Both girls and boys consulted the selection of a secondary school with their parents. As the table suggests, the second most frequent response was 'close to the place of residence' closely followed by the influence of teachers on aspirations. A surprising fact is that in girls this influence is stronger. However, the authors did not examine the effect of the teachers' gender on the students' choice.

Table 1
Preferences of secondary school selection

According to which criteria did you choose secondary school?							
Criteria	**a**	**b**	**c**	**d**	**e**	**f**	**Total**
Boys	3	1	7	4	0	5	20
Girls	8	5	6	2	7	0	28
Total	11	6	13	6	7	5	48

Legend: a – What I am interested in; b – What the school/teacher advised me; c – What my parents chose for me; d – What my friends chose; e – School close to the place where I live; f – Other

Table 2
Assistance in secondary school selection

Who helped you in selecting a secondary school?					
	Parents	**Friends**	**Teacher/school**	**Other**	**Total**
	n	**n**	**n**	**n**	**n**
Students	21	10	15	2	48

The previous table shows a clear influence of parents. However, the second most frequent factor in selecting a secondary school is the teacher. The next question focused on the provision of information. As far as the form of information is concerned, the most frequent was verbal information provided by the class teacher. This form was followed by information meetings and visits to the labour office. In one case, students with hearing impairment had an opportunity to meet a local employer who offered them a job provided that they complete the required field of study. The extent to which this information is distorted is questionable. Headteachers (as suggested in unrecorded interviews) try to keep their students in associated schools and therefore this informa-

tion might be influenced by this fact. Obviously, this is caused by the system of funding, which is currently a hot issue in every school.

Another criterion in secondary school selection was choosing between a mainstream secondary school and a secondary school designed for students with hearing impairment.

Table 3
Preference of study fields for individuals with hearing impairment

Did you select a secondary school that offers study fields for the hearing impaired?			
	YES	NO	Total
	n	n	n
Deaf	12	8	20
Hard of hearing	12	16	28
Total	30	18	48

As was assumed, hard of hearing individuals do not prefer schools for the hearing impaired unlike deaf individuals. However, in both groups this was confirmed by a small difference in their responses.

4 Conclusion and Discussion

It is difficult to precisely define the factors and aspirations that affect the selection concerning future careers and future education made in elementary school. The reason is a low number of relevant empirical studies that would focus on this aspect in students with hearing impairment.

The authors of the present paper conducted a literary review in order to find articles on factors influencing secondary school selection. However, these articles are of a general focus on persons with health disability and all information is generalized for all types of health disability. Due to the specific nature of perception and personality of individuals with hearing impairment, the results of the present study were not compared with these research papers.

The author found a study by Cherry & Gear (1981) *Young people's perceptions of their vocational guidance needs: I. Priorities and pre-occupations,* British Journal of Guidance & Counselling, conducted in the UK in 1981. The study included 1,712 students in the third, fourth and fifth years of secondary education at 20 comprehensive schools. Their task was to complete a questionnaire about the priorities they gave to different aspects of vocational choice and preparation. The research focused on intact students.

The results of the study confirms one of the conclusions of the present paper that parents have a considerable effect on secondary school selection and career choice. An interesting finding in the study by Cherry & Gear (1981) is that students who had completed school gave more priority to their own preferences than their parents' and teachers' compared with those who were still studying (the distribution of answers was not specified).

A research study performed by Foskett and Hesketh (1997) in an English-speaking environment assumed that the greatest influence would be represented by parents. However, this was confirmed by only 22 % of respondents. In the present study, many respondents indicated parents as those who help in selecting a secondary school. Parents are not only decision-makers, i.e. initiators of the decision-making process, but also the primary source of help and advice.

The study mentioned above also included answers suggesting friends' influence on secondary school selection. In the present research the effect of friends was also suggested. It should be mentioned again that the study included students without disability, which had an effect on their responses. We believe that also for this reason students with hearing impairment assign greater importance to their friends' opinions. Regarding the fact that the participants of the present study were individuals with hearing impairment, one of the options was 'school close to the place of residence'. We assumed that in persons with any type of disability this would be one of the reasons for selecting a secondary school.

However, we should not forget the effect of teachers, which is apparently very influential. Therefore, we believe that the teacher-school cooperation is of great importance. A research study by Bartoňová (2011) dealt with vocational guidance in students with specific learning disorders. One of the areas focused on the influence on students' career choice. Again, this study confirmed the greatest influence of parents, followed by friends, and finally educational counsellors, class teachers and employees of educational and psychological counselling centres with an equal share.

A limitation concerning the information gathered might be the fact that we did not examine whether the individual concerned is the first child or whether the family has more children with hearing impairment. We became aware of this fact in the course of the research and we believe that this is an important aspect because it might be expected that the decision-making process will be different in the case of the first child.

The influence of parents is a crucial one. Recently, it has even gained importance. The question that remains and that might be the starting point of subsequent research is to what extent students' decision-making is autonomous in this context. This fact is also important because in the decision-making process, parents and children follow different objectives, have different ideas about the future, and use different strategies in terms of obtaining information. The link between these to 'worlds' could be the teacher, who meets both the parents and the students. The question is the reliability of the teacher in this capacity.

As suggested by Horváthová in her research study (2011), the causes of inappropriate secondary school selection might be as follows:

- Insufficient information provided by schools,
- Influencing of the child by parents and overestimation of his/her abilities,
- Students are not aware of possible difficulties that could occur in relation to their career choice and their impairment,
- Students choose their career based on a single factor and do not consider other significant aspects of the career selected.

With respect to the type of impairment (hearing impairment), one of the criteria of school selection was the type of school. We assumed that deaf individuals would prefer study fields for the hearing impaired, which has not been confirmed by the results of the present study. This is also confirmed by the results of a research study by Hudáková (2014), who emphasised a decreasing trend in special education, while the number of integrated students with hearing impairment remained constant. This statistical indicator reflects the results from 2003 to 2013. However, in the research the author focused solely on students with severe hearing impairment. This means that the number of students in mainstream schools is much higher. Similarly, not all students in mainstream schools are individually integrated. Another aspect that needs to be considered is that currently fewer children are born. A different result was brought by the qualitative part of the present research, where all respondents selected study fields designed for the hearing impaired, but this finding cannot be generalized because this was only a small research sample of interviewees.

At present, there is an abundance of research studies that analyse the factors influencing career choice; however, none of them focuses on individuals with hearing impairment. Most current projects and research studies focus on employer awareness.

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Overview of the Development of Special Education in Tibetan Society

Bu Qiong, Miloň Potměšil

Abstract

The Tibetan nationality is one of the 55 minorities in China. Tibetan people are mainly distributed in the Tibet Autonomous Region, Qinghai Province, Gansu Province, Sichuan Province, Yunnan Province, and other regions, with a total population of about 6.4 million. Education for national minorities has always been an important component of Chinese education, while special education in Tibetan society is an important part of Chinese national education. In recent years, special education has been rapidly developed along with the establishment of special education schools in Tibetan areas, especially since 2000 and the proposal for, and implementation of, educational equality and balanced educational development in China. The paper applies a literature review, observational method, case analysis method, and simple descriptive statistical method to depict the Tibetan people's understanding of special education and the adaptation of different types of disability in Tibetan society before 2000. What is more, it takes the Tibet Autonomous Region and Sichuan Tibetan Region as examples to introduce the development of special education schools among Tibetan people after 2000 and analyze basic information about timetabling and students' skill training in special education schools among Tibetan people. It concludes that there are problems, for instance, that special schools are far from meeting the demand for education for children with special needs, curricula in schools cannot meet the demands for disabled children's localized cultural and life skills, and disabled children's early intervention and disabled

teenagers' transition and settlement measures are extremely deficient in special education in Tibetan society.

Key words: Tibetan nationality, Special Education in Tibetan Society, Development of special education.

Introduction

In China, Tibetan people are mainly distributed in the Tibet Autonomous Region, Qinghai Province, Gansu Province, Sichuan Province, Yunnan Province, and other regions, with a total population of about 6.4 million. Some live on the Qinghai-Tibet Plateau, the Roof of the World, which is also a land of snow because of the snowy mountains all around. There are three ecological zones, including a rural area, pasturing area, and farming-pastoral region, with their own respective ways of production and working. Tibetan people have their own language and words, a traditional culture of long standing, and a religion, Tibetan Buddhism. From birth to death, most Tibetan people live a farming life or a herdsman's life. Simple production and labour skills are all learnt and inherited in practice. People consider that the purpose of school education is to educate children to pass exams, find an office job, and get rid of farmers' and herdsmen's lives controlled and timed by the sunlight. They do not understand what changes school education can bring to production and life in farming and stockbreeding areas, or they do not know the value and significance of school education for human survival and development. It is generally considered that it is unnecessary to enable disabled children to go to school, given such an understanding of school education. Especially before 2000, there were no schools for children with special needs. Disabled youngsters who could not enter general schools failed to obtain a school education. Since 2000, some special education schools have successively been established in Tibetan areas to meet the educational demands of a minority of children with special needs. Therefore, to know about the development of special education in Tibetan areas, it is necessary to know about special education among Tibetan people in two stages: before and after 2000.

1 Understanding of Special Education of People in Tibetan Areas

1.1 Special Education in Tibetan Society Before 2000

Before 2000, "special education" was an unfamiliar concept for most people in Tibetan areas and there was not one special education school in these areas. Middle- and low-grade physically disabled and mentally retarded children could study in general schools, but the schools failed to meet their special learning needs, so they could only adapt to the learning environment and conditions in the same way as general students did. In early childhood, blind, deaf, and seriously mentally retarded children might receive medical treatment and rehabilitation training. If the effect of the training was not good, rehabilitation training could only be done at home on his or her own initiative and there were no opportunities for them to go to school. Because of the lack of understanding of special education, neither systematic and normative special education diagnoses nor early intervention took place in Tibetan areas. Therefore, the development of special education was far behind that in inland and other minority regions.

1.2 Social Adjustment Conditions of the Disabled in Tibetan areas

Being religious, all Tibetan people have a very commendable tolerance and can fully respect and accept disabled children, while the disabled also have good self-recognition and social adaptation ability. Through long-term observation, it was discovered that no disabled people would be discriminated against too much in Tibetan society. Of course, different types of disabilities have different social adaptations.

The physically disabled. The physically disabled have normal language competence, so they can adapt to social communication, but different conditions may occur when they endeavour to take on ordinary production and labour tasks according to different types of physical disability and degrees of disability. They will generally acquire life skills that are adaptable to themselves according to their actual conditions. For instance, a person with a lower limb disability can learn hand sewing.

The deaf. Because of their lack of language competence, the deaf can only communicate with others with self-created gestures, leading to certain barriers when they communicate with intact people. If they have four limbs and their visual sense is normal, they can totally adapt to ordinary people's way of living. They can take part in any productive labour performed by ordinary people.

The blind. Without loss of language competence, the blind can communicate normally with ordinary people. But without visual perception, they cannot be occupied in production and labour like ordinary people and they even have certain difficulties in living an independent life.

The mentally retarded. The middle- and low-grade mentally retarded can communicate with others smoothly and they can also adapt to production and labour that requires no great strength. The seriously mentally retarded cannot communicate with others normally or participate in the production and labour ordinary people work on, and they also have poor social adaptation.

From the above descriptions, it can be concluded that there was neither a diagnosis and rehabilitation organization nor community service for special education, nor a special education school before 2000, so the disabled almost had no chance to go to school. However, they were very clearly recognized and helped by family members and others in the village with regard to social and life adaption.

1.3 Special Education in Tibetan Society After 2000

Since 2000, since the Ministry of Education, especially the Government of China, issued the "Special Education School Construction Plan in the Central and Western Regions during the 11th Five-year Plan (2006–2010)", "National Medium and Long-term Education Reform and Development Plan Outline (2010–2020)", and "Special Education Promotion Plan (from 2014–2016)", Tibetan areas have successively built more than 10 special education schools, which have partially met Tibetan students' need for special education. The paper understands and analyzes the current development of Tibetan special education by the establishment of special education schools in the Tibet Autonomous Region and Ganzi Tibetan Autonomous Prefecture, Sichuan Province, and course design for deaf and blind students in the Ganzi special education schools.

2 General Situation of Tibetan Special Education Schools

In recent years, with the proposal of, and general attention to, educational equality and balanced development, education and special education in the regions inhabited by ethnic groups have seen unprecedented development opportunities. The Tibetan and Sichuan regions have successively built special education schools.

The Tibet Autonomous Region is a major province inhabited by Tibetans and a central area for the development of Tibetan culture, politics, and economy. According to the statistics, the number of all kinds of disabled youngsters (under 15 years old) in the Tibet Autonomous Region is 32,000.[1] And since 2000, the Tibet Autonomous Region has

[1] The data is from the Central Government's survey data in 1987 and the Tibet Autonomous Region Disabled Persons' Federation.

successively built five special education schools. There are 656 students and 173 teachers and administrative staff members.

The Tibetan area in Sichuan Province is the central region of Kham in the traditional Tibetan area. As the main part of the Tibetan area in Sichuan Province, the Ganzi Tibetan Autonomous Prefecture has 1,889 disabled youngsters who volunteered to enrol in the record (not including those youngsters who were not certified as disabled)[2] and built a special education school in 2009, with 102 students.

According to the number of disabled youngsters and special education schools in the two areas, since 2000, special education in Tibetan areas has undergone unprecedented development, but the existing special education schools can only meet the requirements of a small number of disabled youngsters.

2.1 Tibetan Special Education School Timetable

In the survey, we collected the timetables for deaf and blind students in the Ganzi special education schools (Table 1, Table 2).

Table 1
First-year hearing impairment class's spring 2015 timetable[3]

	week / class	Monday	Tuesday	Wednesday	Thursday	Friday
Morning	The first period	Chinese	Tibetan	Mathematics	Mathematics	Chinese
	Second period	Chinese	Tibetan	Mathematics	Mathematics	Reading class
	Exercise between classes					
	Third period	Mathematics	Mathematics	Chinese	Chinese	Mathematics
	Fourth period	Mathematics	Chinese	Chinese	Chinese	Mathematics
Lunch break						
Afternoon	Fifth period	Rhythm	Life skills	Reading class	Communication	Interest class
	Sixth period	Rhythm	Art	Reading class	Communication	Interest class
	Eye exercises					
	Seventh period	Ideological and moral character	Art	Physical education	Ideological and moral character	Interest class
Cleaning	Class is over					
Evening self-study	Ninth period	Class meeting	Self-study courses	Writing class	Safety education	Class activity

[2] The data is from the Ganzi Tibetan Autonomous Prefecture Disabled Persons' Federation in 2014.

[3] The data is from the Ganzi special education school.

Table 2
Fig. 2-1a Visual impairment class's spring 2015 timetable[4]

	week / class	Monday	Tuesday	Wednesday	Thursday	Friday
Morning	First period	Chinese	Chinese	Mathematics	Chinese	Tibetan
	Second period	Chinese	Chinese	Mathematics	Mathematics	Chinese
	Exercise between classes					
	Third period	Mathematics	Mathematics	Chinese	Music	Chinese
	Fourth period	Mathematics	Rehabilitation	Chinese	Music	Mathematics
Lunch break						
Afternoon	Fifth period	Life skills	Mathematics	Art	Physical education	Interest class
	Sixth period	Tibetan	Ideological and moral character	Art	Physical education	Interest class
	Eye exercises					
	Seventh period	Activity	Ideological and moral character	Physical exercise	Rehabilitation	Interest class
Cleaning	Class is over					
Evening self-study	Ninth period	Class meeting	Writing	Safety education	Self-study	Class activity

These timetables reflect the basic concept and special education value orientation of curriculum design in the current Tibetan special education schools, to a large extent, and fully indicate the developmental situation of Tibetan special education.

Fig. 1 and 2
Visual impairment class's spring 2015 timetable[5]

First-year hearing impairment class's kinds of courses

[4] The data is from the Ganzi special education school.
[5] The data is from the Ganzi special education school.

Visual impairment class's kinds of courses

By analyzing Fig. 1 and Fig. 2, we can learn that there are three kinds of courses for 90% of the special needs children from farming and stockbreeding areas in Tibetan special education schools: (1) cultural knowledge courses which include languages, maths, science, and other basic knowledge, accounting for 73.3% (Fig. 1) and 75.6% (Fig. 2) of the total number of courses; (2) living habits and social interaction courses which aim to cultivate students' living etiquette, health habits, and communication methods and abilities, accounting for 17.8% (Fig. 1) and 15.5% (Fig. 2) of the total number of courses, and (3) living and production skills and specialized courses which aim at helping students study survival skills by preparing for their own conditions in their future life, accounting for 8.9% (Fig. 1) and 8.9% (Fig. 2) of the total number of courses.

2.2 Cultivation of Skills for Students in Tibetan Special Education Schools

Special schools in Tibetan areas are only responsible for compulsory education. After the students complete this education, only a few of them will continue their studies in vocational schools or universities. But more students will have to face the difficulties of transition and placement. So it is necessary to stress the importance of living and production skills and specialized courses. According to the different types of disabled students, many special schools in Tibetan areas have opened some skills courses by combining local cultural and social service requirements, such as blind massage for the blind, thangka painting and tailoring for deaf students, and vocal music, musical instruments, and dance for talented students, which can help them obtain some skills for their future life.

Conclusions

By analyzing the development of Tibetan special education after 2000, we can draw three conclusions, as below:

(1) the government pays significant attention to the development of Tibetan special education, so more and more children with special needs will get a relatively fair education. But the few special education schools are far from being able to meet the requirements of all the children with special needs;

(2) although the courses in the Tibetan special education schools meet the national, local, and school-based requirements, education in the traditional culture still fails to be fully utilized and sufficient attention fails to be given to the local life of children with special needs;

(3) although special education schools help children with special needs finish compulsory education, there is still no solution for them to transit after early intervention and special education.

Finally, I can state that Tibetan special education should pay more attention to children with special needs to help them adapt to the local life and respect local people's educational needs according to the beliefs and values of the local community. But the national government policy does not take the local Tibetan needs into account.

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The Role of Textbooks in Primary Education

Jana Stará, Martin Chvál, Karel Starý

Abstract

The article presents the results of a research with the objective of finding out what kind of influence textbooks have on teachers' decisions about the content and methods of their teaching, especially in comparison with other materials and factors. The research was particularly aimed at teachers of primary schools and textbooks and other teaching materials for social studies and sciences. The results show that even though the teachers believe that textbooks have a major influence on their teaching, they disagree with the idea that textbooks should determine the content and methods of teaching. The article will present you with some thoughts on how to overcome this contradiction.

Keywords: primary education, use of textbooks, textbooks.

Role učebnic v primárním vzdělávání

Abstrakt

Článek představuje výsledky kvantitativně orientovaného výzkumu, jehož cílem bylo zjistit, jaký vliv mají učebnice na rozhodování učitelů o obsahu a metodách výuky, obzvláště v porovnání s ostatními materiály a faktory. Výzkum byl zaměřen na učitele 1. stupně ZŠ a učebnice prvouky, přírodovědy a vlastivědy (vzdělávací oblast Člověk a jeho svět). Výsledky ukazují, že navzdory tomu, že učitelé věří, že učebnice mají velký

vliv na jejich výuku, nesouhlasí s myšlenkou, že by učebnice měly určovat obsah a metody výuky. Článek se mj. zamýšlí nad tím, jak tento rozpor překonat.

Klíčová slova: primární vzdělávání, použití učebnic, učebnice.

Introduction

The international comparisons of data collected on classroom teaching and learning resources from TIMSS indicates the following: Despite the politicians' claims that digital media are the teaching tool of the future, printed textbooks still play a major role among other classroom curricular resources (Horsley and Sikorova, 2014). According to the TIMSS 2011 study, more than 70 % of students were taught by using textbooks as the basis of instruction. Other teaching and learning tools, such as worksheets or computer software, were used just as an addition to the lessons. According to this study, from 2003/2007 to 2011, the percentage of teachers using textbooks as the basis of instruction increased. This phenomenon appeared significantly during lessons of fourth grade science and fourth and eighth grade mathematics. Logically, the percentage of teachers who used textbooks just as a supplement for their instruction decreased for the same grades and subjects as mentioned above (Horsley and Sikorova, 2014).

Even though previous studies indicate these results about the usage of textbooks, this study is another attempt to address the issue of the influence of textbooks on other elements in education, for instance teachers' personal beliefs, shared school beliefs, and factors set by the government and the school management.

If the students are provided with multiple learning resources, it is essential to ponder how these different sources interact with each other. The textbooks need to be linked and integrated with other resources (Horsley, Knight and Huntly, 2010). The current society demands supporting individual students' learning and taking into account the local context of teaching and learning (Seoane and Rodríguez, 2014). Furthermore, the demand underpins the claim to look at textbooks as resources that mediate and support mutual creation of learning by teachers, pupils, and textbooks. The concept of *participation on the text* coined by Remillard (2005) is being introduced to the students of Faculties of Education. They ought to adapt and interpret texts and in the process of working with the texts students should undergo changes themselves. At the same time, the content of a textbook is a product of sociocultural development; as such, it is retrospectively formed by both teachers' and pupils' actions (Brown, 1992; Dvořák et al., 2008, p. 83; DBRC, 2003; Wang and Hannafin, 2005). Pinar et al. (2004, p. 699–704) mention the approach called *curriculum enactment* in which the implementation requires a change in teachers' thinking.

Teachers individually develop themselves and change their way of thinking as well as their behaviour while working with a curriculum and textbooks. This process could thus be referred to as curriculum/textbook development rather than just its implementation.

As argued above there is a need to look at the textbook usage as the result of many factors that are in mutual relationships. Emphasizing on this phenomenon could create a new system of pedagogical education by using the available curricula materials more effectively. The understanding could support individual needs of pupils and the requirements of class environment.

In the research that is being presented in this article, the following research question was asked: What is the influence of textbooks on teachers' decisions about the content and the methods of their teaching, especially in comparison with other materials and factors?

1 Methods

The survey of this study was conducted via an online questionnaire. About 310 of the 592 teachers who completed the questionnaire did not comment on any question and 181 filled in all required data. The remaining 99 respondents answered only to some parts of the questionnaire; the main reason was probably the time limit since answering the questionnaire took only twenty minutes on average.

The participants were primary education teachers (ISCED 1), mostly women (97.8 %) and fully qualified teacher (71.8 %). The online questionnaire was sent to 390 selected alumni (who graduated in 2013–2015) from Faculties of Education. We had selected alumni from three different Czech universities with the purpose of distributing the questionnaire to their colleagues. The questionnaire was sent to all the alumni whose e-mail addresses the researcher and the co-workers from other universities had thanks to previous courses.

The data was collected from February 2015 to June 2016. The online questionnaire consisted of 160 items divided into seven sets of questions. The items focused mainly on the influence of primary science and social studies textbooks. The questionnaire also dealt with problems such as modifying textbooks, the qualities of ideal textbooks, other factors influencing instruction and the use of different sources in instruction. Most items contained a five-point Likert scale and the participants were also asked to order different quotes according to their importance.

In this paper the part of the research which refers to the influence of textbooks on the content and the methods of teaching is given most prominence to.

2 Results

Factors Influencing the Content and the Methods of Teaching

The following charts represent the results of the research concerning the influence of textbooks and other educational factors, such as curricula baselines, monthly teaching plans, teacher's personal beliefs, teacher's guidelines, and shared school beliefs on the choosing of the content of instruction (figure 1) and the teaching methods (figure 2).

Figure 1
Influence on WHAT I teach (content), N = 286

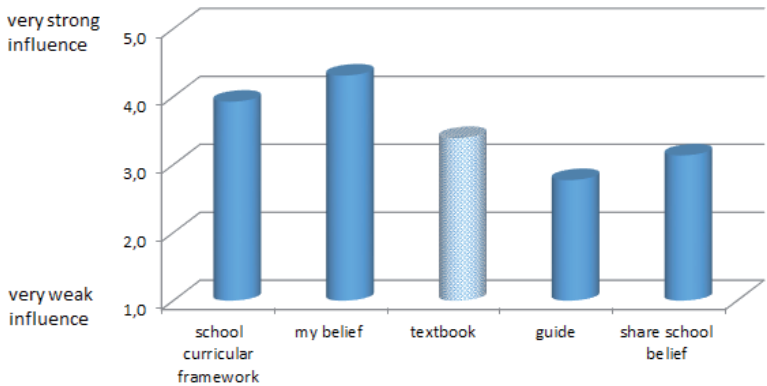
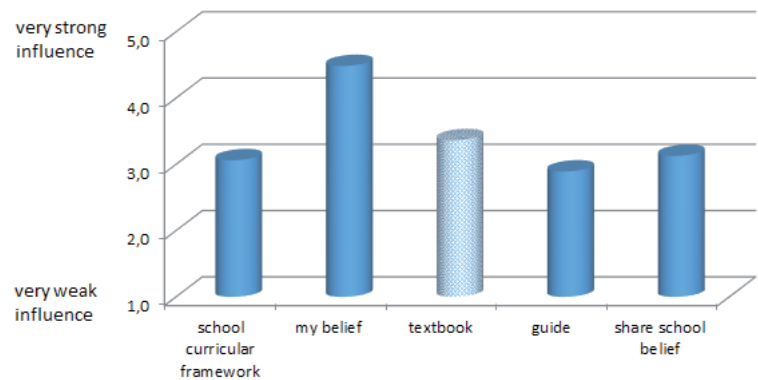


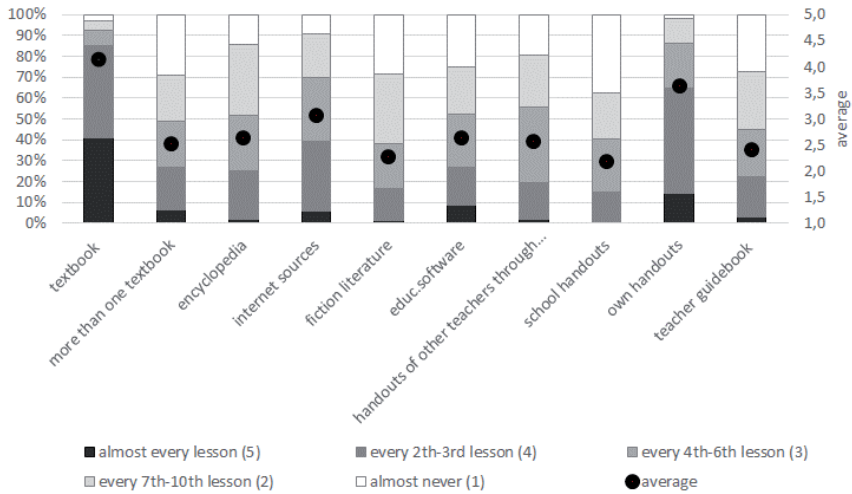
Figure 2
Influence on HOW I teach (methods), N = 260



2.1 Use of Educational Resources

Among individual educational resources, textbooks play the main role in everyday education as they are used every second or third lesson on average. The use of encyclopedias, various educational software and teachers'/colleagues' handouts is relatively low. On the other hand, teachers work with internet sources and their own handouts quite often (figure 3). As for the use of different educational resources, we have neglected a significant difference between beginning and experienced teachers. Experienced teachers tend to use encyclopedias and educational software more than beginning teachers. This issue has not been fully examined yet and we are willing to gather data from more participants in the future.

Figure 3
Use of educational resources

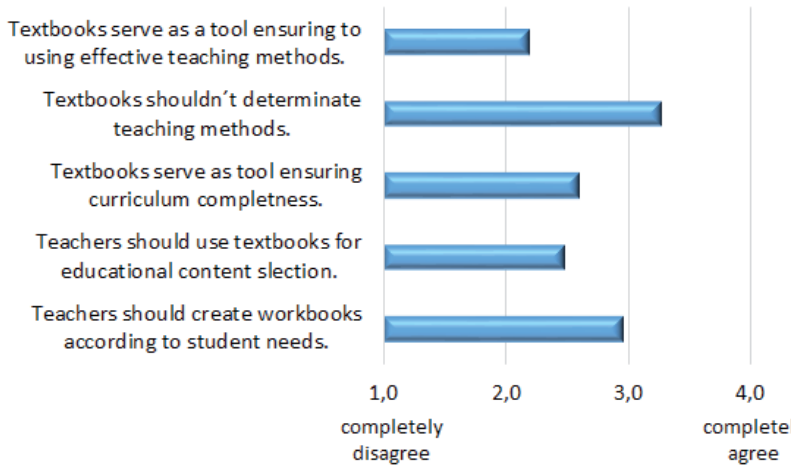


2.2 Teachers' Opinions about the Function of Textbooks During Instruction

The answers about defining the role of textbooks have not completely reflected their actual role. Yet these answers have brought plenty of information about the teachers' beliefs in this area. The majority of teachers are convinced that textbooks should not determine the way they teach. Concerning the questions about influencing the teaching content, teachers answered that they do not believe textbooks must or should

guarantee the completeness of curricula. The same goes for the role of textbooks as tools to ensure proper content selection; approximately one half of the teachers do not claim that textbooks should play this role. The majority of respondents believe that teachers should develop their own worksheets for supporting individual needs of their pupils. In our extended research we will ask the teachers for which pupils they adapt and create their materials. Finally, we will inquire into what the differences in adapting the materials are between beginning and experienced teachers.

Figure 4
Teachers' opinions on the function of textbooks in instruction



3 Discussion

Considering the fact that the respondents were addressed by the university staff or teachers' colleagues, it is not possible to generalize the results. However, it can be claimed that the interpretation of the results could lead to a better understanding of the discussed issue. It might also encourage us to design a further research in this area, which may include answering to recently discovered questions.

Although the qualitative surveys (Stará and Krčmářová, 2014; Stará, Dvořáková and Dvořák, 2010) and their generalizations showed that curricula reforms (based on implementing school curricula) resulted in unmanageable formalism (Janík, 2013; compare also with Dvořák, 2015 and Rendl, and Štech, 2012), the current research seems to validate the view that teachers consider school curricula to be frameworks for planning and

realizing their training. Rather influential are also monthly teaching plans developed by teachers in individual schools.

In any case, our findings indicate that teachers think that it is mainly their belief to determine their way of teaching. This claim is in correspondence with our previous conclusions from the qualitative studies mentioned above. According to the study of Stará and Krčmářová (2014) teachers see it as an indisputable fact that the selection of the subject matter is at their discretion, according to their own preferences and experiences, which is something they truly welcome.

The results of our study, as of many other former ones (Sikorová 2011, Peacock and Gates 2000, Lambert 1996, Grossman and Thompson 2008), appear to validate that printed textbooks are still essential. A closer look at the data indicates that teachers are willing to work with other resources, even though they actually do not do that very often. Taking into consideration that the research focuses on teachers of primary social studies and science, the average use of encyclopedia (see fig. 3) is surprisingly low. Similarly, the use of educational software is below average (fig. 3). It is despite the fact that many experts call for increased usage of educational software in order to develop pupils' digital competency (Rambousek, et al., 2015). This fact can be caused by the low competency or willingness of teachers to use educational software because of their low skill in combining different sources for fulfilling the goals of the instruction etc. It might also be caused by the shortage of ICT software at schools (EURYDICE 2011), which could potentially be an even greater problem than the lack of computer hardware in schools.

As Horsley and Sikorova (2014) state, the role of textbooks is changing. Traditionally, teaching was based on information transmission and textbooks served mainly as tools enabling it. In the constructivist way of teaching, textbooks serve mainly as guidelines for learning and learning management. Textbooks are transforming into a source of activities and inquiries and also have co-ordination and integrative functions (Stará and Krčmářová, 2014b). Mikk (2000, p. 18) claims that textbooks should be used with other educational aids like videos/animations, worksheets or computer programs. It is not possible to discern whether the answers of teachers (fig. 4) in our survey reflect their beliefs on the coordinating role of textbooks or not. A qualitative research in this area should bring more answers.

Conclusion

The majority of teachers are convinced that textbooks should not determine the way they teach. They do not believe textbooks should guarantee the completeness of curricula and most of them believe that teachers should develop their own worksheets for supporting individual needs of their pupils. This result is in contradiction with the

other result of our study, namely that textbooks play the dominant role in instruction and that other teaching resources are used surprisingly infrequently.

Summing up the results, it can be concluded that a new challenge for the designers of textbooks is to create materials that would enable teachers to put the finishing touches to the textbooks' framework and to feel free to decide to use additional materials or resources according to their own beliefs about the proper way of teaching. The challenge for pedagogical education could be to help both future and current teachers to reflect their beliefs and to develop their skills. Furthermore, teachers should be able to use different resources to fulfill systematic goals of instruction.

According to Grossman and Thompson (2008), pedagogical lectors often advise their students to minimize the usage of textbooks for its poor qualities. Instead, students are encouraged to create their own worksheets. On the other hand, some researches (Ball and Sharon, 1988) show that average students would not be able to manage this task in their teaching practice. The obvious solution for this problem would be to create new, high-quality textbooks. Such textbooks would provide teachers with tips for their own needs and values. Furthermore, we ought to teach students of Faculties of Education to recognize proper textbooks and show them how to work with them effectively.

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Preparedness of Prospective Elementary School Teachers to Collaborate with Parents in Mathematics

Radka Dofková

Abstract

The goal of this article was to analyze basic aspects of preparedness of prospective elementary school Mathematics teachers to collaborate with parents. This article is based on a research project in which a total of 83 third and fourth year students of the programs of Teacher Training for Elementary Schools and Special Education and Teaching Children with Special Needs, and Teacher Training for Elementary Schools partook at the beginning of the 2017 summer semester. The research was based on seminar works "Preparedness to Teach Mathematics", which were analyzed using instruments typical for qualitative research.

Key words: teacher, Mathematics, student, parents, collaboration.

Připravenost budoucích učitelů základních škol na spolupráci s rodiči v matematice

Abstract

Cílem tohoto článku bylo analyzovat základní aspekty připravenosti budoucích učitelů matematiky na základních školách spolupracovat s rodiči. Tento článek vychází z výzkumného projektu, na kterém spolupracovalo 83 studentů 3. a 4. ročníku studijních programů Učitelství pro 1. stupeň základních škol a speciální pedagogika a učitelství pro děti se speciálními potřebami a Učitelství pro 1. stupeň základních škol, a to na začátku letního semestru v roce 2017. Výzkum byl založený na seminárních pracích „Připravenost na výuku matematiky", které byly analyzovány za použití nástrojů typických pro kvalitativní výzkum.

Klíčová slova: učitel, matematika, student, rodiče, spolupráce.

Introduction

Despite all educational reforms and various alternative approaches to education, the traditional model how a student's successfulness is perceived by their parents based on their good grades persists. Most parents are rather interested in the student's grades than their knowledge or their personality development, in spite of the fact that it should be the common focus of collaboration between the teacher and the parents to remove this anachronism, ideally in mutual collaboration if possible.

Developing a good relationship between school and family, however, should be the teacher's primary goal, since their character and quality largely depend on their ability to collaborate, initiate and develop. Therefore, the goal of this article is to identify strong and weak points in the preparedness of elementary school teachers to collaborate with parents in Mathematics.

Introduction and Theoretical Background

Teachers in elementary schools are the first to introduce children into school culture and the network of social relationships, new social roles, and are first to give them some bearings in order to become orientated in the world. It is obvious that socialization and personalization roles prevail in these teachers. Moreover, the socialization role is specifically emphasized during collaboration with parents. In the preparation of elementary school teachers we aspire to train such professionals who understand children, the sub-

jects they teach, and also inherent general teacher education laws. They need to posses developed cognitive functions, the ability to creatively apply professional knowledge in new situations and contexts. However, inadequate preparation of teachers, namely in terms of collaboration with parents, is widely criticized.

1.1 Historical Development

Collaboration between school and family has long been the essence of multiple studies (Waggoner & Griffith, 1998; Driessen, Smit & Sleegers, 2005). In the previous conception of collaboration between school and family there was a significant difference between the goals within which various spheres of influence on children (students) were covered. The responsibility for education and upbringing was shared. Subsequently, Epstein (1995) formulated the typology of parent involvement as overlapping spheres of influence. The above mentioned typology includes six items: strengthening of parent skills, parent – school communication, voluntary parent work in school, parents tutoring children at home, parent participation in the decision making process in school, and collaboration within a wider community (Šeďová, 2009).

Since the 1990s West Europe and the U.S.A. have stopped seeing the family – school relations as a utilitarian way to improve the child's results. Instead, these have started to be understood as part of parent rights in relation to the principles of civic society. The term parent *involvement* has been replaced by the term *partnership*. Partnership is defined as: *"sharing power and responsibility between family and school, sharing common goals, responsible dialog including mutual listening to each other, the will to make compromises, and the commitment to act together"* (Bastiani, 1993 in Šeďová, 2009, p. 29).

A key moment in building an ideal partnership might be built through gradual implementation of five Bull steps: (1989, p. 114 in Gavora & Majerčíková, 2012):

1. Informing parents of their children's grades.
2. Explaining and clarifying to parents what is going on in school.
3. Monitoring of what is going on in school by parents.
4. Parent participation as a form of support of the teacher and school.
5. Parent involvement in the decision making process regarding the organization and curricular matters of the school.

The sequence of these steps may be a practical instruction also for Mathematics didactics seminars how to design the program of parent involvement in the field of Mathematics. Through individual activities the students can prepare for building a functional relationship with parents, which will then take on the form of a partnership.

2 Strong and Weak Points of Preparedness for Collaboration with Parents in Mathematics

As Smetáčková (2014) puts it, a Mathematics teacher is strongly determined in their teaching activity by their subjective teaching theory and their professional identity. In Mathematics didactics seminars within a teacher's preparation, however, these aspects are rarely emphasized strongly enough. It is obvious that it is mainly due to time reasons. However, the question is whether there should not be a space created for them in respect to the efficiency of their future work as teachers. Based on research ensuing from the international comparative study named *Teacher Education and Development Study in Mathematics* (TEDS-M) (Dofková, 2016, 72) states that students training to become Mathematics teachers do not feel prepared for this important part of their future career.

2.1 Research Design

At the beginning of the 2017 summer semester a total of 83 students of the third and fourth years of teacher training for elementary schools and special education (TTESSE) and teacher training for elementary schools (TTES) were given the seminar work of *Self-reflection of preparedness for teaching Mathematics*. There were 29 TTESSE students and 54 TTES students, and that was a 100 % sample in the given school year. The students' goal was, using a prepared structure, to assess in writing their own preparedness to teach Mathematics, also in collaboration with parents ("Give your strong and weak points in terms of preparedness to collaborate with parents"). The students wrote down their assessment into a prepared template, which included the instruction that they were supposed to emphasize the main points in each area, and that the assessment must fit one letter size sheet of paper.

2.2 Processing Results

The first stage of data processing was to create codes of the research area being scrutinized. In compliance with the principles of anchored theory such a coding process was selected, during which *"the text as a sequence is broken into units; these units are assigned names, and the researcher then works with these named (labeled) text fragments"* (Švaříček, Šeďová et al., 2007, 211).

The coding process was created in the QDA Miner program (Provalis Research)[6]. A total of 30 codes were created in two main areas: preparedness for collaboration with

[6] Available at: https://provalisresearch.com/products/qualitative-data-analysis-software/

parents – strong points (RPA), and preparedness for collaboration with parents – weak points (RPN). The names of individual codes were created in such a way that there should not be any mistakes that generally happen during a coding process. The codes are unequivocal (not unnecessarily thin, nor thick), there are not too many of them, and unnecessarily long sections were not coded (same place).

A total of 13 codes were created in the RPA area, and 17 codes in the RPN area. Seven codes were identical in individual categories – preparedness in the area of argumentation with parents, every day communication, discussion about home preparation, assessment of personality qualifications for the given collaboration, dealing with conflicts with parents, informing parents of problems, general collaboration between parents and school, and communication at parent evenings.

The following codes were also identified in the RPA area:

- Conveying specific information of the children's grades to the parents (e.g. *"I think I am able to defend my assessment – grades given to individual students"*);
- Advising parents (e.g. *"I feel prepared to advise parents in terms of what and how they should practice with the students"*);
- Belief in consensus with parents (e.g. *"I hope that I will not have a problem to reach agreement with parents. There is always a solution upon which both parties can agree"*).
- Down to earth approach to parents (e.g. *"I would like to be open to parents but make it clear that I also need their support and want them to collaborate with us – the school, and help their children study at home"*);
- Experience collaborating with parents (e.g. *"I am used to working with both children and parents so I think there won't be a problem here"*).

The remaining 10 codes in the RPN area concerned the following areas:

- Collaboration with arrogant parents (e.g. *"I am a bit afraid to have children in class whose parents are trouble makers who will not allow me to explain them anything, will yell at me and complain"*);
- Concern regarding their handling of inclusion (e.g. *"I am concerned with communication with parents of included children. I think they might have greater or different demands, and that they will try and advise me how to approach individual students"*);
- Concern regarding collaboration with parents using the so-called Hejný method (e.g. *"In collaboration with parents I am the most insecure regarding home preparation. The Hejný method is often difficult for the parents to handle while trying to help their children do assignments"*);
- Dealing with noncollaboration from the parents' side (e.g. *"I am the most insecure if the parents set their heads and won't budge"*);
- Parents prejudice against a starting teacher (e.g. *"I am afraid that some parents won't trust me enough due to my age and the fact that I am still studying, or right after graduating from college"*);

- Concern regarding possible parent participation in lessons (e.g. *"While parents attend lessons (e.g. during open doors days). The presence of other adults that may observe and assess me will probably be unpleasant for me and make me nervous"*);
- Concern regarding collaboration with parents who cannot accept criticism of their children – the parents of "know-alls" (e.g. *"Unfortunately, there are also those types of parents who never admit mistakes on the part of their children or themselves, and won't accept advice"*);
- Concern regarding collaboration with the parents of weak or talented students (e.g. *"In collaboration with the parents of a child who is not successful in Math"*);
- Concern regarding collaboration based on experience from elementary school, high school or college (e.g. *"In my opinion I have to say that I don't think the faculty has prepared us adequately for confrontation with parents, unfortunately"*).

The following section lists the basic descriptive statistics of individual codes.

2.3 Summary of Research Results

Chart 1 makes it clear that the assessment of students in the RPA area, in respect to the frequency of the codes given, is identical. In both groups they are confident in regular communication with parents – 32 % TTES and 23 % TTESSE (e.g. *"I have confidence in my ability to collaborate and positively communicate with parents who want to discuss work and the possibilities and options of improving their child's (and my student's) abilities, and assess this as my strong point"*), and in personality qualifications – 28 % of TTES and 19 % of TTESSE (e.g. *"I am confident in my nice and positive approach to people"*). In third place 8 % of the respondents in the TTES group and 11 % of respondents in the TTESSE group state that they are confident in collaboration based on experience (e.g. *"As I already have had some teaching practice I can say that even if it is sometimes not easy, if there is will on both the teacher's side and the parent's or student's side, then there is almost always a solution with which both parties would be satisfied"*). On top of that, the same number of TTESSE respondents (11 %) mentioned belief in consensus with parents (e.g. *"I believe that I will easily collaborate with parents who have a healthy interest in their child, and who are not trouble makers"*).

Chart 1
Answer frequencies in the RPA area

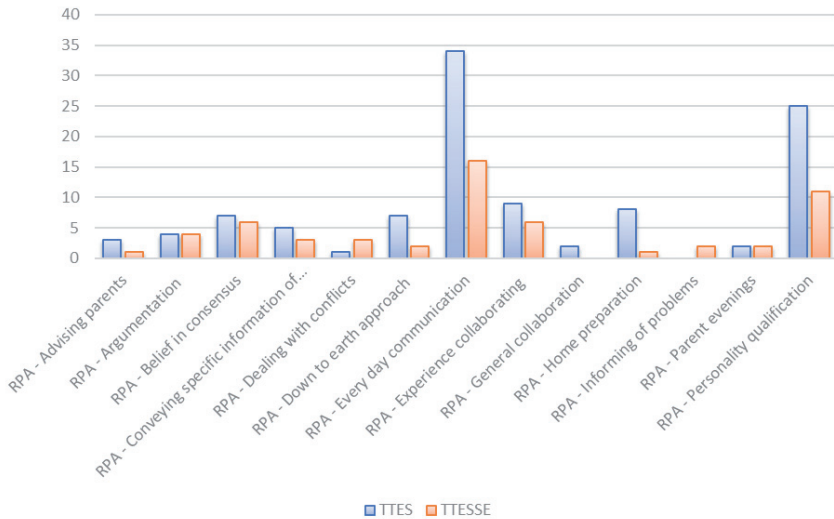

Chart 1 shows two more interesting facts – zero frequency of occurrence of the code meaning preparedness of students to convey problems with children to their parents in the TTES group (i.e. only TTES students feel prepared), and zero frequency of occurrence of the code meaning preparedness for collaboration between school and family, e.g. in extracurricular activities in the TTESSE group (only TTES students feel prepared in this respect).

Chart 2
Answer frequencies in the RPN area

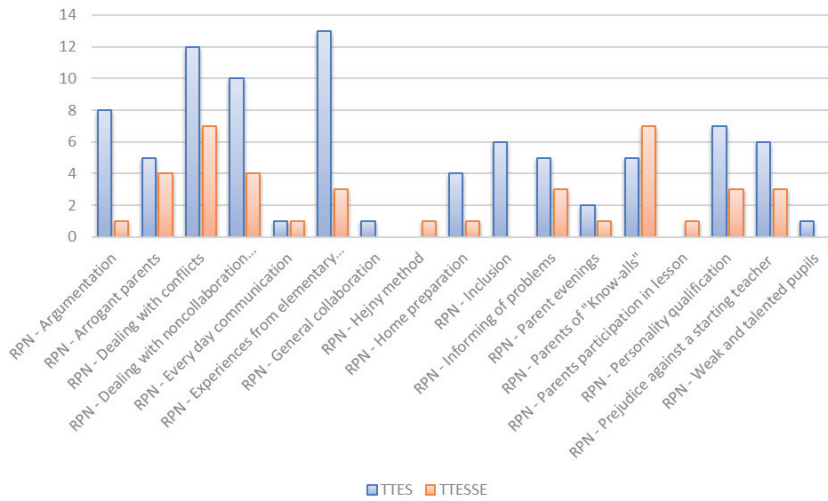

Chart 2 makes it clear that the assessment in the RPN area based on frequencies differs as early as in first place. A total of 15 % of the respondents in the TTES group stated that they did not feel up to collaboration based on experience from elementary school, high school or college (e.g. *"I am rather not confident. There is not such subject taught at the teacher education faculty that would focus on communication, collaboration and the right procedure while dealing with critical situations with parents"*), whereas 18 % of the TTESSE respondents stated shortcomings in preparedness to deal with conflicts with parents (e.g. *"In personal direct conflict with a particular parent"*), and the same number (18 %) concern of not being prepared for parents who refuse to collaborate (e.g. *"I am least confident while dealing with non-collaboration"*).

Also here in Chart 2 we can identify some more interesting facts – zero frequency of occurrence in the TTES group in case of the codes of the Hejný method and parent presence in lessons. On the other hand, the inclusion code, the communication with parents of weak or talented students code, and the general collaboration between school and family codes were not even identified by the TTESSE group.

Conclusion

Based on the above mentioned results it is obvious that the area of Mathematics teacher and family collaboration should have its place in Mathematics didactics seminars in the process of prospective teachers' preparation. In accordance with expectations, differences were found in assessment between the TTES and TTESSE groups. It is obvious that the TTES students feel more prepared for collaboration with parents given the fact that their children have special education needs. Adequate preparation could also help eliminate frequently mentioned concerns regarding the "starting teacher prejudice" – a self-confident teacher should not be afraid to defend their work processes and approach to children.

It is pleasant to find out that most students are not afraid to communicate with parents, have a positive approach to finding common solutions, and are self-confident in terms of personality qualifications. This can be considered as a good start for future work.

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Sitting an Exam from the Students' Point of View

Jana Matošková

Abstract

The study examined students' reports about their feelings related to exams, factors influencing exam passing and behaviour and mental strategies applied during exam sitting. It was based on an analysis of data gained by way of interviews and group discussions with students, a questionnaire survey among students and student seminar works. The study supports the idea that academic performance is influenced by external context as well as internal factors like intelligence, personality, and study motivation. The study indicates that students prefer neither a surface approach to studying nor cheating, but there are exceptions in which they find such behaviour appropriate. Further, if students have lack of knowledge, they often rely in such cases on an examiner's exhaustion, lack of attention or indulgence.

Keywords: university student; behaviour strategy; exam; cheating; academic performance.

Účast na zkoušce z pohledu studentů

Abstrakt

Tato studie zkoumá výpovědi studentů o jejich pocitech ohledně zkoušek, faktorů, které podle nich ovlivňují úspěšné složení chování, a strategií myšlení a chování, které aplikují během zkoušky. Studie je založena na analýze dat získaných prostřednictvím rozhovorů

a skupinových diskusí se studenty, dotazníkového šetření mezi studenty a studentských seminárních prací. Studie podporuje myšlenku, že studijní výkon je ovlivněn externím prostředím i interními faktory jsou jakou inteligence, osobnost a motivace ke studiu. Studie naznačuje, že studenti nepreferují ani povrchový přístup ke studiu, ani podvádění. Nicméně existují výjimky, které podkládají takové chování za vhodné. Pokud studenti nejsou dostatečně na zkoušku naučeni, spoléhají na to, že vyučující bude unavený, nebude dávat pozor či že budou shovívaví.

Klíčová slova: student univerzity; strategie chování; zkouška; podvádění; studijní výkon.

Introduction

Exams aim to assess primarily the level of preparation reached by the students (Frosini, Lazzerini, & Marcelloni, 1998). On the other hand, exams typically belong to critical and stress-related situations with which students are regularly confronted. Spangler et al. (2002) explain that passing or failing exams may profoundly affect their chances to get access to further educational and occupational development, thus implying high importance and the potential to induce high amounts of psychological stress. In addition, as Pressley et al. (1997) note, getting ready for an exam might sometimes be difficult because of unsuitable textbooks, inadequate teaching, failures to specify testing demands, reading strategy deficiencies, background knowledge deficiencies, appropriate information processing deficiencies, anxiety or low motivation. That is why academic exams still awake research interest.

Many studies have dealt with predictors of academic performance (e.g., Caprara, Vecchione, Alessandri, Gerbino, & Barbaranelli, 2011; Krumm, Lipnevich, Schmidt-Atzert, & Bühner, 2012; Win & Miller, 2005; Zuffianò et al., 2013) or on strategies for exam preparation (Halamandaris & Power, 1999; Mirkov, 2010; Neuderth, Jabs, & Schmidtke, 2009). Some studies focused on cheating at exams, e.g. Tibbetts (1999). However, only a few studies have examined exams from students' points of view and dealt with their recommendations for exam passing. Therefore, the goal of this study was to detail university students' beliefs about the examinations they face. Specifically, the study examined students' reports about factors influencing passing an exam, and the behaviour and mental strategies that students mentioned in relation to it. The students' point of view on exam passing was chosen because, as Van Etten, Freebern, and Pressley (1997) note, students have their own understandings about their academic world and knowledge of the conscious decisions they must make to negotiate the academic demands on them. Therefore, there might appear more factors critical in exam passing and different strategies than the ones emphasized in the studies to date. Answers to following questions were sought within the data analysis: 1) What feelings do university students

have about exams?; 2) What internal and external factors influencing exam passing do students mention in their comments?; 3) What behaviour and mental strategies do students present for exam passing?

1 Theoretical Framework

Aitken (1982) defines academic performance as a function of intellectual ability, the level of student motivation, academic skills, the quality of the physical environment in which the student's academic work is done, the degree of family support for the student completing a university education, the degree of peer group support for intellectual and academic activities, faculty teaching ability, the degree of close personal contact with faculty, student satisfaction with major field of study, the health of the student and the possible intervention of external factors (such as severe personal injury or illness, or family or personal problems). Generally, personal predictors of academic performance are typically dichotomized into cognitive characteristics (e.g., mental speed, working memory) and non-cognitive characteristics such as consciousness or motivation (Krumm et al., 2012). For example, Caprara et al. (2011) supposed that it is likely that conscientious students perform better because of their ability to make plans, regulate their behaviour in accordance to their purposes, make the effort that is needed to learn and demonstrate persistence.

Generally, as an exam is a stressor for many students, students apply some coping strategies to deal with it. Three main coping strategies as individual response tendencies to stressors might be distinguished: problem-focused, emotional-focused and avoidant (see e.g. Halamandaris & Power, 1999; Spangler et al., 2002). Problem-focused coping (i.e. coping with the problem that is causing the distress) means that students can try to reduce exam-related stress and meet academic demands by using personal and social resources like investing effort, asking for instrumental help, finding out more information about the exam or making up a list of priorities for tackling the exam. Emotional-focused coping (i.e. focused on regulating emotion) might include activities like trying not to feel angry or depressed or daydream about the future, to change appraisals (e.g. positive reinterpretation) or to use methods of relaxation. Spangler, Pekrun, Kramer, and Hofmann (2002) state that problem-focused coping may be specifically adaptive during preparation; emotions-focused coping may be helpful for emotional regulation during the exam. The third coping is avoidant coping. It would imply withdrawal from the situation psychologically (e.g. by ignoring academic demands, keeping negative emotions out of consciousness) or behaviourally (e.g. by reducing effort, not entering the exam) – which in fact may increase psychological stress rather than reduce it.

Some studies and monographs discuss in detail suitable strategies which a student should apply during an exam to achieve success, e.g. Fryjaufová (2006), Jacobs and

Hyman (2010), Price and Maier (2010), Robinson (1993). For example, a student should think positively, read the instructions of written exam tests carefully, leaf though the test to get an overall sense of the questions and their difficulty, pay close attention to any key words in the question, start with questions which he/she can answer well and if he/she does not know the exact answer, to write down his/her best approximation.

Regarding learning, some authors (e.g. Davidson, 2002) highlight that students use two basic study approaches – a "surface" study approach or a "deep" study approach. The first one means students concentrate on detailed parts of the text in sequence without regard to the importance of these passages. The latter means that students attempt to understand the meaning of the article and the broader implications of the message contained in the text. It is assumed that a "deep" study approach is necessary for the achievement of a more conceptual form of learning.

Tibbetts (1999) and Van Etten et al. (1997) mention that recent studies have found that test cheating is common among college students. In relation to a student's cheating, rational choice models of behaviour are mentioned. The basic idea of such a model is that individuals are rational actors who tend to behave according subjective evaluations about expected costs and benefits related to a given act (Tibbetts, 1999).

2 Methods and Participants

The study is based on data gathered during a research focused on the tacit knowledge of university students. Research participants were full-time students, especially Bachelor's and Master's students, and three graduates from the same university. Methods of non-probability sampling – intentional (simple), opportunistic and self-selection – were used to select the respondents in the research.

Participants were from one university. The semester is 13 or 14 weeks long (depending on the faculty), then an exam period follows. The regular exam period usually has five weeks. Students commonly have 3 chances to pass an exam (one regular attempt and two retakes).

Not all subjects are officially finished by a final exam, but it is common that at least a passing of a final written test is required in the case of credit courses as well. Normally students have 2 chances to pass the test for gaining a credit course. Considering subjects at Faculty of Management and Economics, the most difficult subjects for students might be Mathematics, Macroeconomics, Microeconomics and Business Economics.

2.1 Procedure

Compliance with ethical research rules, especially informing respondents sufficiently and safeguarding anonymity during evaluation, was ensured during the data collection. As the primary research focused on the development of an inventory of tacit knowledge measurement, data gathered during research was re-analysed for this study. Specifically, quotations related to sitting university exam and factors which influence exam passing were found. Regarding the topic, the following sets of data gathered during the research were identified to be relevant:

- **Transcriptions of three group discussions** focused on outlining criteria for evaluating student success and setting examples of tacit knowledge important for student success:
  - with five full-time students from the Faculty of Management and Economics (GD-S);
  - with three full-time post-graduate students from the Faculty of Management and Economics (GD-PGS);
  - with three graduates of the Faculty of Management and Economics (GD-G).
- **Transcription of a workshop with students utilising a follow-up discussion** (W-CS) – Twelve full-time students participated in the workshop. The students were divided into two groups. The groups' task was to suggest critical situations in the life of a university student. A moderated group discussion followed the group work, during which the students were to suggest appropriate and inappropriate behaviour strategies in chosen, previously defined, critical situations.
- **217 students' responses from a questionnaire survey filled in by university students** (Q) – full-time students of five university faculties participated in the questionnaire survey and in total 985 questionnaires were filled out. The priority groups for distributing the questionnaire to were the first year students of bachelor and master degree studies. They filled out the questionnaire during their seminars and tutorials. The topics at which the questionnaire aimed were: 1) characteristics and behaviour of successful university students, 2) recommendations for best friends at the beginning of the study program to make that friend's studies effective, 3) situation in which tacit knowledge might be relevant.
- **Transcriptions of 21 semi-structured interviews** (I) **with students who were identified as successful students by their peers in a previous questionnaire survey** – amongst the students were representatives of five different university faculties. The methodology prepared for the interviews aimed at students' thinking, behaviour, experience and critical situations in the life of a student.
- **Two students' seminar papers** (SP) **on the topic of "Situations in the life of a university student and their management strategies"** – the students' task was to define, based on their own experience, critical situations in the life of a student and for each of those situations to suggest appropriate and inappropriate management

strategies. Both students presenting their work were from the Faculty of Management and Economics.

2.2 Data Analysis

During the data re-analysis, sections in documents which bore information about sitting an exam and factors influencing exam passing were found. Then initial themes in data were identified, namely feelings about exams, factors influencing passing an exam and the student's behaviour strategies related to an exam. Next, the data was sorted by theme and a thematic chart was done. After that a descriptive analysis with data categorization followed. Finally, data summarising was done.

2.3 Results

At last five broad themes emerged from the analysis: feelings about exams, external and internal factors influencing passing an exam, student's behaviour strategies before an exam, student's behaviour strategies during an exam and student's strategies of dealing with lack of knowledge during an exam (including cheating at exams).

2.3.1 Feelings about Exams

The first identified topic was feelings about exams. Some students are aware that, in the long-term, passing exams is imperative to graduating from their chosen university. Additionally, indices that exams are a way of preparation for student's future professional life were found. Specifically, it was mentioned that exams teach how to deal with unpredictable situations (to improvise), to communicate, to find out and process information. As well remarks about a relation between exams and self-development were found. Moreover, some felt that sitting an exam is a critical situation connected with stress. However, others considered that an exam should not be viewed as a make-or-break and key point in one's life.
'what we shouldn't do is to pretend that it [exam] is some kind of milestone in one's life, that it represents some kind of success or failure and – stress out because of it all the time' 126

2.3.2 Factors Influencing Passing an Exam

The second topic was factors influencing student behaviour at an exam and the exam result. An overview of the factors mentioned by participants is presented in Figure 1. First, there are some external circumstances which should be taken into account. For

example, the subject itself (especially its supposed difficulty) and its teacher (his/her attitude to students, style of teaching and his/her fatigue caused by students' examination). Furthermore, participants admitted that also the number of exam chances matters. Generally, they have three chances to pass an exam. The more unsuccessful chances they have had, the more intensive preparation for the exam is. Sometimes also luck on exam questions can help in exam passing.
'As the tests and questions are…made as they are, sometimes luck is needed because one can't know everything 100 %.' 125

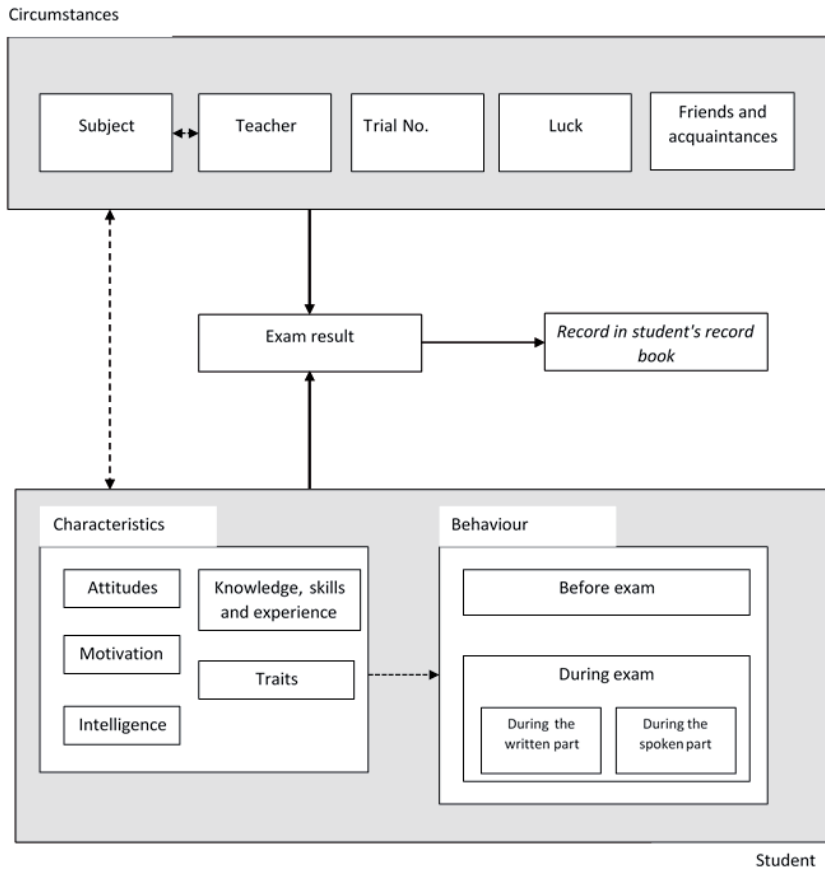
Additionally, some note that friends and acquaintances can help. Specifically, it was mentioned that friends' experience can influence stress related to the exam. As well, friends and acquaintances can be sources of information about the teacher and the exam. On the other hand, a lot of factors influencing exam passing are internal. Such factors are related to a student's personal characteristics and his/her behaviour.

Personal characteristics which might make an exam easier were identified as follows: 1) attitudes to study and with it related motivation (especially student's interest about the subject and the supposed importance of the subject for future career), 2) intelligence, 3) student's knowledge, skills and experience, 4) student's traits like endurance, ambitiousness, purposefulness, self-confidence, proactivity, flexibility and courage. Intelligence might matter especially in cases when to learn by heart is not enough to pass an exam (e.g., in subjects where graphs or arithmetical problems are common) or when the student has to improvise because of the lack of knowledge.

A student's knowledge, skills and experience influence his or her behaviour before the exam (especially the intensity of preparation and the choice of strategies used for it), as well as during the exam when dealing with the lack of knowledge. Specifically, general knowledge and personal experiences (e.g., from part-time work) with the subject content might be welcomed in cases where it is necessary to improvise. Moreover, three type of skills and abilities seem to be essential: 1) self-management, 2) decision-making (the ability to decide in time and choose the right possibility) and 3) communication and social skills. Self-management influences above all preparation for an exam. It includes at least time management (abilities to plan preparation, to set priorities), self-organisation and self-motivation and an ability to cope with stress. It was mentioned several times that a student should try to stay calm and try to think positively during exam preparation and during the exam itself – as well as in cases the student finds out that he/she lack some knowledge during the exam.
'One has to take it [exam] easy and not to stress out. It's not worth getting health problems.' GD-PGS

Communication and social skills are related to verbal communication (vocabulary, fluency and readiness for communication) as well as non-verbal communication (including care of appearance). Participants stated that communication and social skills can be helpful in cases the student wants to mask his/her lack of knowledge during the exam, to get a teacher's help, to persuade the teacher about student's interest in the subject or to awake someone's interest in something.

Figure 1
Factors influencing an exam result



2.3.3 Student's Behaviour Strategies before an Exam

The third topic identified was the student's behaviour before exam. In this case, the most mentioned strategies were connected with preparation for the exam. Specifically, the following actions were stated: 1) to attend lectures during the term, because it is helpful for future preparation, 2) to make a social network, because friends and acquaintances can be sources of useful information (about the teacher and the exam itself), 3) to make a plan of preparation, which means among others to decide which exam term to attend (the findings indicate that students prefer to go as soon as possible or as late as possible), to set priorities (school versus entertainment) and to register for the exam and 4) to learn. The last named is related to a decision what in particular to learn might be important, and to concentrate on it where it is possible to imagine oneself as a teacher and so to gain a new point of view on the subject content. Furthermore, it was mentioned that it is not the best strategy to learn everything by heart but rather to think about the subject matter and look for some logical connections. Generally, a frequent comment was that the student should stay calm and keep on the top of things. If the student is not enough learned and the exam term is soon, two possible preferred strategies were identified: to withdraw from the exam term or to prepare a cheat sheet. Additional advice which could be derived from participants' statements is to limit alcohol consumption the night before the exam term, to check the time and place of the exam and to sort out the means of transport which will minimise the chances of delay and arriving late for the exam. Even then, it was advised to allow extra time.

2.3.4 Student's Behaviour Strategies during an Exam

As explained earlier, a student's behaviour during the exam might influence the exam result. Again, the advice of staying calm and keep on the top of things appeared. It is essential especially when a student finds out that he/she lacks the knowledge to answer everything. Other basic recommendations are to think, not to look for complicatedness and trickiness in instructions and to make the effort to formulate one's ideas and knowledge in answers as comprehensibly and precisely as possible. There is some evidence to suggest that students prefer not to cheat at exam.
'…he [a successful student] doesn't cheat during tests because he knows that it won't help him to gain better skills.' Q966

Since an exam can be written, oral or have both parts, some statements connected with particular exam parts were identified. Regarding a written exam, it was stated to read instructions carefully and just to be sure, to sit next to a well-prepared fellow student. At a written exam it is also advisable to set priorities when answering questions, which means to plan time for answering individual questions, deciding which questions to

answer first and thinking about the answers before writing them down. As far as an oral exam is concerned, the basic recommendation is probably to speak – optimally to the point.
'… I say to myself, better keep on talking even if not all of it may be correct rather than being quiet.' GD-G

Interestingly, some remark that it is worthwhile to guess the examiner's expectations and requirements as well as to assess the examiner's mood and then to behave in accordance with it. Some participants argue that it is beneficial to present good manners and to act confidently. Intriguingly, advice to attend an oral exam as one of the first students on a given exam day appeared, which might be connected with an assumption that the examiner might have a better mood at the beginning and a chance that the student will succeed is bigger.

2.3.5 Strategies of Dealing with Lack of Knowledge during an Exam

The fifth theme which came up was dealing with a lack of knowledge. The basic remark to this topic was that such a thing is common and that is why a student should expect it could happen. A common view was that it is better to stay calm and not to reveal the lack of knowledge. Next, it seems advisable to assess a risk related to cheating.
'I have to foresee whether a teacher can see me fiddling with the test.' Q807

If risk of getting caught is low, it is possible to try cheating (e.g., to use a cheat sheet or a mobile phone). A student stated that it is a good idea to try to excuse oneself, go to toilet and then call a friend from there and ask him to find out the answer. Another student admitted that apart from other things, he keeps cheat sheets in his mobile phone.

However, if a student cheats, it is still necessary to suppose the examiner might discover it and thus, in such a situation, should stay calm and to try to find out another solution. One participant suggested to borrow a cheat sheet from his fellow student. If consequences of cheating could be serious or the risk of being caught cheating is high, it is still possible to improvise. This means 1) to think and try to derive the answer with the use of other knowledge, general knowledge, own personal experience and/or logical thinking, 2) to describe an example or an application if suitable, 3) to answer to something else with a hope the examiner would not notice that the answer is not in accordance with the instruction. Regarding written exams, it might be beneficial to flip through the test (maybe something useful or inspiration can be found in instructions to other questions), to read instructions carefully (because there might be a hint to the answer) or in the case of a test with offered answers (e.g. A, B, C…) it is possible to just guess. As far as an oral exam is concerned, essential tips are 'to speak and speak' and listen to the examiner carefully, because he/she can offer a clue.

'I've been at an exam with a mate who didn't understand the topic at all. But he can speak so well that he basically convinced the teacher that he understood it even though he knew nothing.' 108

'If one isn't sure what is exactly meant by a question at an exam, he has to listen to a professor and improvise accordingly.' Q852

3 Discussion and Conclusion

The study deals with students' understanding about their academic world. The aim of the study was to look for answers to the following questions: 1) What feelings do university students have about exams?; 2) What internal and external factors influencing exam passing do students mention in their comments?; 3) What behaviour and mental strategies do students present for exam passing?

Generally, the results from the current study are consistent with previous findings. Students reported that a difficult exam can be a stressful situation for them. This is in accordance with the findings of Spangler et al. (2002) who found out that before the exam, when students still are experiencing uncertainty about actual demands and the course of the exam, negative emotions seem to be most prominent. On the other hand, some students are aware that exams are useful for their future professional life.

The study also replicated the influence of other factors previously documented to influence academic performance. Most of factors which Aitken (1982) defined as influencing academic performance were mentioned by students as well. In connection with the findings of Van Etten et al. (1997) about factors affecting test preparation, examination experiences seem to be relevant not only for test preparation but also for exam passing itself. Moreover, the study findings further support the idea that academic performance is influenced by intelligence, personality and study motivation. One interesting finding is some students' confessions that the number of unsuccessful exam chances from the subject matters in their study effort.

It is encouraging that students' notes about what to do to pass an exam are in accordance with statements in literature. Participants stated problem-focused coping strategies as well as emotional-coping ones. Furthermore, the study indicates that students prefer neither the surface approach to studying nor cheating. On the other hand, there seem to be some exceptions and the further research could examine such exceptions more deeply. One interesting finding were students' comments about the reduction of alcohol consumption the night before the exam, which raises the question of how common it is to drink alcohol or to use other addictive drugs for university students. This is another topic which might be further examined.

The study extends the knowledge of students' strategies to deal with a lack of knowledge during an exam. The findings suggest that students often rely in such cases on an examiner's exhaustion, his/her lack of attention and/or indulgence.

The study has several practical implications. First, as self-management, decision-making skills and communication and social skills were mentioned to be important for academic success, it strengthens the idea that such skills need to be developed in university students from their first months in an academic setting. For example, seminar tasks could support such skills development, or extra-curriculum courses could be offered to students. Furthermore, as the role of teacher is appreciable, good teaching skills seem to be necessary, as well as reducing student anxiety and maintaining and enhancing student motivation which Pressley et al. (1997) mention as well. Another important practical implication is connected with discouraging students from cheating. As Tibbetts (1999) suggests, the existence of an official honour code and the consistent referral to an official zero-tolerance policy toward cheating and a clear explanation of why these acts constitute immoral behaviour by teachers and administrators would be a significant step toward reinforcing student's moral beliefs regarding acts of cheating.

A limitation of this study is that it represents the perceptions of students at one university. On the other hand, several methods of data collection were used. Another limitation of the study is that secondary data analysis were used, because the data was collected originally for another purpose. Thus it was not possible to give additional questions to find out more details. A further limitation of the study is that students' ability to give recommendations (to describe a strategy for passing exams) does not mean that they apply the strategies into practice themselves. For example, Yazedjian et al. (2008) found that although students reported numerous strategies they believed would help them to be successful, many responded that they did not necessarily employ those strategies.

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Health literacy relating to everyday eating habits having impact on body composition in students of pedagogical disciplines of the Palacký University in Olomouc

Tereza Sofková, Michaela Hřivnová

Abstract

Appropriate eating habits create a prerequisite for the prevention of many chronic non-infectious diseases. Formation of health literacy, which includes edification in lifestyle and particularly education in the optimal eating habits, is part of general and profiling disciplines of students of pedagogical disciplines. This strengthens the likelihood of higher health literacy and thus putting into practice good eating habits by the students themselves and above all, by the next generation they will be educating and training in their teaching profession.

The aim of our research was to evaluate selected parameters of body composition based on eating habits in 324 female students of pedagogical disciplines of the Pedagogical Faculty of the Palacký University in Olomouc. Based on a questionnaire investigation of eating habits, the monitored students were divided into two groups: Group I (5 meals per day or more), Group II (4 meals per day or less). Multi-frequency bioimpedance analysis was carried out using the InBody 720 device to determine the body composition parameters. Received energy divided into five portions per day

(Group I) has optimal impact on the body composition. We can state that a statistically significant lower relative risk of health damage assessed using the amount of body fat (BFM, BFP, BFMI) was demonstrated in Group I women. The relative body fat (BFP) for Group II women exceeded 28 % and falls into the overweight category. From the point of view of Fat-free Mass Index (FFMI), both groups of women were placed among individuals with higher muscle development. Positive results of somatic diagnostics based on good eating habits thus may become a tangible basis for motivation of using preventive nutritional measures by future teachers. Secondarily, the results are used within the framework of academic educational reality in disciplines related to the health literacy and health education.

Key words: health education, health promotion, young adulthood, bioelectrical impedance.

Zdravotní gramotnost na úrovni uplatňovaných stravovacích zvyklostí v kontextu tělesného složení u studentů pedagogických oborů Univerzity Palackého v Olomouci

Abstrakt

Vhodné stravovací návyky vytvářejí předpoklad pro prevenci mnoha chronických neinfekčních onemocnění. Vytvoření zdravotní gramotnosti, která zahrnuje úpravu životního stylu a zvláště vzdělávání v optimálních stravovacích návycích, je součástí obecných a profilových disciplín studentů pedagogických oborů. To posiluje pravděpodobnost vyšší zdravotní gramotnosti, a tím zavedení dobrých stravovacích návyků samotnými studenty a především tak budou vzdělávat budoucí generace ve své profesi.

Cílem našeho výzkumu bylo zhodnotit vybrané parametry tělesného složení založené na stravovacích návycích u 324 studentek pedagogických oborů Pedagogické fakulty Univerzity Palackého v Olomouci. Na základě dotazníku zaměřeného na stravovací návyky byli sledovaní studenti rozděleni do dvou skupin: skupina I (5 jídel denně nebo více), skupina II (4 jídla denně nebo méně). Byla provedena frekvenční bio-impedanční analýza s použitím přístroje InBody 720 pro stanovení parametrů tělesné kompozice. Výsledná energie rozdělená na pět porcí denně (skupina I) má optimální dopad na složení těla. Můžeme konstatovat, že u žen skupiny I bylo prokázáno statisticky významné nižší relativní riziko poškození zdraví, které bylo hodnoceno pomocí množství tělesného tuku (BFM, BFP, BFMI). Relativní tělesný tuk (BFP) u žen skupiny II přesáhl 28 % a spadá do kategorie nadváhy. Z pohledu Indexu bez tuku (FFMI) byly obě skupiny žen zařazeny mezi jedinci s vyšším vývojem svalů. Pozitivní výsledky somatické diagnostiky založené

na dobrých stravovacích návycích se tak mohou stát hmatatelným základem pro motivaci využití preventivních nutričních opatření budoucími učiteli. Dále jsou výsledky využívány v rámci akademické vzdělávací reality v disciplínách týkajících se zdravotní gramotnosti a zdravotní výchovy.

Klíčová slova: zdravotní výchova, podpora zdraví, mládež, bioelektrická impedance.

Introduction

Health is determined by many endogenous and exogenous factors. However, the most dominant factor is the everyday lifestyle that can enhance natural determinants of health and delay the onset or manifestation of many health and lifestyle complications. Lifestyle is the result of interaction between man and environment. Good eating habits and healthy nutrition take part in weight management and are one of the key prerequisites for a healthy lifestyle. Established positive principles in this area provide prerequisites for prevention in the fight against chronic non-infectious diseases (Hainer et al., 2011; Holčík, Káňová, & Prudil, 2015; Katzmarzyk, Baur, & Blair, 2008; Machová & Kubátová, 2010).

Atherosclerotic cardiovascular diseases, which are a very common accompanying complication of obesity, are the most frequent cause of death (approximately 50 %) in developed countries, including the Czech Republic (Report on the Health of the Population of the Czech Republic, 2014). To remedy this situation, programs aimed at improving the health condition of the population have been developed (Health 21, Health 2020, Zdraví 21, Zdraví 2020, etc.) at international and national level. One of the tools of the Health 2020 program is the Action Plan to Improve Health Literacy (2015), which ranks among the key intervention areas, among other things, education and training (MZ ČR, 2015; MZ ČR, 2014a; MZČR, 2014b; MZČR, 2003; WHO, 20013; WHO, 1999).

Scope for the formation of health literacy, health promotion and health education is thus created at the various levels of the educational system, where, within the curriculum documents, this issue is implemented into objectives and educational content. For this reason, it is essential to prepare knowledgeable educators at the level of specialists in health education and to train future teachers of various approbation combinations for acquiring medical proficiency (Hřivnová, 2017; Marádová, 2016).

Health literacy in the Czech Republic is assessed as problematic to low in the adult population. The justification of health education and thus the development of health literacy is based on a number of research studies confirming relationship between the health literacy and educational attainment levels and, consequently, the socio-economic status (Kučera, Pelikan & Šteflová, 2016; Heide, Wang, Droomers, Spreeuwenberg, Rademakers, & Uiters, 2013).

Because the primary prevention is always the most effective, the focus of our study is on future teachers and their health literacy relating to everyday eating habits having impact on the body composition. We consider the body composition as appropriate indicator of the functional status of the body and its fitness. Suitable indicators of the somatic condition are the different body components, particularly body fat, visceral fat and fat free mass (Baumgartner, 2000; Hainer et al., 2011; Sofková & Přidalová, 2016).

Through teaching at the Pedagogical Faculty of the Palacký University in Olomouc, we can learn a healthy approach to nutritional stereotypes. Future teachers and parents are involved in shaping the level of pupil's health literacy. How teachers will be equipped to deal with the primary prevention process at elementary or secondary school with all cognitive-affective-psychomotor issues is based on their undergraduate and lifelong learning.

Consequently, the primary objective of our research was to evaluate the selected body fractions, particularly body fat and fat free mass, based on the eating habits of female students of pedagogical disciplines at the Pedagogical Faculty of the Palacký University in Olomouc (PdF UP).

1 Methodology

1.1 Research group

The research group consisted of 324 female students from the Pedagogical Faculty of the Palacký University in Olomouc, aged between 18 and 30 years. Women were divided into two groups according to their eating habits: Group I (5 meals per day or more) and Group II (4 meals per day or less). The first group of women (Group I) had an average age of 25.9 years (SD = 2.3) and the second group of women (Group II) had an average age of 24.4 years (SD = 2.7).

Data collection was carried out during October 2014–2016. Each woman signed a written consent to the measurements and was familiarised with the organisational requirements of the research. Somatic measurements and questionnaire investigations of eating habits were carried out within the research framework.

1.2 Somatic research

The standardised anthropometric methods were used to determine basic somatic parameters and somatic indexes. The body height (BH, cm) was determined with an accuracy of 0.5 cm using the P-226 anthropometer (Trystom, Czech Republic). The body mass (BM, kg) was determined using the InBody 720 device. Body Mass Index (BMI = BM/BH^2, kg/m^2) was based on the anthropometric parameters, namely BH and BM.

In addition to the basic somatic parameters (BM, BH, BMI) we evaluated the quantity of body fat (BFP, %; BFM, kg), visceral fat (VFA, %), fat free mass (FFM, kg) and skeletal muscle mass (SMM, kg). We also calculated the Body Fat Mass Index (BFMI = BFM/BH^2, kg/m^2) and Fat-free Mass Index (FFMI = FFM/BH^2, kg/m^2).

The InBody 720 device was used to diagnose the body composition by using the directly controlled multi-frequency bioelectric impedance (1–1,000 kHz). The principle of the bioelectric impedance method lies in differences in the propagation of the high frequency alternating current of different intensity in different biological structures. This is a non-invasive and fast method. The device differentiates body mass into three components – total body water (intracellular and extracellular water), dry matter (proteins and minerals) and body fat. InBody 720 device also analyses the amount of visceral fat, which is defined as the area of the transverse section in the abdominal area at the level of the L_4–L_5 vertebrae. The method used is unified; the measurement was carried out under the standard conditions given by the device manual (Biospace, Seoul, South Korea). Before each measurement, women were familiarised with the rules that are required to acquire valid body composition data.

1.3 Questionnaire investigation of eating habits

Data relating to eating habits was acquired through an investigation that focused on the frequency of daily food consumption (breakfast, snack in the morning, lunch, afternoon snack, dinner). Based on the recommendations in the "Nutritional Recommendations for the Population of the Czech Republic" (2012) paper, the optimal diet was determined as having five meals over the course of the day (Group I) and non-optimal diet as having four or less daily portions of food (Group II) (SPV, 2012).

Data analysis

Data acquired by the InBody 720 device was processed using the appropriate methods using the Lookin'Body 3.0 program; data relating to eating habits was transferred to MS Excel spreadsheet.

Statistical data analysis was carried out using the statistical program Statistica 10.0 (StatSoft, Tulsa, OK). The basic statistical variables for the monitored parameters and their differences between the groups were calculated. The significance of these differences was tested using the Mann-Whitney U test. Statistical significance was determined at $\alpha < 0.05$.

2 Results and Discussion

We have divided the monitored students into two groups that meet and do not meet the recommended frequency of daily meals. Table 1 presents selected somatic characteristics of the body composition for each group differentiated according to the daily frequency of meals. The average total body water (TBW) in an adult is about 50–60 % of the body weight. The TBW percentage in both groups exceeded the 50 % threshold. From the total body mass (BM, kg), the relative TBW (l) for Group I was 53.3 % and for Group II was 50.9 %. Rokyta (2000) reports that women have a lower water distribution due to a higher proportion of fat tissue, intracellular water (ICW: Intracellular Water, l) is represented by 32 % and extracellular water (ECW: Extracellular Water, l) by 21 %. Our two monitored groups had the following ratios: $ICW:ECW_{Group\ I} = 33.1 : 20.2$ and $ICW : ECW_{Group\ II} = 31.4:19.5$. This corresponds to the assumption that the amount of TBW is in reciprocal relationship to the body fat (BFM, kg). The most variable component of the body mass is BFM, which is the main factor of the body composition variability and is easily affected by eating habits. The relative body fat (BFP, %) for Group II exceeds the recommended 28 % according to Wang, Pierson and Heymsfield (1992), yet they are at the lower limit, i.e. $BFM_{Group\ II} = 29.3$ %. Group I, with the higher TBW, comes up to BFP = 26.3 %. Groups of women that have different number of meals per day have statistically significant differences in the parameter associated with the risk aspects of obesity for the body fat, namely BFM: $p = 0.01$ and BFP: $p = 0.005$. Visceral fat (VFA, cm^2) is metabolically more active and its increase in the human body, so-called abdominal obesity, is considered a risk factor for cardiovascular complications (Dukát, 2007). For the VFA we observed lower than the risk levels (< 100 cm^2) in both groups, i.e. $VFA_{Group\ I} = 58.3\ cm^2$; $VFA_{Group\ II} = 67.4\ cm^2$, $p = 0.11$.

The ratio between the fat free mass (FFM, kg) and BFM is a function of nutrition and physical activity and thoroughly characterises the somatic condition of the individual. FFM also testifies about the amount of proteins and minerals in the body, which are not significantly higher in Group I, as well as skeletal muscle mass (SMM, kg).

An inverse relationship between the BMI and the frequency of consumed meals has been demonstrated in adults (Kant & Schatzkin, 1995).

The average Body Mass Index (BMI, kg/m^2) is within the normal mass category (BMI: ≤ 25 kg/m^2) for both groups (Table 2). For a more objective assessment of the occurrence of health risk from the point of view of the body composition, splitting up the BMI into the Body Fat Mass Index (BFMI, kg/m^2) and the Fat Free Mass Index (FFMI kg/m^2) is used (Hainer et al., 2011; Kyle et al., 2004; Riegerová, Přidalová, & Ulbrichová, 2006). For women the BFMI's health safe zone is defined within 3.9 kg/m^2 and 8.1 kg/m^2. BFMI average falls into the health safe zone with the two groups having statistically significant differences, that is to say $BFMI_{Group\ I} = 6.3\ kg/m^2$, $BFMI_{Group\ II} = 7.4\ kg/m^2$, $p = 0.008$. This index may also be referred to as the body risk index of obesity. FFMI takes

better account of, among other things, the lower or higher representation of SMM – diagnosis of sarcopenia, i.e. malnutrition or higher development of muscle mass. The FFMI optimal range is within 14.6 kg/m^2 and 16.7 kg/m^2 (Kyle et al., 2004). Schutz et al. (2002) gives a classification for the age range of 18–34 years, which is set for BFMI at 5.5 kg/m^2 and for FFMI at 15.4 kg/m^2. $FFMI_{Group\ I}$ = 16.8 kg/m^2 and $FFMI_{Group\ II}$ = 16.6 kg/m^2 (p = 0.39) correspond to a higher development of muscle mass.

Rokyta (2000) states that the even energy intake during the day maintains increased metabolic rate and prevents storage of reserves in the body. Regular intake of food during the day is considered as the nutritional factor that is an independent predictor of proportionate mass (Ma, 2003). In addition to receiving the appropriate amount of energy, it is important to spread it appropriately to more meals throughout the day, that to say, three main meals and two snacks. Based on our results, we can confirm this theory as the statistically lower body fat (BFM, BFP, BFMI) has been demonstrated in persons with at least five portions per day. It is generally recommended to consume food with a lower energy value and a lower glycaemic index in the afternoon (Machová & Kubátová, 2010). The question is what food and how much to consume. Due to the amount of body fat found, the daily serving can exceed the recommended amount of food by its volume and caloric intake. Hřivnová, Kopecký, Knausová and Vařeková (2013) state that the risk level of cholesterol intake exceeds 48 % on weekends in the PdF UP female students.

Table 1
Selected somatic characteristics in relation to the eating habits

	Group I		p	Group II	
Variable	Mean	SD		Mean	SD
BH (cm)	168.8	8.1	0.33	167.7	6.9
BM (kg)	66.3	13.1	0.67	67.8	16.1
TBW (l)	35.4	6.7	0.26	34.5	6.4
ECW (l)	13.4	2.5	0.35	13.1	2.3
ICW (l)	22.0	4.3	0.22	21.3	4.0
BFM (kg)	17.8	8.8	**0.01**	20.7	10.5
BFP (%)	26.3	8.6	**0.005**	29.3	8.6
VFA (cm^2)	58.3	34.5	0.11	67.4	42.1
FFM (kg)	48.4	9.2	0.26	47.1	8.7
SMM (kg)	45.5	8.7	0.25	44.3	8.2
proteins	9.5	1.8	0.22	9.2	1.7
minerals	3.4	0.6	0.29	3.3	0.6

Note: BH – Body Height, BM – Body Mass, TBW – Total Body Water, ECW – Extracelular Body Water, ICW – Intracelular Body Water, BFM – Body Fat Mass, BFP – Body Fat Percentage, VFA – Visceral Fat Area, FFM – Fat-free Mass, SMM – Skeletal Muscle Mass.

Table 2
Indices of selected body composition health indicators

	Group I		p	Group II	
Variable	Mean	SD		Mean	SD
BMI (kg/cm^2)	23.2	4.0	0.29	34.6	4.3
BFMI (kg/m^2)	6.3	3.1	**0.008**	15.1	5.1
FFMI (kg/m^2)	16.8	2.0	0.39	18.9	1.9

Note: BMI – Body Mass Index, BFMI – Body Fat Mass Index, FFMI – Fat-free Mass Index.

Conclusions

We assess the body composition relating to eating habits in the monitored groups of women as acceptable. Because the pedagogical disciplines are involved in shaping the level of pupils' health literacy, the results of the research are used in the framework of academic educational reality in disciplines related to the topic of health literacy and health education.

The average BMI values are in the normal weight category (BMI: ≤ 25 kg/m^2) for both groups. It has been proven that the energy absorbed in five portions per day has an optimal effect on the body composition. Statistically significantly, lower body fat (BFM, BFP) has been demonstrated in women with at least five portions per day (Group I). The recommended standards relating to the average values of somatic characteristics were confirmed for the Group I. The BFP average of > 28 % is indicating overweight condition for women with dietary habits of four or fewer portions per day (Group II). The average BFMI for obesity falls within the safe range of 3.9 m^2 to 8.1 kg/m^2, even though the Group I has statistically significantly lower values. FFMI results show higher muscle development in both groups of women. Positive results of the somatic diagnostics based on good eating habits may be the motivation to maintain preventive nutritional measures leading to a healthy lifestyle.

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The Use of Digital Technologies in the Science Camp VEBOR

Beáta Brestenská, Jana Cibulková, Petra Ivánková

Abstract

Summer science camps for young people are full of different activities that develop children's motivation, to learn and get enthusiastic about natural science subjects in schools. The main meaning of the camps is to increase interest in science and develop a positive relationship with nature as well as environmental responsibility. One of the ways to implement these activities is to work with digital technologies. During the camp we used measuring equipment that supports the scientific character of the camp and mobile devices like tablets as working tools and a source of information in connection with the Internet.

Key words: science camp, digital technologies, measuring equipment, tablets.

Abstrakt

Letní vědecký tábor pro děti zahrnuje množství rozdílných aktivit, které rozvíjejí motivaci dětí učit se a nadchnout se pro přírodovědné předměty ve školách. Hlavním smysl tábora je zvýšit zájem dětí o vědu a rozvíjet jejich pozitivní vztah k přírodě, tedy environmentální odpovědnost. Jednou z možností implementace těchto aktivit je aktivní práce s digitálními technologiemi. Během realizace tábora jsme používali měřicí zařízení, která podporovala vědecký charakter tábora. Také jsme využívali tablety, které sloužily jako pracovní nástroj a informační zdroj pro připojení na Internet.

Klíčová slova: vědecký tabor, digitální technologie, měřicí přístroje, tablet.

Introduction

In this article, we will prove that science camps are the right place for teaching natural science in nature. It fosters playful and experience-based learning which motivates and supports comprehension of the abstract concepts and scientific processes. Empiricism is the essential condition in order to understand them. For research purposes, the science world makes a frequent use of the most varied technologies and devices, to simulate their work not only in laboratories, but mainly in the field. Therefore, we applied digital technologies (measuring and mobile devices, sensors, digital microscope, etc.) in the science camp too.

1 Digital Technologies and Science Camp

Due to the recent lack of interest of young people in the area of natural science, different projects have been launched to keep increase in their interest. Summer science camps are one of them. Realized activities in the summer camps support the interest and motivation of children and youth in the field of natural science and technology. At the same time, the camps help develop a connection with nature. The International SciCamp project started in 2012 with three main ideas as follows (SciCamp, 2015):

- To create a European network of science camp organizers and allow for sharing of their experience.
- To connect the science camp organizers with local institutions dealing with scientific research.
- To integrate science camps in school systems.

Other goal of the science camps is to navigate young people in their search of roles – scientist and engineer. "A Science Camp is a residential science education program, which offers various activities for young people of 6–20 years of age, aimed at supporting and strengthening (SciCamp, 2015) their science, technology, engineering and math (STEM) skills, and which lasts at least two days with one overnight (usually) within the camp premises." (Sveegaard, 2014).

Science camp target younger audience, they are appropriate to introduce individual scientific fields in a "playful and entertaining way" (Veda nás baví, 2016). Therefore, the activities should be adjusted to the form of experiential teaching. Yet in the 1940s, the German pedagogue Kurt Hahn launched the first experience-based summer school (Hypeš, 2007). One of the most famous experience-based camps is the summer school Lipnice in the Czech Republic, which organizes many courses dedicated to personality development (Prázdninová škola Lipnice, 2016). Its mission is to motivate humans to bravery and creativity.

Digital technologies (DT) are teaching tools used in the (science) education quite frequently. DT are the tools to support the process of learning and teaching, to develop critical thinking and problem solving skills, or to develop the ability to cooperate and communicate. Also DT develop digital skills of students as well as teachers who become digitally literate. DT support the development of science and social competence during the learning process (Kalaš, 2010; Kern, 2008).

In the science camp program we decided to use various types of digital technologies:

1. Measuring equipment
   With the respect to scientific nature of the camp the mission of which is to convey children the science in a fun and informal way. Measuring instruments are proper alternative, resp. they are the tools for getting real science (chemistry) outside the (science or school) laboratory. The advantage of measuring equipment with integrated computer is its mobility and therefore they are suitable for field work, so for science camp too (Prokša et al., 2015). In the science camp we used measuring equipment LabQuest, LabQuest 2 in Figure 1 in the connection with the sensors to measure pH, temperature and conductivity of selected materials.

Figure 1
Selected measuring equipment in the science camp

- Mobile devices
  Mobile devices include tablets, smartphones with various attachments which are assimilated to the Slovak school environment through the national program OPIS – Operational Program Informatization of Society (Government Office of the Slovak Republic, 2013). Since 2013, the OPIS has supported national projects focused on digitalization of the education system, for example Digiškola (Digiškola, 2016) and Škola na dotyk (Škola na dotyk, 2016). For the needs of the camp, we used tablets (connected to the Internet) with the Android operating system and Windows tablets (Figure 2) primarily as the source of the information and its processing.

Figure 2
Selected mobile devices in the science camp

- Digital microscope
  Digital microscope is a very interesting digital technology which can be used for observation of subjects during camp activities and for direct visualization on the chosen display area (computer, interactive whiteboard, screen). Flaškár et al. (2010) consider this tool as the excellent way to use digital technologies in biology.
- Other technologies
  For astronomy activities, we used a digital telescope and a classic astronomy telescope to compare their properties. We also used notebooks and printers for technical and administrative needs of the science camp.

2 General Background of Research

During the first year children dealt with topics such as astronomy, orientation in the field, water, biochemistry and green chemistry. Topics were designed according to ISCED 2 of selected subjects – biology, chemistry and geography. Prepared activities followed the content of the mentioned subjects in 5th grade, for example themes: Earth in geography, water in chemistry, or life in forest and work with microscope in biology. With the support of sponsors and university grants, it was possible to try interesting digital technologies which added a completely new dimension to the event.

The Science Camp VEBOR took place in the recreation center Smolenice Záruby, tailored to the individual activities such as field trip to the city Smolenice, the cave Driny and the beekeeping Včelco. All activities were carried out through experiential learning.

2.1 Activities with the Use of Digital Technologies

During the science camp we realized activities with the use of selected digital technologies displayed in Table 1.

Table 1
The design of activities with selected digital technologies

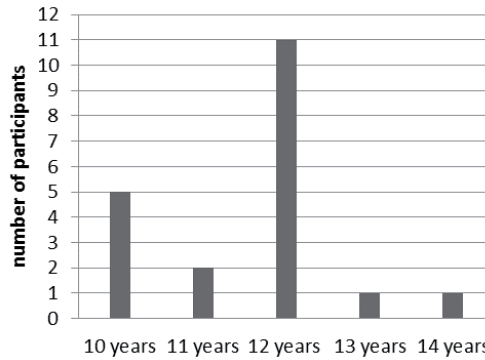
The name	Science	The goals of activities	Digital technologies
Session with an astronomer	Astronomy, geography	To be able to find, define and name visible elements of solar system (stars, planets), based on the work with a digital telescope, sky map and led by the guidance of an expert.	Digital telescope
Herbalist	Biology, botany	To collect plants during a walk in the forest and to name them using an atlas of plants by their characteristics. To prepare parts of plants (leaf, stem, plant cell) for observation of the anatomy and physiology of plant organs and cells.	Digital microscope
Hidden water treasure	Microworld	To observe samples from prepared hay infusion through digital microscope – the presence of living organisms. To study biotic properties of water.	Digital microscope
The secret of water	General chemistry,	To solve prepared problems, based on factors affecting the properties of water in daily life with the use of tablets and measuring equipment.	Measuring equipment, mobile devices – tablets

The implemented activities were conducted mostly in group work. At the beginning of the camp, the children were divided in 4 groups or scientific teams in order to encourage children to communicate and collaborate both in separated groups as well as among groups.

2.2 Sample of Research

The Science Camp VEBOR was designed for children aged from 10 to 14 years. The number of participants was 20 including 11 girls and 9 boys. The children are pupils of lower secondary schools: 5th–9th grades. The largest number of children was of 12 years of age which means that dominating were pupils of the 6th and 7th grades in primary schools, as displayed in Graph 1.

Graph 1
The age of participants



2.3 Data Collection Methods

At the beginning of the science camp a knowledge-based quiz from different subjects (chemistry, biology, physics, geography) was used to determine the level of the children's knowledge. Quiz tasks were based on real-life problem solving.

Initial interviews were also carried out with each child individually. The structured interviews were used to capture data about the participants' relationship to nature and natural sciences.

Final structured interviews focused on impressions and opinions of the children on the science camp, its realization and camp activities.

3 Results and Discussion

The initial interviews reflect the way the children's perception of science as such and their ideas of scientists, their mission in the world of science ("A person who is fascinated by the world around us. Therefore, they are trying to understand the world around us and teaching others, even if it does not make sense."). In the second part of the initial interviews, the children expressed the reasons and their motivation to participate in the Science Camp VEBOR. Interesting answers to the question were: "Because I enjoy science.", "I like observing.", "I was on other science camps.", "I like physics and chemistry. I wanted to learn something new about these subjects."

3.1 Overview of Activities with the Use of Digital Technologies

The design and realization of suggested activities that were actually carried out are slightly different. As a result of unexpected changes, we had to adjust the activities to the actual circumstances in the field. In the following part, individual activities with the implementation of digital technologies will be described.

3.1.1 Session with an Astronomer

Star observation with the use of a telescope is a fascinating experience, which enchanted all the camp participants. However, the observation was preceded by a proper preparation. Starting with Wi-Fi network connected tablets, they read about our solar system, found out information about planets – their constitution, characteristics (color, size, shape, etc.) and the position of the Earth in the universe in Figure 3. Afterwards, they had to prepare their own posters in Figure 4.

Figures 3 and 4
Our solar system

Before the observation of the night sky, they played a group game, the purpose of which was to collect all parts of a paper telescope as fast as possible in Figure 5. The goal of this game was to introduce the children to basic construction of a classic telescope.

Figure 5
The construction of a classic telescope

The night sky observation was led by a professional from the Department of Astronomy, Physics of the Earth and Meteorology of Comenius University in Bratislava. Working in an unknown field requires a due preparation; the astrologer arrived in the afternoon to check the most suitable location for the sky observation. He brought one classic telescope and one digital telescope to show the advantages and disadvantages of both. When the professional had chosen the right location for observation, he had to take into consideration the limited conditions for electricity connection and cabling which are necessary for the use of the digital telescope. Nevertheless, this is the only disadvantage of the digital telescope in comparison with the classic one. The digital telescope allowed the children to see space objects under the same weather conditions much better compared to the classic telescope.

The children were excited and enthusiastic about the astronomer's explanations, they patiently watched stars, star clusters, planets Saturn and Mars, moons of Mars, etc. in Figure 6. On the digital telescope, it was possible to set the codes of the position of individual objects so that the telescope found them itself without any further help from the astronomer, which accelerated the whole observation and saved the astrologer a lot of time.

Figure 6
The night sky observation

3.1.2 Hidden Water Treasure

The original idea was to research biotic properties of different samples of local water resources. Unfortunately, the local brook dried up so we focused our attention on the artificially prepared hay infusion and observation of the organisms living in this type of water. We turned the preparation of hay infusion into a fun activity for the children. Even though we had to wait three days before we could actually use it. To complete this activity, we used work sheets randomly hidden in the close area of the camp premises. Children received a map leading to the worksheets after they had participated in a running game in Figures 7, 8.

Figures 7, 8
The running game and the preparation of hay infusion

For the purposes of observation we equipped the children with two types of microscopes – the classic one and the digital one. The children could see that working with the digital microscope is more effective in Figure 9. While the classic microscope could be used only by one person looking through the eye-piece. The digital microscope allowed us to connect it with a data projector, so we were able to zoom in objects and view them on a huge screen, and they could be seen by everyone. As the digital microscope allowed an experienced person to guide the observation and explain the step-by-step process at once to all, it saved some time, plus it offered space for open discussion of all the camp participants in Figure10.

Figures 9, 10
The observation with a digital microscope and open discussion

3.1.3 The Secret of Water

The goal of this activity had to be modified from investigating abiotic properties of collected water samples from the neighborhood to solving problems using prepared worksheets. Topics of the problems were based on the daily life:

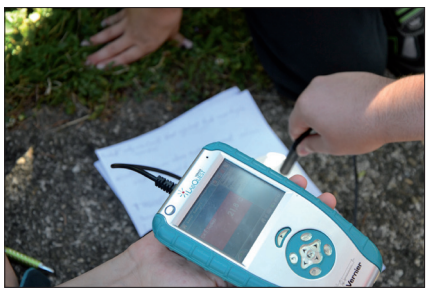
- the impact of detergents on pH of water,
- the impact of fertilizer on pH of water,
- the impact of water hardness on conductivity.

The children explored problems from the position of scientists, better said scientific teams because science is team work, by which we incorporated the elements of inquiry-based learning during the camp. They applied the measuring equipment and mobile devices – tablets for their solution.

The children were more skilled when working with tablets connected to the Internet for searching, collecting and processing the necessary information because they use tablets in everyday life and the schools participating in national projects implement tablets in lessons in Figure 11.

Then the children used the measuring equipment and the sensors Vernier or Windows tablets and sensors Pasco to measure pH, temperature, conductivity according to the nature of prepared problems in Figures 12, 13. The work with the measuring equipment was new and interesting experience for the little scientists. The children saw the process of collecting data directly in the displays of the measuring equipment which helped them to understand the observed process better.

Figures 11–13
The solving of prepared problems with the measuring equipment

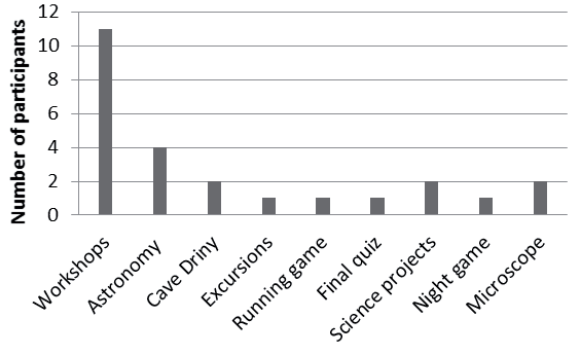


After research work and scientific activities they focused on creating a poster and a follow-up presentation in Figures 14, 15. Through visualization of the obtained data, scientific teams were able to easily process and record the data in the form of graphs and tables on the poster.

Figures 14, 15
Creation and presentation of a poster

The final interview referes mainly to the time spent at the science camp and gives feedback to the organizers of the science camp. Based on the responses of children it can be said that the the Science Camp VEBOR is an interesting, meaningful and fun way how to spend free time. The prepared activities fulfilled the pre-defined goals to get attention of the children and direct it for active learning of new knowledge. Popular activities in the science camp VEBOR are displayed in Graph 2. The most popular activity was workshops focused on biochemistry (carbohydrates and lipids) and biopolymers (bioplastic from starch). The workshops covered of four topics: 1. Honey and beekeeping, 2. How to make soap?, 3. How to make bioplastic?, 4. Dancing. They included not only scientific experiments but also discussion with a beekeeper and a physical activity too. The second most interesting part of the program was space observation and discussion with astronomy experts. Attractiveness of the astronomy topic was supported by the use of a digital telescope. Another favorite activity at the Science Camp VEBOR was scientific projects, it was necessary to work with measuring devices and the observation of selected objects through a digital microscope.

Graph 2
Popular activities in the science camp VEBOR



At the end of the final interviews, some of the children expressed interest in the integration of technology as a future topic of the program of the Science Camp VEBOR ("Maybe some information technology – IT. How IT works.").

4 Conclusions

The trend of the present days is to popularize science and technology among young people. One way is the realization of science camps for children and youth. In the science-related camp Vebor, the use of digital technology not only shows the real work of scientists, but introduces children to the use of laboratory technology too. The science camp fully leads to the personal development of children in all directions of STEM (science, technology, engineering and math). We believe that the science camp in cooperation with digital technologies, as a type of informal and experiential education, is a suitable way of learning about the world and learning from experience.

Acknowledgement

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Authors of Figures:
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Figure 2. Selected mobile devices in the science camp. Author: Cibulková, J. 2016.
Figure 3. Our solar system 1. Author: Ivánková, P. 2016.
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Figure 5. The construction of classic telescope. Author: Ivánková, P. 2016.
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Figure 14. Creation and presentation of a poster 1. Author: Ivánková, P. 2016.
Figure 15. Creation and presentation of a poster 2. Author: Ivánková, P. 2016.

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Urban-Rural Contrasts in Attitudes, Motives and Sport Preferences in Adolescents

Michal Kudláček, Martin Sigmund, Jana Kvintová, Tomáš Junek

Abstract

This study focuses on the attitudes, motivation for physical activity (PA), structure of sport preferences and physical activity of students of two selected high schools (rural area; urban area). There were several questionnaires employed in this study: Dimension of Attitude for Children and Youth (DIPO-J), Motivation for Physical Activity Questionnaire (MPAM-R) and Sport Preferences Questionnaire. The research group (in total 300 respondents) consisted of 150 students from a rural area and 150 students from an urban area. According to the results, adolescents at both the schools have moderately positive attitudes toward physical education. The most frequently chosen attitude was the one to performance, health and fitness in both girls and boys. The results of the sport preferences survey indicate that the adolescents, in terms of different types of physical activity, preferred most the category "Individual Sports", in which they placed swimming on the top. In terms of evaluation of PA, we found that boys are more physically active than girls are. After comparing the PA between the rural and urban areas, the respondents from the urban area have scored better in the category "Total PA" than the respondents from the rural area.

Key words: physical education, health, lifestyle, DIPO-J, MPAM-R, sport preferences.

Abstrakt

Předložená studie se zaměřuje na postoje, motivaci k pohybové aktivitě (PA), strukturu sportovních preferencí a pohybovou aktivitu studentů dvou vybraných středních škol (venkovská oblast, městská oblast). Výzkumný soubor představuje celkem 300 studentů středních škol (150 studentů z venkovských oblastí a 150 studentů z městské oblasti). V rámci dotazníkového šetření byly aplikovány Dotazník DIPO-J (Dimenze postojů pro juniory), Dotazník motivace k pohybové aktivitě MPAM-R, dotazník IPAQ a Dotazník sportovních preferencí. Zpracování výsledků bylo provedeno v programu Statistica 12.0 CZ. Byl použit neparametrický test Kruskal-Wallis, pro zjištění vztahu mezi závisle a nezávisle proměnou byl použit Spearmanův koeficient pořadové korelace a k posouzení „effect size" koeficient η^2. Výsledky ukazují, že adolescenti obou škol mají mírně pozitivní postoje k tělesné výchově. Pro dívky i chlapce byl nejčastěji hodnocený postoj k výkonu, zdraví a kondici. Výsledky průzkumu sportovních preferencí ukazují, že adolescenti, pokud jde o různé druhy pohybové aktivity (PA), upřednostňovali nejvíce kategorii „individuální sporty", v níž nejvíce dominuje plavání. Z hlediska hodnocení PA bylo zjištěno, že chlapci jsou pohybově aktivnější než dívky. Po srovnání PA mezi venkovskými a městskými oblastmi respondenti z městské oblasti zaznamenali lepší výsledky v kategorii „Celková PA" než respondenti z venkovských oblastí. Výsledky přeložené studie budou zohledněny a implementovány do edukační praxe sledovaných probandů.

Introduction

Currently we are witnessing a rapid increase in the number of mass non-communicable diseases, such as the ischaemic heart disease, cerebrovascular attack, hypertension, or diabetes mellitus type II, etc. These diseases are collectively referred to as 'lifestyle diseases', which according to WHO (2014) cause 60 % of all deaths worldwide (Hallal et al., 2012; Kohl et al., 2012).

The health benefits of physical activity include the cumulative effects of physical activity (PA) on health, health profits, gains, advantages or values resulting from regular physical activity of recommended intensity and frequency (Hendl & Dobrý et al., 2011; Janssen & LeBlanc, 2010; Warburton, Nicol, Bredin, 2006).

Recently a project was launched in the UK called GP Exercise Referral Scheme, under which a physician diagnoses a patient with one of the above mentioned lifestyle diseases and, suggesting that regular physical activity could minimize the consequences of the disease, refers the patient to a physical activity specialist, who in cooperation with the physician prescribes adequate physical activity (National Institute for Health and Care Excellence, 2017). The importance of appropriate PA dosing is also emphasised by Blahutková, Řehulka and Dvořáková (2005), as it supports the overall immunity

system and systematically improves performance under load (Swain & Brawner, 2014; Thompson, Arena, Riebe, & Pescatello, 2013).

Health is highly individual and every person is responsible for their own development, their everyday activities, and their health. The level of health is strongly associated with behavioural characteristics (Glanz, Rimer, & Viswanath, 2015). Health-affecting behavioural characteristics primarily include lifestyle, followed by other factors such as genetic predispositions, the environment, or health-care services. A fact that should be reflected upon and subjected to a deep analysis is that a majority of the population place health at the top of their scale of values, but their active efforts to maintain their health are negligible and rather prefer passive care for their health by using health-care services (Hodaň, 2000).

Modern school-based PE focuses on the assessment of individual physical activity preconditions, improvement of physical skills, and the development of physical fitness. Schoolchildren should be encouraged to engage in positive and pleasant physical activity and to maintain a positive attitude to such activity (Centers for Disease Control, 2013; Redelius, Quennerstedt, & Öhman, 2015; Roth, Zittel, Pyfer, & Auxter, 2017). This implies that physical education should not be limited merely to children's performance and competitiveness. PE is a school subject that can directly affect the health of young people and later adults. Ideally, school-based PE should also support and increase regular physical activity among young people and act as a means of health prevention. The information on PA and PA skills gained in school should be applicable at any later stage in life (transferability), just like grammar or numerical operations. Blahutková, Řehulka and Dvořáková (2005) emphasise that PE should promote health rather than performance, because especially in the second stage of elementary school, performance is given preference. As a result, a number of less talented children are greatly frustrated after initial failures in PE, which can lead to serious life transformations (loss of identity, confidence, etc.) This also leads to a loss of motivation and to a decrease in an individual's natural desire for movement. This adverse situation may persist into adulthood, when continuous rejection of movement becomes a life principle.

According to the World Health Organization (2012), physical inactivity is one of the leading risk factors affecting the health of the population. Research has shown that more than a half of the population of Europe do not achieve sufficient PA levels (Dishman, Washburn, & Heath, 2004), and that two-thirds of the population over the age of 15 years do not achieve the recommended weekly PA levels. It is estimated that only 31 % of the European population carry out health-promoting PA. Europeans aged 11, 13 and 15 years prefer a sedentary lifestyle, and only 34 % of them meet the current PA guidelines (Kalman et al., 2011; Csémy et al., 2013). In most countries, women tend to be more active in this respect, but with increasing age their amount of daily PA decreases as well. As a result of hypokinesia, a total of 6 % of the population of the Czech Republic die. This finding ranks physical inactivity fourth in the ranking of human death causes (Lee, Shiroma, Lobelo, Puska, Blair, & Katzmarzyk, 2012).

Motivated behaviour of an individual brings satisfaction and is targeted, which means that it has a certain direction and objective. The results of a controlled trial entitled The Physical Activity Counselling (PAC) have confirmed the irreplaceable role of the amount and quality of motivation, as interactions between PA and mental constructs can contribute to increase PA. Similarly, self-determination theories suggest an effect of motivation on physically active behaviour (Fortier et al., 2011).

Should adolescents become involved in everyday physical activity, individual motives must be changed to encourage voluntary engagement in physical activity, and specific physical activity programmes must be developed according to the findings (Centers for Disease Control, 2013). The motivation component should go hand in hand with sports preferences, which is an area however that does not receive the required amount of attention both in the Czech Republic and internationally. In the Czech Republic, the issue of sports preferences was addressed primarily by Frömel, Novosad and Svozil (1999), Kudláček and Frömel (2012), and Rychtecký (2006).

The main objective of the research was to analyse the relationships, attitudes, motives and preferences concerning physical activity in students in a rural school and urban school.

1 Methods

1.1 Research Sample

The research was conducted in two high schools in the Olomouc region. The Grammar School Kojetín (150 students; 74 boys, 76 girls) – rural area; and the Grammar School Čajkovského (150 students; 70 boys, 80 girls) – urban area. The research sample consisted of 300 students of 16–18 years of age.

1.2 Data Collection Methods

All the research data were obtained by means of a questionnaire. To determine the motives that encourages students for physical activity, the Motives for Physical Activity Measure (MPAM-R) was used. The respondents' attitudes to physical education as a school-based subject were identified by means of the DIPO-J (junior attitude dimensions) questionnaire. The attitudes to physical activity were monitored in the following areas: Dimension I – Attitudes to performance, capacity, health and fitness; Dimension II – Attitudes to the development of personality, character, abilities; Dimension III – Attitudes to social experience, behaviour and conduct, friendship; Dimension IV – Attitudes to stress, risk, courage and adventure; Dimension V – attitudes to aesthetic experience in PE and sport, beauty and grace of movement; Dimension VI – Attitudes

to relaxation, compensation, decreasing tension. To make a comprehensive picture of the data, the International Physical Activity Questionnaire (IPAQ) and Sports Preferences Questionnaire were used.

1.3 Statistical analysis

The results were processed using the Statistica 12.0 CZ programme. The non-parametric Kruskal-Wallis ANOVA was used to identify any dependences between the values. To determine the correlation between dependent and independent variables, the Spearman's rank correlation coefficient was used; the η^2 coefficient was used to assess 'effect size'. This coefficient (η^2) might be applied in the Kruskal-Wallis ANOVA test with the following interpretation: $\eta^2 = 0.01$ small effect, $\eta^2 = 0.06$ medium effect and $\eta^2 = 0.14$ large effect (Morse, 1999).

The Spearman's correlation coefficient was also used to measure the strength of two variable values. It is a non-parametric method which uses the principle of ordering individuals by their size with respect to two monitored quantities. If the order is identical, the 'r' coefficient has a maximum value of 1; if the order is reversed the value is -1. If the measured values of the correlation coefficient are close to zero, the orders are random without any mutual dependence. The degree of association was assessed according to Hendl (2006): 0.1–03 weak, 0.3–0.7 medium and 0.7–1.0 high.

2 Results

Attitudes towards Physical Activity

Table 1
Comparison of average values in the DIPO-J dimensions by s school location (rural, urban), gender, physical activity level, and BMI

School	*n*		I	II	III	IV	V	VI
Rural area	150	*M*	13.79	11.75	13.2	10.83	8.53	13.04
		SD	0.663	0.907	0.778	0.866	0.36	4.513
		order	1st	4th	2nd	5th	6th	3rd
Urban area	150	*M*	14.34	11.14	12.68	10.9	9.53	13.63
		SD	2.634	3.491	3.121	3.373	3.933	3.826
		order	1st	4th	3rd	5th	6th	2nd
		p	0.279	0.341	0.42	0.907	0.131	0.427

Gender	*n*		I	II	III	IV	V	VI
Boys	144	*M*	13.33	12.02	12.46	11.34	7.44	13.31
		SD	2.954	3.879	2.998	3.478	3.314	4.675
		order	1st	4th	3rd	5th	6th	2nd
Girls	156	*M*	14.62	11.3	13.4	10.45	10.25	13.29
		SD	2.763	3.432	4.147	3.476	3.644	3.83
		order	1st	4th	2nd	5th	6th	3rd
		p	0.010*	0.121	0.145	0.143	**0.001***	0.974
Physical activity	***n***		**I**	**II**	**III**	**IV**	**V**	**VI**
More active	177	*M*	14.14	12.75	13.13	11.61	8.52	14.43
		SD	2.942	3.337	3.957	3.275	3.513	3.985
		order	2nd	4th	3rd	5th	6th	1st
Less active	123	*M*	14	10.55	12.98	10.32	9.82	12.45
		SD	2.654	3.458	3.424	3.442	4.06	3.979
		order	1st	4th	2nd	5th	6th	3rd
		p	0.788	**0.001**	0.833	**0.042**	0.065	**0.008**
BMI	***n***		**I**	**II**	**III**	**IV**	**V**	**VI**
< 18.5	46	*M*	14.4	11.65	13.6	10.35	10.45	12.65
		SD	2.703	3.588	4.173	3.453	4.019	4.258
		order	1st	4th	2nd	6th	5th	3rd
18.5–24.9	231	*M*	14.13	11.51	12.77	11.09	8.76	13.72
		SD	2.92	3.701	3.728	3.563	3.771	3.956
		order	1st	4th	3rd	5th	6th	2nd
25.0 <	23	*M*	12.82	11.55	14	9.91	8.36	11.46
		SD	3.157	3.328	2.236	3.113	3.009	5.538
		order	2nd	3rd	1st	5th	6th	4th
< 18,5 a 18,5–24,9		*p*	0.7	0.877	0.376	0.396	0.073	0.279
<18.5 and 25.0<		*p*	0.152	0.937	0.771	0.723	0.144	0.507
18.5–24.9 and 25.0<		*p*	0.164	0.976	0.288	0.294	0.734	0.087

Note: n – size of the research sample, p – statistical significance, M – mean, SD – standard deviation, * statistically significant values in bold

The results in Table 1 describe that the students' attitudes to physical education in both the schools are rather slightly positive than negative. The only area with other than positive attitudes was dimension V (*attitudes to aesthetic experience in PE and sport, beauty and grace of movement*) with slightly negative attitudes in the rural school. On the contrary, the students in the urban school had neutral attitudes. The attitude with

the best assessment was dimension I (*attitudes to performance, capacity, health and fitness*). The following order was almost identical, the only difference was that the second place in the rural school was occupied by dimension III (*attitudes to social experience, behaviour and conduct, friendship*), in the urban school the second place was occupied by dimension IV (*attitudes to relaxation, compensation, decreasing tension*). In the third place the dimensions mentioned above were again reversed. However, no significant inter-school differences were identified in any of the areas.

Table 2
Comparison of mean values in the DIPO-J dimensions by age

Age	*n*		I.	II	III	IV	V	VI
16 years	100	*M*	14.36	12.22	13.34	11.36	7.84	13.81
		SD	2.537	3.367	2.695	3.545	3.777	3.711
		order	1st	4th	3rd	5th	6th	2nd
17 years	104	*M*	14.31	11	13.34	10.98	9.66	13.83
		SD	2.883	3.601	4.262	3.560	3.954	3.971
		order	1st	4th	3rd	5th	6th	2nd
18 years	96	*M*	13.24	11.68	12	10.19	8.73	11.92
		SD	3.218	4.014	3.283	3.365	3.220	4.856
		order	1st	4th	2nd	5th	6th	3rd
16 years & 17 years		*p*	0.911	0.113	0.995	0.612	0.033	0.983
16 years & 18 years		*p*	0.113	0.548	0.070	0.159	0.297	0.077
17 years & 18 years		*p*	0.089	0.384	0.102	0.271	0.225	**0.034**

Note: n – size of the research sample, p – statistical significance, M – mean, SD – standard deviation, * statistically significant values in bold

Based on the results presented in Table 2, with specific focus on age aspects, we can state that the order of assessment of dimensions I–IV from positive to negative attitudes in all the age groups was almost identical, see as follows: 1) dimension I – *attitudes to performance, capacity, health and fitness*; 2) dimension II – *attitudes to relaxation, compensation, decreasing tension*; 3) dimension III – *attitudes to social experience, behaviour and conduct, friendship*; 4) dimension II – *attitudes to the development of personality, character, abilities*; 5) dimension IV – *attitudes to stress, risk, courage and adventure*; 6) dimension V – *attitudes to aesthetic experience in PE and sport, beauty and grace of movement*. The only difference was that the 18-year-old individuals ranked dimension III as the second one and dimension VI as the third one. The only significant difference was measured in dimension VI in the category of 17-year-old individuals with an average value of 13.83, and in the category of 18-year-old individuals with an average value of 11.92.

2.1 Motives for physical activity

The results (Figure 1) suggest that the core PA motive for the students of both the schools is 'experience'. On the other hand, the least important motive for the students of both the schools is the motive of 'fitness', which is in significant contrast with the results of Janssen and Leblanc (2010); and for students from the urban area it is also 'social'. The differences between the results of the two schools were statistically insignificant.

Figure 1
Comparison of motives for physical activity by schools

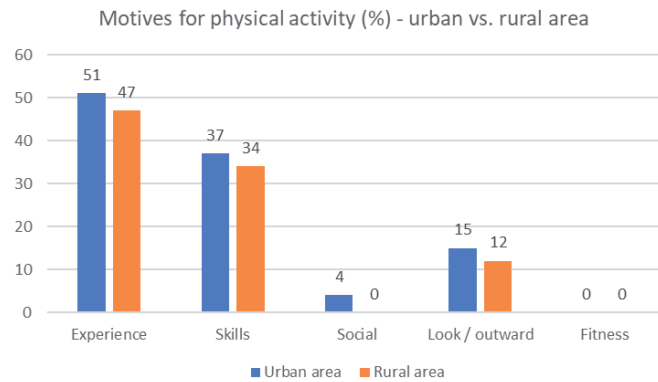
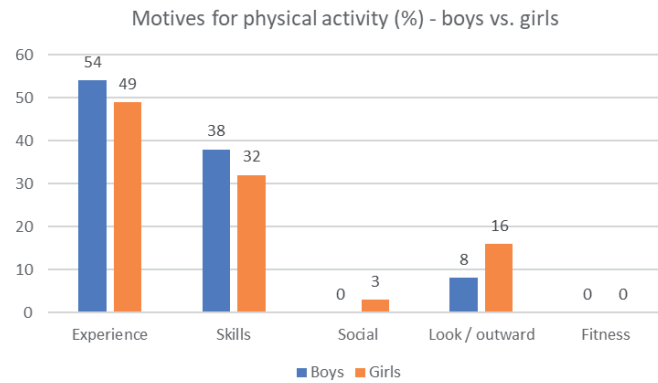
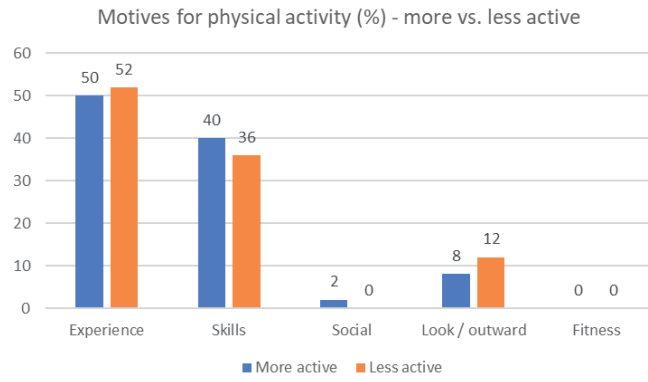


Figure 2
Comparison of motives for physical activity by gender



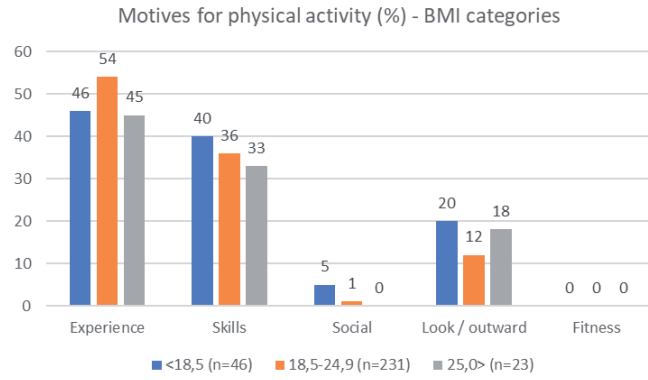
The dominant motive for both the boys and girls is 'experience' (Figure 2). A significant factor also is the motive of 'ability', which was ranked as the second one by both the genders. A more significant difference was observed in the motive 'appearance', which was mentioned more often especially by girls.

Figure 3
Comparison of motives for physical activity by PA level



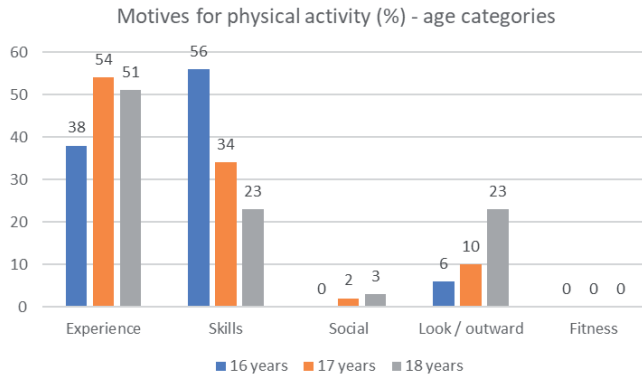
In terms of dichotomization into more active and less active individuals, no significant differences were observed between the groups.

Figure 4
Comparison of motives for physical activity by BMI



In terms of BMI (Figure 4), the results in the category of 'BMI 18.5–24.9' and 'BMI 25.0' were similar; the first three positions were occupied by the following motives: 'experience', 'ability' and 'appearance'. In the category of 'BMI < 18.5', the first was 'ability', followed by 'experience' and 'appearance'. In the category of 'BMI 25.0' the motives with the lowest score were 'social' and 'fitness'. However, the differences between the categories in terms of BMI were not statistically significant.

Figure 5
Comparison of motives for physical activity by age



In terms of age (Figure 5), some differences were observed in the students in the category of '16 years' in relation to the remaining two categories; the youngest students ranked their PA motives as follows: 'ability', 'experience' and 'appearance'. In the category of '17 years' and '18 years' the first one was 'experience' followed by 'ability'; in the category of '18 years' the same percentage was also achieved by the motive 'appearance'. The third place in the category of '17 years' was occupied by the motive 'appearance'. The differences were not significant in this category.

2.2 Sport preferences

The most popular individual sports include swimming, which was ranked first by the students from the rural area and third by the students from the urban area (Table 3). A high score was also achieved by cycling and surprisingly badminton, which was ranked first by the students from the urban area. A considerable difference was observed in downhill skiing, which was ranked second by the students from the urban area, but eighth by students from the rural area. A similar difference was also observed

in athletics, which was ranked third by the students from the rural area but tenth by the students from the urban area. In terms of individual sports, the degree of correlation was high (r = 0.75).

Table 3
Sport preferences – Individual sports ranking

Individual sports	Rural	Urban	Overall
Swimming	1	3	1
Cycling	2	4	2
Athletics	3	10	7
Badminton	4	1	3
Skating	5	7	5

Note: The list presents the most preferred activities

Table 4
Sport preferences – Team sports ranking

Team sports	Rural	Urban	Overall
Baseball, softball	1	2	1
Floorbal	2	4	3
Handball (dodgeball)	3	6	5
Volleyball (beach-, netball)	4	3	4
Basketball	5	1	2
Football	6	5	6
Ice hockey (in-line hockey)	7	8	7

Note: The list presents the most preferred activities

The most preferred team sports among the rural students were baseball, floorball and handball (dodgeball), meanwhile among the urban students it was basketball, baseball and volleyball (Table 4). This result (in rural school) was expected because baseball was played quite often in PE lessons and the school organizes regular floorball tournaments. Surprisingly, football occupied the sixth position. In terms of team sports, the degree of correlation between schools was high (r = 0.84).

Table 5
Sport preferences – Fitness activities ranking

Fitness activities	Rural	Urban	Overall
Resistance/strengthening exercise	1	1	1
Running (jogging)	2	2	2
Yoga	3	3	3
Conditioning walking (Nordic walking)	4	4	4
Bodystyling	5	6	5

Note: The list presents the most preferred activities

In the category of fitness activities (Table 5), no significant differences were observed, which explains the high value of the correlation coefficient (r = 0.83). In both schools, the top positions were occupied by resistance/strengthening exercises, jogging and yoga.

In the area of outdoor physical activities, the top three positions were occupied by swimming, skating and cycling. Similary to the category of individual sports, the differences concerned skiing, which was more popular among the students from the urban are (fourth place), while the students from the rural area preferred board sports to skiing. In terms of favourite activities, a different assessment was achieved by golf, which was more popular among the students from the urban area. A surprisingly high score was achieved by climbing as assessed by the students from the rural area as the opposed to students from the urban area. In terms of outdoor physical activities, a medium degree of correlation was observed (r = 0.66).

Discussion

We examined the motives, attitudes and physical activity (PA) patterns of urban and rural adolescents living in the Czech Republic, particularly in the Olomouc Region. Our findings from the motives and attitudes part of the study suggest that although some differences may exist between adolescents residing in urban and rural areas, their magnitude was rather small and are not likely to influence the approach of teachers, instructors, coaches in a significant manner as well as urban planning and other related activities.

The domain of attitudes towards PA/PE suggests that particular attitudes differing according to children's PA levels emphasize the need for physical educators to foster positive attitude towards physical education and PA in order to encourage children to adopt and maintain healthy and active lifestyles.

Regarding motives towards PA there were five main motives explored within our study – fitness, body image, ability, social reasons, experience. One of the most relevant motives is body image. Relationships between body image and PA were also described in previous studies (Finne et al., 2011; Fountoulakis & Grogan, 2014). Adolescents with a more positive body image may engage in PA because they do not perceive barriers to exhibit their bodies in a public places/settings. Above all of that, PA may be a consequence of body image.

Our emphasis was put on gender differences as well as on the activity level and BMI index. In accordance with our assumption, the motive of body image was more frequent among girls (16 %) than among boys (8 %), but we assumed that this motive will be the leading motive for girls. This leading position was grabbed by the motive of experience and the motive of ability, which was quite a surprising result for us.

One of the possible explanations for this result can be the tendency of girls to use other weight control techniques, such as dieting. Wertheim and Paxton (2012) found that a significant proportion of adolescent girls tend to be thinner although they are more likely to use unhealthy and not very effective methods to achieve their goals, which can be seen as a gender specific strategy.

In contrast with our findings, Holsen, Carlson Jones, & Skogbrott Birkelnad (2012) as well as Monteiro Gaspar et al. (2011) published their findings, and girls reported more negative body image within the inter-gender comparison. The topic of body image seems to be one of the key aspects in teaching approaches and intervention programs planning since we are living in Western culture (Markland & Ingledew, 2007)

Our finding are in contrast with findings from other studies showing no differences in PA patterns between urban and rural children. In these studies, similar percentages of students were classified as active or inactive (Plotnikoff et al., 2004). On the other hand these authors found that rural children were at the same or even higher risk of being overweight or obese, which is in accordance with our findings, because our results proved that rural adolescents are less physical active compared to urban adolescents. In contrast to our findings, Tognarelli et al. (2004) concluded that PA choices of rural children mirrored those of urban children.

Other studies have indeed found differences in the PA patterns between urban and rural children. Proctor et al. (1996) reported that rural children in Cameron were twice as active as urban children. Similarly, in Turkey, fewer urban children were reported to engage in PA compared to rural children (Ozdirence, 2005).

The findings from these studies reveal an interesting pattern, in which differences in PA habits between urban and rural children are usually observed in developing countries but not in westernized ones.

The more social conditions change, however, the milder the difference between children from urban and rural areas is likely to become (Bathrellou, Lazrou, Panagiotakos, & Sidossis, 2007).

A possible explanation of our findings can be seen in better leisure time infrastructure and a wider range of facilities for leisure time, sports club and other opportunities for PA.

Conclusion

Attitudes

- The attitudes of the students to PE in both the monitored areas (urban and rural) are slightly positive. The only area with other than positive attitudes was Dimension V (Attitudes to aesthetic experience in PE and sport, beauty and grace of movement) with slightly negative attitudes of the students from the rural area. On the contrary, the students from the urban area had neutral attitudes. The attitude with the best assessment was Dimension I (Attitudes to performance, capacity, health and fitness). No significant differences were identified in any of the areas.
- The attitudes of the boys and girls to PA are almost identical. A noticeable difference was observed only in Dimension V (Attitudes to aesthetic experience in PE and sport, beauty and grace of movement), which was considered slightly negatively by boys but neutrally by girls. In both the genders, the attitude with the best assessment was Dimension I (Attitudes to performance, capacity, health and fitness). Significant differences were observed in Dimension I (Attitudes to performance, capacity health and fitness), and in Dimension V (Attitudes to aesthetic experience in PE and sport, beauty and grace of movement) – in both the cases in favour of girls.
- In terms of BMI, none of the dimensions shows significant differences between the monitored groups in any of the areas.
- In terms of age, the order of specific PA motives is almost identical in the monitored age groups. In all the categories, the first position was occupied by Dimension I (Attitudes to performance, capacity, health and fitness). The only significant difference was observed in Dimension VI (Attitudes to relaxation, compensation, decreasing tension).

Motives

- The dominant motive for the implementation of PA in both the monitored areas was the motive of experience, both in terms of gender and dichotomization into 'active' and 'less active' individuals.
- In terms of BMI, the first position in the categories 'BMI 18.5–24.9' and 'BMI 25.0>' was occupied by 'experience'. In the category of 'BMI < 18.5' the first motive was 'ability'.

- In terms of age, the dominant PA motive for the category of '16 years' was 'ability'. In the categories of '17 years' and '18 years' the first motive was 'experience'.

Sports preferences

- In the category of 'Individual sports', the top positions as assessed by the students from the rural area was swimming, followed by cycling and athletics. In contrast to these results, the students from the urban preferred badminton, downhill skiing and swimming.
- In the category of 'Team sports', the students from the rural area preferred baseball, floorball and handball. The students from the urban area preferred basketball, followed by baseball and floorball.
- In the category of 'Fitness activities', the students from both the areas preferred muscle strengthening exercises, jogging and yoga.
- In the category of 'Sports activities in nature', the students from both the areas preferred swimming, skating and cycling.

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The Socio-Cultural and Historical Motifs and Types as well as The Reconciliation of The World Experiences in Czech, Slovenia, and Madura Folktales/Fairy Tales To Adapt and Reconstruct The New Perspectives of The Stories for Learning

Imron Wakhid Harits

Lynch-Brown and Tomlinson (1999) are defined children literature as good – quality trade books for children from birth to adolescence, covering topics of relevance, and interest to children of those ages, through prose and poetry, fiction and non-fiction (p. 2). Many children stories are scattered around and it can be easily found today, but not all of such children stories are suitable for the children mental development. In this case, the theme including the content of the stories should be becoming the salient consideration to choose the best stories according to the level of an age. For example the theme, it is truly essential problem in the way of choosing the stories for children. The themes in the children stories usually are the childhood world and problem such as telling their new toys and pets, talking the scary things like the ghost, their excitement of the new friends and school, and so forth. Or, the themes can also be the common themes that are loved by the children, like the imaginative themes about big dragon, giant lizard, and dinosaur till the super hero. The sentimental problems and other rough themes are inappropriate for the children, because such themes are not engaging with their world and ages, like the suicide, love stories, and so forth. Further, Hunt (2005) gives the more detailed definition of the children stories and book, Children's books are different from adults' books: They are written for a different audience, with different skills, different needs, and different ways of reading: Equally, children experience texts in ways which are often unknowable, but which many of us strongly suspect to be very rich and complex (p. 3).

Further the educated theme and the cultural identity content of children stories usually are the reflection of custom, culture, and belief from one society. In consequences, even though the social values standard is universal but their way to accomplish their idea will be different each other. The cultural history of the society will affect to the children stories a lot. For instances, the

society with its history of the royal family life will dominate the children stories from one generation to the next generation, thus in the next phase, the children stories will tell about the noble life of the king, queen, prince, and princess as well as their characters. The theme will deliver the ideas of the royal family problem such as the good princess, the wise king, the cruel queen, the brave prince, and so forth. On the other hand, the children stories that are not rooted from the royal society environment, they will take away from the noble, kingdom, and palace themes. The ordinary people in this case will be the hero and heroine in the children stories. The hard worked farmer, the tough young man, the smart boy and girl, the diligent woman, the patient lady and so on usually will become the favorite themes for the children stories sourced from the common society. Then, related with the educated themes, the children stories have to teach the young generation with kindnesses such as giving motivation, teaching and sharing knowledge, learning the world, giving experiences, and teaching the kindness.

At the very beginning the folktales and the fairy tales as well according to Jack Zipes (2012) intertwine the culture, tradition and social values. It makes the role of oral tradition such as folktales/fairy tales important as the social identification. Folktales/fairy tales is the fruit of the cultural process and experiences of one society. That is why the oral tradition is strongly believed and told from one generation to the next generation. Brother Grimm tales as an example was published firstly in 1812 as the literary fairy tales, but eventually the oral tradition has been existed hundreds years in Germany and Europe before. The oral tradition process is also connected with the universality context or in Jack Zipes term called cultural transmission. The folktale/fairy tale is interconnected with other stories from the whole parts of the world. There is the dialogic process among of them. Such as *Yeh Hsien* or well known as Chinese Cinderella was found in 618–907 AD during the Tang Dynasty in China, and transform it into literary tradition in 9th century by You Yang. In Europe this literary tradition found it in Charles Perrault tales published in 1697 or around 8 centuries after the Chinese Cinderella. It was such a long dialog and process in cultural adaptation and transmission.

The adaptation and the transformation from the oral tradition to literary tradition is a kind of effort to bring the oral tradition into the pedagogic context besides it also is very useful to preserve the richness and the diversities of the culture. Some of famous transformations into the literary tradition were the Brothers Grimm fairy tales written by Jacob and Wilhelm Grimm from Germany, Mother Goose tales from Perrault (French), fairy tales from Andersen (Denmark), Němcová (Czech), and Kavčič (Slovenia). Mostly the literary folktales/fairy tales were adapted from the oral tradition that has been existed in Europe for hundreds years ago. Some of the writers also employed the additional elements in the story as the process of adaptation and dialog among the stories. Such as in Němcová stories, her fairy tales has been through the long process of adaptation and dialogic with other stories, not only from Europe but also from other parts of the world. Němcová fairy tales are also much more interesting because as the literary tradition she created the conflicts among the characters and designed the characterization by her own. While in Indonesia particularly in Madura Island, eventually it is rich with the oral tradition because of its strong tradition and its long history from Pagan, Hindu and Muslim cultural combination. Unfortunately, during this time it is only one literary folktale was found written by D. Zawawi Imron entitled *Cerita Rakyat Madura*. This book is not for the children either due to its content was only the compilation of some popular folktales from Madura Island and mostly it does not precise for the children and out of pedagogical context. Also, the book has no illustrations and consequently it is not really interesting for the children to read. That's the starting point to design the new concept of teaching the stories for children.

Shortly Reports

International Physical Literacy Conference and Forum 2017

Jana Vašíčková

The International Physical Literacy Association (IPLA) organised a one-day conference followed by a three-day Forum with the mission "Choosing Physical Activity for Life". The events were held in the Liner Hotel in Liverpool, UK, from 27th to 30th of June 2017 and the conference was open free of charge to anyone interested in this topic. The main purpose was to introduce Physical literacy (PL) and its holistic approach to people from various branches, not only from the academic sphere but also to practitioners, community workers, PhD students, teachers and others working with people.

There were already two conferences with the same topic organised in 2011 and 2013, followed by workshops in 2014 (where IPLA was founded) and 2016 in the UK. These were held under the supervision of the University of Bedfordshire (the first two) and Liverpool John Moores University (the last two).

The opening session of the conference included the keynote speaker and the president of the IPLA professor Margaret Whitehead who set out the objectives of the day and introduced the IPLA and the concept (and importance) of PL to the delegates who were less aware of both.

Elizabeth Myers, the vice chair of the IPLA and the senior lecturer in physical education (PE), spoke about four attributes of PL that can be described as a disposition to capitalize on the human embodied capability, wherein the individual has "the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engaging in physical activities for life". Nigel Green, the facilitator and chair of the IPLA from the Liverpool John Moores University spoke about the importance of PL for holistic health throughout life.

The programme of the conference was divided into three panel sessions and afternoon "breakout sessions". The first panel session was focused on "why and how PL is so important for all of our health"; the second panel session focused on "why PL is so valuable at all ages and stages of life", and the third session reflected "the challenges of widespread adoption and gaining traction in varied sectors of the community". In the breakout sessions people grouped with regard to specific life stages and during discussions tried to develop and share PL life stage specific benefits and ideas of how to promote its PL widespread adoption. Then each group presented a five-minute feedback to other participants.

The next three days IPLA forum took place for those who are very committed to this topic and its dissemination. During the first two days, four sessions were organised, followed by fruitful discussions. At the first session six speakers from Jersey, Scotland, Wales, Singapore, Canada, and the Netherlands presented "what has been happening with PL around the world?" The afternoon session focused on the theme "moving the concept forward – research and scholarly activities" with five different topics. On Thursday, there was one practical session with Tai Chi by Tony Ulatowski who is teaching this exercise at six elementary schools within London. In the afternoon after the session about operationalising PL in practise, the participants discussed the question "What do you / other sectors / organisations, need / want?"

The programme was concluded by work in pairs with the objective of producing any kind of material that would help to answer the question: "What do you/we want people to know (about PL) and how do we disseminate information?"

Friday discussions focused on the question "In an ideal world, what would PL look like? How do we get there?" and later on each of the participants presented their own objectives in the effort to find steps to better promotion of PL in practice.

The participants of the Forum appreciated the meeting, sharing the general agreement that intellectual exchange and new contacts will help in future collaboration and support in PL dissemination. The next major international Physical Literacy event will take place in April 2018 in Bahrain.

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Scientific Conference of Doctoral Degree Programmes Students at the Faculty of Education at Palacký University in Olomouc

Iva Koribská, Ondřej Duda

In the first week of November 2017, students of doctoral study programmes had an opportunity to present and discuss the results of their scientific research at an annual 13th International Scientific Conference held by the Faculty of Education at Palacký University in Olomouc. Over 60 participants from both the Czech Republic and abroad, who share doctoral studies, professional interests and visions in the field of education, accepted the invitation to this year's conference entitled "Novice Teacher in a Changing Society".

The conference guests were welcomed by prof. PaedDr. Libuše Ludíková, the Vice-Dean for Science, Research and Doctoral Studies at the Faculty of Education, Palacký University in Olomouc. The following lectures were related to the topic of novice teacher in a changing society. The first foreign guest coming from London Metropolitan University, Associate Professor Digby Warren, talked about the expectations and demands aimed at university teachers and emphasized the importance of feedback needed for the quality of higher education. Associate Professor Jaroslav Koťa and Dr. Martin Strouhal, who are colleagues at the Faculty of Arts at Charles University in Prague, prepared two lectures focusing on teacher's profession and the introduction of a new teacher into the educational process. The plenary session ended with a lecture by Dr. Imron W. Harite, who travelled to Olomouc from a very distant Universitas Trunojoyo Madura in

Indonesia. Dr. Harite is not a stranger to Olomouc as he is a doctoral graduate of the Faculty of Education, Palacký University. In his lecture, Dr. Harite dealt with the problem of an incoming teacher in Indonesia, specific difficulties faced by teachers, and the general status of teachers and education in Indonesia.

The afternoon meetings were dedicated to the students of doctoral study programmes. Based on previous positive experience, the entire conference was designed as a poster section conference. The individual authors presented their posters according to the time schedule and had the opportunity to discuss their research designs and results with other doctoral candidates as well as the present academic staff. The advantage of this presentation part of the conference is flexibility; participants are not bound to a fixed section but can choose the posters they are interested in and spend more time in the discussion. The whole meeting becomes less formal, which boosts feedback, fosters mutual enrichment and creates a network of novice and experienced scientists.

As in previous years, this year's contributions included a wide range of topics. Many of them focused on professional identity, teacher competences, pre-school education in the teaching profession and the value of education. Other posters dealt with, for example, using modern information and communication technologies in education, moral education, special education, social education, didactics and psychology.

During the first day's closing ceremony, it was possible to say that the conference met its goal as it enabled participants to meet and share the results of their research, expertise and experience. All posts whose authors met the requirements will be published in the review process, which will later be available on the Conference website.

The second day of the conference continued with a lecture and several workshops. Associate Professor Tomáš Janík from the Faculty of Education at Masaryk University in Brno gave a lecture on didactic case studies in teacher's work. The workshops focused on Internet security and prevention, the use of grounded research theory and the organization of doctoral studies. The workshops were organized by the Institute of Education and Social Studies at the Faculty of Education, Palacký University in Olomouc. Participants were able to acquire interesting theoretical knowledge as well as valuable knowledge that can be used during both their study and teaching practice.

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