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**THE SECONDARY/HIGHER EDUCATION ENVIRONMENT AND THE
ACADEMIC EXPERIENCE AS AN ARTICULATION OF DOMINANT
LEARNING STYLES OF STUDENTS**

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ABSTRACT

The research course is perceived as an effort to examine the learning styles under the prism of development stage, the transition between the adolescence and early mature. The methodology used in this article represents a combination between the quantitative and qualitative methods. Not less important is either the determination of learning styles distribution between two transitional stages.

The research was conducted through a planned sample comprising of 793 respondents, 324 males and 469 females of secondary schools (356 students) and 437 faculty students. The research was implemented during 2016-2017. The learning styles have been measured through the learning style assessment tool (Learning Styles Questionnaire – Honey & Mumford, 1986). The credibility of Kronbah $\alpha=0.79$ and Gutman $\alpha=0.82$, resulting positive.

The descriptive analyze confirmed that the reflective learning was perceived as a dominant learning style (44.30%), followed by theorist style (29.90%), pragmatist style (8.20%), and at the end by the activists learning style (6.40%). About 11.20% of students use the combined style. The reflective style (34.8%) is dominant at secondary school students, same but slightly emphasized at faculty students (51.0%), whereas the reflective style is dominant at postgraduate students in rate of 60%. The reflective style is also dominant for both sexes; males (39.5%) and females (47.5%).

The correlative analyze proved a significant link between the theorist, activist and reflective style on one hand and educational/academic achievement on the other hand. Furthermore, the correlative analyze proved the existence of correlation between the theorist and reflective style with educational level. The educational profile correlates significantly with reflective style. Post hoc analyze proved that students with more emphasized reflective style at the same time are distinguished for higher educational/academic achievements, unlike other activist, theorist and combined style students.

Key words: educational levels, academic experience, learning styles, pragmatist, reflective, activists and theorist

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Introduction

The advantages and problems related to the learning and academic achievements are very often attributed to development features and their interference with the process of education. During the teaching and learning not only the cognitive segments of an individual, but above all, the integrity of the personality is taken into account. Therefore, when we talk about the organization of an educative process, the proper development of psychical phenomena has to be taken into account. On the other hand, the efficiency and effectiveness of the educative process depends directly from the circumstances and proper commitment of the same psychical phenomena, which are a part of the educational process. By other words, there is reciprocal dependency between the learning and teaching.

The acquaintance with the learning styles provides an opportunity to approach and understand the manner how an individual elaborates the data during the educational process. In the sense of the school and academic environment this means that the student receives, elaborates and mentally represents the curriculum contents transmitted through different methods of teaching.

In our schools we have very less cases, almost none, regarding to the samples which demonstrate the use of theoretical knowledge related to the specific learning styles. The modification of educational approach requires the orientation of teaching towards an inclusive education, which involves the need to renew the issue of taking into account of the difference, the particularity to obtain a better qualitative performance, more successful and developed of learning....

The learning styles – concept and approach

The learning styles refers to cognitive, affective and psychical processes, which are relatively consistent and sustainable indicator on the fact how a student perceives, interprets and reacts towards the learning (Zarghani, 1988; Swanson, 1995).

The cognitive style of an individual as well as his learning styles are treated as unique, determined as a specific cognitive path, respectively as a specific code. The cultures cultivate specific cognitive styles. Some cognitive styles enables a successful operation, the other styles may be less usable, but depending on educational environment and teaching methods applied in such environments the learning styles may be modified, improved and effected. In this view the teacher may play an important role on interlacement of learning styles, in possession of various learning strategies which will facilitate their selection for a period, being supported maximally by their preferred learning

style.

Accentuation of learning styles provides the individualization of learning process, which is in connection to the tendencies of modern education. Only such learning will offer a perspective, safe performance and successful problem solving of failures in the school. When solving these issues we will be able to foresee which learning strategies may give better results for each student and about the learning tasks. The knowledge of learning styles and their development is considered as an important source of information for professional orientation of students and as a tool for their professional instruction.

Such a learning practice contributes to reorganization and effectiveness of teaching, because it gives an opportunity to students to advance through a faster rate, achieved by a lot of success in their work. This confirms that internal elaboration of external world is unique and different for each individual and this influences on the way the decisions are taken, environmental problems are solves and how should we live in peace with ourselves and environment. The way how to perceive, memorize, think and solve problems, is influenced by one's cognitive or learning style. This is a proportional, consistent and sustainable manner how an individual perceives and operates in the environment; the manner how he/she perceives, elaborates and use information in a considerable rate is genetically conditioned (Stojakovic, 2000). This leads to a direct conclusion that the cognitive style of an individual and the style of his/her learning, because of internal elaboration of the external word, it is nothing more than the education. "The learning style is a determined manner and dominant in reception, elaboration and use of stimulation/information during the learning process. This is a dominant was on mental representation and elaboration of learning and of content of learning".

Types of learning styles

Learning based on experience, conceived by Kolbi, is an important theoretical type which is used to explain the learning styles. There is no doubt about Lewin's impact on Kolbi's concept. Kolbi (Kolbi, 1984 according to Vizek Vidovic, Vlahovic Štetić, 2007) came into conclusion about four learning phases, which in a simultaneous way follow each-other: the concrete experience, which is followed by reflection on personal bases. This is followed by generalization of overall regulations, or through use of a known theory, the one that was mentioned as abstract conception, including the modification of current experience (active experiment), leading towards a new actual experience. Therefore,

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according to him the learning process depends on two main dimensions: a). Approach towards the information (approach to information through concrete experience or through symbolic representation or abstract thinking); b). Data transformation manner (through the reflective surveillance, active experiment and practical examination);

Based on learning model which was developed by Kolbi, Honey and Mumford (1992; according to Vizek Vidovic, Vlahovic Štetić, 2007) have built a typology of learning styles, in four samples: activist, reflective/interpretative, theorists and pragmatist. The activist prefers work and personal experience, respectively the experience is considered as a primary source of his knowledge. The reflective/interpreting surveys and reflects, is orientated more on the sense of experience to be gained, respectively on their connotation. The theorist requires understanding the reason, concepts and relations between them, operates more on an abstract level being based on his previous theoretical knowledge. Pragmatist prefers the experiment approach, practical attestation of things, respectively to find out how they work in practice.

Research Methodology

Table 1. The sample of subjects based on gender and level of education

Development period		Gender				Total	
		Female		Male			
Adolescence	Medium	202	25.5%	154	19.4%	356	44.9%
	Late	267	33.7%	170	21.4%	437	55.1%
Total		496	59%	324	41%	793	100%

This research was conducted in 2016. This research was conducted by authors if this work.

Research variables and Assessment tools

The learning styles refers to cognitive, affective and psychological processes, which are relatively consistent and sustainable indicator on the fact how a student perceives, interprets and reacts towards the learning (Zarghani, 1988; Swanson, 1995).

The learning styles have been measured through the learning style assessment tool (Learning Styles Questionnaire – Honey & Mumford, 1986). The tool is projected to assess four structural components: a). Sub-level for activist style assessment; b). Sub-level for theorist style assessment; c). Sub-level for reflective style assessment; d). Sub-level for pragmatist style assessment. The average of interval level 4 are of the type Likert, where 1 determines the level between non-compliance and confession and 5 determines the full consent with confession. The

The research problem can be formulated in the form of a questionnaire if the learning styles are in relation to the level of education, academic experience and calendar age. Not less important is the research question on distribution of learning styles depending on social-demographic features: educational profile and level of education.

Sample

The number of subjects included in this research is 793, 469 of which were females and 324 males (Table no. 1). The calendar age of involved subjects includes the development period of medium and late adolescence, between 15-24 years, of which 356 secondary school students and 437 social sciences university students from R. of Kosovo and R. of Macedonia. The majority of adolescents belong to Albanian ethnicity. Their selection was made based on relevant features for research: gender, age and educational program.

individual learning style comes up through the comparison of averages achieved in each sub-level in particular. The higher average in sub-level determines the dominant style. This research has examined even the fifth style, which is determined as a combined style of learning. This style is considered as a classing product; respectively the same averages resulting from two or more levels shall examine the combined style. The internal consistency of the level, expressed through Alpha Cronbah is $\alpha=0.79$.

In the second group of variables are included social-demographic features like: the level of education and gender, which are considered as classing variables (the educational level with two classes: medium and upper; gender also with two classes: female and male).

Results

The one way analyze of variables explored the existence of lineament between learning styles depending on educational level of respondents. In

the frames of three learning styles was evidenced a significant lineament in respect of statistical viewpoint: for the theorist style ($F= 14.82$; $p < 0,01$), the activist style ($F= 8,56$; $p < 0,05$), and reflective style ($F= 18.10$; $p < 0,01$), depending from the level of education. The variable analyze found an insignificant lineament in respect of statistical view, between the pragmatist style and

level of education ($F= 1.60$; $p>0.01$).

The graphic 1 illustrates the distribution of learning styles (activist, theorists, reflective and pragmatist) of subjects, which forms the sample. The subjects are classified by their dominant style, whereas the subjects having same averages in more than one same style are classified in combined style.

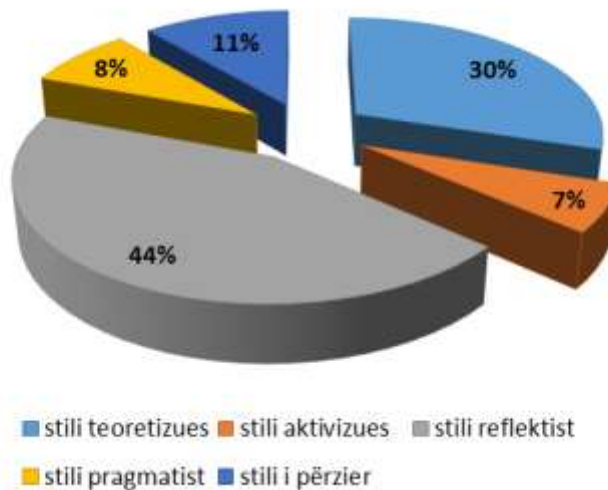


Figure 1. Distribution of learning styles of a sample

In general, the reflective style is considered as dominant learning style (44.30%), followed by theorist style (29.90%), pragmatist style (8.20%) and at the end by activist style (6.40%). Around

11.20% of students use possessive elements of two or more learning styles (more often the combination between reflective and theorist style, or between the reflective and pragmatic style).

Table 2. Tabular explanation of learning style distribution in a sample, depending on educational level of respondent

			Dominant style					Total
			Theorist style	Activist style	Reflective style	Pragmatist style	Combined style	
Level of education	Middle	N	117	35	124	38	42	356
		%	14.8%	4.4%	15.6%	4.8%	5.3%	44.9%
	Graduated	N	106	16	200	27	43	392
		%	13.4%	2.0%	25.2%	3.4%	5.4%	49.4%
	Post graduat.	N	14	0	27	0	4	45
		%	1.8%	0.0%	3.4%	0.0%	0.5%	5.7%
Total		N	237	51	351	65	89	793
		%	29.9%	6.4%	44.3%	8.2%	11.2%	100.0%

The table above gives an input about the learning style distribution, depending on development period of subjects. The value $\chi^2 = 16.52$ $p < 0.01$, which is a considerable and statistically important, indicates that the learning styles were not distributed equally in the middle and higher level. The table illustrates

that the reflective style is represented as a dominant style (44.3%) in three educational levels (28.6% in upper and 15.6% in middle school level). Following it, the theorist style is represented in a rate of 29.9% (middle school level 14.8% compared to higher level 15.2%).

Table 3. Tabular explanation of correlation coefficients between the learning styles and educational level, studying profile and academic/educational achievements

	Theorist style	Activist style	Reflective style	Pragmatist style
Educ. level	.26; p<0.01	-.15; p<0.01	.26; p<0.01	-.02; p>0.05
Study. profile	-.08; p>0.05	-.14; p<0.05	-.25; p<0.01	-.15; p<0.05
Average grad.	.11; p<0.05	-.17; p<0.01	.25; p<0.01	-.03; p>0.05

The positive correlations, thought not so high but important, are examined through sub-components of learning styles. The correlative analyzes proved the existence of correlations with different algebraic signs between learning styles and demographic features of subjects. The educational level correlates statistically with theorist style ($r=0.26$; $p<0.01$), reflective style ($r=0.26$; $p<0.01$), and with pragmatist style ($r=0.15$; $p<0.01$), but the last one is not important in statistical view. The educational profile correlates importantly with the reflective

style ($r=-0.25$; $p<0.01$), whereas unimportantly with theorist style ($r=-0.15$; $p>0.01$). Two following correlations, although statistically significant, are still negligible because they are low in pragmatist style ($r=-0.15$; $p<0.05$) and activist style ($r=-0.09$; $p>0.01$). The educational/academic success, statically significant, correlated only with the reflective style ($r=-0.26$; $p<0.01$), although the two following correlations are statistically significant they are still considered low to be taken into account.

Table no. 4. Post hoc analyze about differences between academic achievements, depending by dominant learning style.

Style	Style	M	Mean Difference	Std. Error	Sig.
Reflective M=4,81	Activist	4,28	,483	,191	,025
	Theorist	4,30	,381	,138	,005
	Combined	4,28	,574	,152	,000
Pragmatist M=4,75	Combined	4,27	,580	,219	,009

The comparative analyze in the context of educational/academic achievements has been examined through four learning styles (activist, theorist, reflective and pragmatist), including the combined style as well (Table no.4). The post hoc comparisons between groups produced significant differences ($F=5.08$, $p<0.01$). The significant differences in the view of educational/academic achievements were observed between reflective style subjects on one hand ($M=4.81$, $DS=0.44$), and subjects with more emphasized activist style ($M=4.28$, $DS=0.75$), theorist style ($M=4.30$,

$DS=0.79$) and combined style ($M=4.28$, $DS=0.70$), from the other hand. By other words, students with more emphasized reflective style at the same time represent a higher educational/academic achievement, unlike activist, theorist and combined style students. Furthermore, the post hoc analyze proved significant differences between pragmatist style subjects ($M=4.75$), unlike from combined style students ($M=4.27$, $DS=0.70$).

Discussion of results

The results derived from learning style distribution produced many contrasting findings. The most evident fact is that the features in both educational levels, middle and higher, favours one style of learning respectively one “characteristic learning modality”. On the other hand when specific development features interlace with specific learning styles, then a personal learning model and approach towards different learning contents comes up.

The reflective dominant style (40%) in both educational levels, middle and higher, supports the ascertainment that primary and secondary development features factorize a specific approach towards exploration and absorption of knowledge, an approach that is articulated as a specific learning style. This corresponds with increasingly formal thinking potential (probabilistic and combined thinking), which is taking increased presence on adolescence’s approach towards the knowledge (Shkariq, 2004). There is a need for adolescents to reflect on information received during the

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educational process before a general conclusion comes up; there is a need to gather facts, why not even contrasted facts about the knowledge. This can be classified even as a stimulation of a group of students – reflective type. The results of the research are on the same line with the results of other researches (Romanelli, Bird, & Ryan, 2009; Osmani, 2015; Osmani, Xheladini & Gashi, 2016). The knowledge of learning styles provides two important preconditions, for which the teaching is conducted. First, knowledge of learning styles is considered as a main competence for a solid teaching and second, knowledge of styles is a precondition for a solid absorption of teaching material. What importance may have the awareness process of students regarding the personal cognitive styles? Making students aware about his cognitive preferences, on strengths and weaknesses of cognitive styles used during the learning, the student competes to achieve optimal results in learning. The researches claim that when the teaching corresponds to cognitive styles of students, the students are inclined to perceive lessons easily and shortly, and to maximize the academic success in contrast when the student makes an adoption of personal leaning style conform to teaching subject and teacher's teaching methods. (Agosino, Hsi, 1995; Kramer-Koehler, Tooney & Beke, 1995; Blackmoore, 1996; Mc. Keachie, 1995, Montgomery, Groat, 2000; O' Connor, 2000; sipas Tubic, 2003).

The research findings suggest that the assessment of specific learning styles shall be conducted by psycho-pedagogical professional service in the school starting from the earliest phases of development, respectively from the preschool cycle. Later, the received data in a systematic manner shall be communicated to teachers whom the information related to styles may help to facilitate the planning and implementation of lesson. The focus on observation of specific learning styles may require an additional commitment of teacher, which may lead to possibility of failure to complete teaching objectives. Therefore, it suggests the assessment model of learning styles.

The purpose of this study is limited as it involved a limited number of variables. The next researches should take into account the detailed review of learning styles, the sources of internal motivation and indistinctive, as well as various variables. Implementation of a longitudinal research will provide the possibility to obtain findings about what happens to the learning styles during the education process, respectively if the same ones (by the modification of development concept) change, or the style developed by respondents may not be changed easily or adopted to the new development context.

Knowing the effects that learning styles have on the development of abilities, features of a personality, gaining of social competencies, absorption of knowledge (during the entire life cycle of education), cognitive development, etc., of teacher and all others involved in creation of educational policies – provides a knowledge which will be used during the creation of conditions for an educational process, and which may influence in a stimulation manner regarding the development of an individual. Since the curricula and educational policy somehow is a determinant of educational and development objectives, as what kind of generations wants society and culture, then the knowledge on learning styles enables the development of strategies in order to influence over the creativity, originality, flexibility, and by a word, on integrity of personality. Teachers, therefore, need to be acquainted with the learning styles, and above all, with competences to recognize these styles amongst students as well as to adopt the educational contents or lesson presentation methods.

Conclusion

Everyone enjoys a unique, original way how he perceives, experiences and recognises the inner and outer world. All researches prove a fact that there is no any dominant learning style because within the same subject the content features of styles are specifically combined into a single learning model, which may be a result of social-demographical features of subjects like calendar age, sex, but also other features like personality, etc.

The inclusive education, at each stage of individual's education, is an imperative of educational reform. This means, apart to abstraction of curricula, teaching methods, which means "average" or orientation of curricula opposite to the group (whose values are not minimized; on the contrary), there is a need for an approach "focus towards students". The last one may be achieved only if from the Bloom's taxonomy we descend to the level of individual taxonomy, and this is reflected in orientated approach towards specific learning styles.

However, the working practices in our schools still do not confirm that the inclusive education is established in its denotative forms and in complete forms. One of the reasons may stand on the process that impacts the educational system in the state or more extensively "the bureaucratic process of teaching class" or due to lack of teacher's education in regards to "learning styles". Therefore, another reference to the importance of this topic is that there is the last chance to make important changes to apply the theoretical knowledge in practice.

The objective of this study was limited because the same examined only the learning styles and other

social-demographic and academic variables. Additional studies, involving various factors, features of personality, environmental factors, etc., would complement the findings of this research.

Literature

Vizek Vidovic, V & Vlahovic Štetic, V. (2007). Modeli ucenja odraslih i profesionalni razvoj. *Ljetopis socijalnog rada*, 14 (2), 283-310.

Dunn, R. (1983). Learning Style and its Relation to Exceptionality at Both Ends of the Spectrum. *Exceptional Children*, 49, 496–506.

Honey, M. i Mumford, A. (2000). The Learning Styles Questionnaire. Peter Honey Publications.
Honey, P., & Mumford, A. (1992). *The Manual of Learning Styles* (3rd ed.). Maidenhead: Peter Honey.

Jensen E. (2003). *Supernastava*. Zagreb: Educa.
Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. New Jersey: Prentice-Hall.

Kolb, D. A. (1999). *Learning Style Inventory, Version 3*. Boston: Hay Group.

Kolb, D. A. & Fry, R. (1975). *Toward an applied theory of experiential learning*. Cooper (ed.) *Theories of Group Process*, London: John Wiley.

Osmani, Q., Musai, M., Jonuzi, M. (2016). *Stilet e të mësuarit në funksion të avancimit të nxënies dhe suksesit akademik*. Kumesat nga konferenca vjetore e shkencës "Java e Shkencës" 2015. Ministria e Arsimit, Shkencës dhe teknologjisë. Departamenti i Shkencës dhe Teknologjisë. Vol 2. pp.311-322.

Osmani, Q., Xheladini, F., Gashi, K. (2016). "Raporti mes stileve të të mësuarit, nxënies dhe suksesit mësimor". 5th International Vocational Schools Symposium – Prizren: Importance of vocational education in word. *Umyos*, Vol 2, pp.1183-1191.

Romanelli, F., Bird, E., & Ryan, M. (2009). Learning styles: a review of theory, application, and best practices. *American Journal of Pharmaceutical Education*, 73, 9.

Ronan, N. (1996). Learning styles and academic performance in an African university. *Research in Education*, Nov, 87-92.

Willis M. i Kindle Hodson V. (2004). Otkrijte stil

učenja vašeg djeteta. Zagreb: Ostvarenje.

Zoriah A., Tey X.Y., Syireen A., Chong N.J. (2013). Learning Style Preferences of Pharmacy Students. *The European Journal of Social & Behavioural Sciences*, 14, 819-835.

Шкарик, О. (2004). Развојна психологија. Скопје: Филозофски Факултет.