THE EMOTIONS IN LIGHT OF THE WORK BY VYGOTSKY AND LEONTIEV: NOTIONS, FEATURES AND FUNCTIONS

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ABSTRACT

The emotions impact every single process in an individual's life. An analysis of the scientific works selected by a Google search based on the terms 'emotions, Vygotsky, Leontiev' shows that the complexity of the topic is multiplied by the complexity, mixture and fragmentary nature of the approaches applied to the investigation of the emotions. The aim of this work is to revisit the works of Vygotsky and Leontiev relating to the emotions underpinning the identification of notions, features and functions of the emotions. A novel research methodology, the development of the system of external and internal perspectives, was implemented. The investigation into the emotions was based on the theories of Vygotsky and Leontiev: activity theory, law of development, psychological system, word meaning, concept formation, and the unity of language. The theoretical analysis resulted in the definition of notions, features and functions of the emotions. The limitations of the research were identified. Further research directions are proposed.
KEY WORDS: *emotions, language, Leontiev, psychological system, Vygotsky.*

Introduction

The emotions are an integral part of an individual's life. Every day an individual experiences diverse emotions in different life situations. The emotions can be different and even contradictory in one and the same situation. For example, an in-store social event designed to elicit surprise and feelings of romantic love among young customers might also give rise to a relevant negative emotion such as embarrassment (Addis, Miniero, Soscia, 2018). On one hand, emotions reflect the cultural traits of a person (Harre, 1986); and on the other, the emotions are social constructions (Averill, 1980).

The topic of 'emotions' is extraordinarily complex (Jantzen, 2019). It is worth noting that complexes do not offer a sequential continuum of a phenomenon, while systems are of a cyclical nature (Khoshkish, 2003).

The importance and complexity of a personality's emotions have attracted a lot of research from the scientific community. Google scholars have identified about 4,690,000 results, which are research papers containing the term 'emotions'. When limiting a Google scholars search to 'emotions, Vygostky, Leontiev', only 8,180 results are shown.

An analysis of scientific works based on 'emotions, Vygostky, Leontiev' and selected by a Google scholars search shows that the complexity of the topic is multiplied by the mixture and fragmentary nature of approaches applied to the investigation of the emotions.

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The aim of this work is to revise the works of Vygotsky and Leontiev relating to the emotions underpinning the identification of notions, features and functions of the emotions.

The research object is the development of notions, features and functions of the emotions.

The research tasks are:

- to identify key words to investigate the previous research via Google search;
- to analyse previous research on the topic of notion, features and functions of emotions in the light of the theories of Vygotsky and Leontiev;
- to model theoretically the notion, features and functions of the emotions', and
- to draw conclusions.

Conceptual framework. The activity concept originated with Vygotsky (Blunden, 2009), although Activity Theory is associated with the name of Leontiev rather than Vygostky. Leontiev made a distinction between the individual action and the social activity of which it is a part (Leont'ev, 1978) and which gives it meaning (Blunden, 2009).

Emotions fulfil the function of internal signals, internal in the sense that they do not appear directly as a psychic reflection of the objective activity itself (Leont'ev, 1978). A special feature of emotions identified by Leontiev (Leont'ev, 1978) is that they reflect the relationships between motives (needs) and success, or the possibility of success, of realising the action of the subject that responds to particular motives. Emotions do not reflect those relationships, but reveal a direct sensory reflection of emotions about experiencing (Leont'ev, 1978). Emotions are relevant to (social) activity, and not to the individual actions or operations that realise it (Leont'ev, 1978). As a result, emotions are not subordinate to activity, but appear to be its result and the 'mechanism' of its movement (Leont'ev, 1978).

Vygotsky formulated the Law of Development (Vigotskis, 2002) or interiorisation (Ситаров, 2002). The Law of Development is defined by Vygotsky as the transformation of the external culture into the individual internal perspective (Wells, 1994), which means that any function in individual cultural development appears twice or on two planes (Wells, 1994):

- first on a social level (the external perspective);
- and later on an individual level (the internal perspective).

The social level (the external perspective) accentuates social interaction of development (Surikova 2007). Social interaction is defined as the unity of outside developmental circumstances and individual psychological characteristics in his/her experience (Surikova, 2007). The individual level (the internal perspective) focuses on cognitive activity (Surikova, 2007). Cognitive activity refers to the unity of processes of sense, perception, attention, memory, thinking, speech and imagination (Ситаров, 2004), by which people perceive, remember, think, speak, and solve problems. In other words, any function in individual cultural development appears at the beginning between people (as the interpsychical or intermental category), and then on an intrinsic level (as the intrapsychical or intramental category) (Wells, 1994).

Methodology of the research. The research methodology (Zaščerinska, 2010), the development of the system of external and internal perspectives, was elaborated based on the law of development formulated by Vygotsky (Vigotskis, 2002). It should be pointed out that the methodology of research differs from the study methodology. The methodology of study refers only to the construction of the empirical analysis, while the research methodology allows for connecting the theoretical analysis with the empirical study for considering both, theoretical analysis and empirical study, as a unity, as demonstrated in Fig. 1.

The methodology of research allows for examining a phenomenon as a whole. By a whole, the unity of theoretical and empirical investigations is meant.

Table 1 describes the components of external and internal perspectives based on the analysis of the external culture and the individual internal culture in Vygostky's law of development or interiorisation (Zaščerinska, 2010).
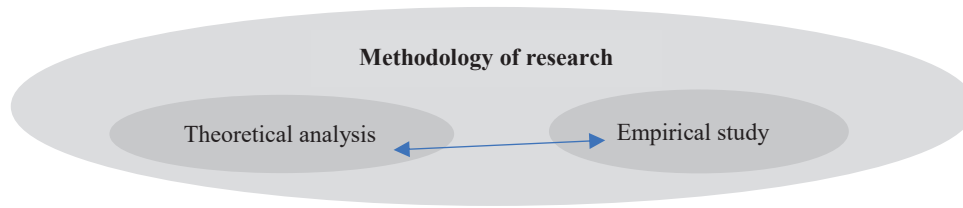
Figure 1. The inter-connections between the methodology of research, theoretical analysis and empirical study

Table 1. The components of external and internal perspectives

External perspective	The development of the system of external and internal perspectives	Internal perspective
Meaning	Schemas	Sense
Denotation	Chunks	Personal meaning
Scientific	Gambits	Spontaneous
Whole	Concept system	Part
	Grammar	Connotation
Conscious	New type of function	Unconscious
Instruction/Teaching		Learning/acquisition
Foreign language		Mother tongue
Professional language	Foreign language for professional/academic	
Systematic		Non-systematic
From abstract to concrete		From concrete to abstract
Thought generalisation		Object generalisation
Social interaction	Peer mutual interaction	Cognitive activity

Research results. The emotions have been defined by a number of scientists from different scientific disciplines. Table 2 shows some selected definitions from different scientific disciplines.

Table 2. Selected definitions of the emotions

Definition of the emotions	Scientific discipline	Reference
Emotions are nerve impulses that ensure a faster reaction to a problem situation, as emotions encourage acting by the use of an immediate plan of action	Neuro-psychology	Kriumane, 2013
Emotions are not only feelings but also other elements, such as expressions in the face or the voice, physiological changes, and changes in action tendencies or action readiness	Physiology	De Vierville, 2002
Emotions fulfil the function of internal signals	Psychology (motivation)	Leont'ev, 1978
Experiencing emotions as the ability to identify emotions in others and the capacity to express emotions are dependent on the functional integrity of a set of neural systems.	Neurobiology	Daum, Markowitsch, Vandekerckhove, 2009
Emotions serve as social signals	Sociology	Hareli, Hess 2012
Emotions pervade subjective experience	Psychology	Izard, 2009

Definition of the emotions	Scientific discipline	Reference
Attitudes toward emotions predict specific forms of emotion regulation	Social psychology	Harmon-Jones, E., Harmon-Jones, Amodio, Gable, 2011
Emotions as socially constructed imply that individuals may consciously alter their emotional expressions to align them with the expectations of the surrounding context	Management	Beal, Trougakos, Weiss, Dalal, 2013
Emotions are linked to values	Axiology	Kriumane, 2013; Burkit, 2021

Applying the methodology of the present research, namely the development of the system of external and internal perspectives to an analysis of the selected definitions of the emotions, the initial notion of the personality's emotions is defined as an individual combination of abilities and experience based on a personality's social interaction and cognitive activity.

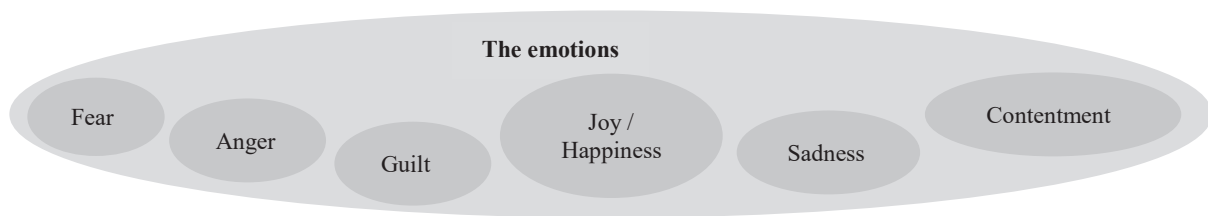The emotions (NHS Fife, 2016) are listed in Figure 2.

Figure 2. The emotions

Emotions are not only (bodily) feelings, but also other elements, such as expressions in the face or the voice, physiological changes, and changes in action tendencies or action readiness (De Vierville, 2002), attitudes (Leont'ev, 1978), mood, verbal expression, word meaning and vocal intonation (Burkit, 2021), as well as other elements. The elements of the emotions are grouped in the emotion triangle shown in Fig. 3 (NHS Fife, 2016).

Well-known functions of the emotions are determined to be evaluative (Burkit, 2021) and motivating (Leont'ev, 1978). Another concept of the six functions of the emotions was presented by Ilyin (Ильин, 2004):

- the protective function: associated with fear, both imaginary and real. Fear protects people from unpleasant situations or unintended consequences, sometimes even from death;
- the mobilising function: both negative (fear) and positive (inspiration, joy) emotions mobilise the body's reserves for activity;
- compensatory function: emotions can compensate for missing information for making or evaluating a decision;
- signalling function: the external expression of emotional expression gives an opportunity to express or warn about the emotional state, mood or effect of the respective moment;
- stabilising function: positive emotions that arise when achieving a goal are stored in the memory and can be used in another situation to achieve a similar goal. Negative emotions are also used to warn of wrongdoing;
- disorganising function: strong emotions sometimes disorganise a person's behaviour or action (great fear or euphoria).

According to Burkit (2021), emotions develop in relation to other mental functions and in relation to individual social situations. Burkit (2021) points out that the gradual mastery of language at different stages of development leads to the social and historical formation of the 'higher mental functions' that are based on 'word meaning'.
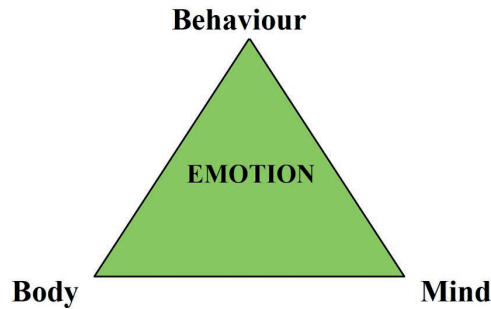
Figure 3. The emotion triangle (NHS Fife, 2016)

Vygotsky considers that from the point of view of psychology, the development of concepts and word meaning is one and the same process (Vigotskis, 2002). It should be highlighted that 'Vygotsky's work focused on children, yet, his instructional insights (instruction in the present research) are equally applicable to adult learning' (Benson, 1995).

Concepts and word meanings are dynamic and not static (Benson, 1995; Robbins, 2007). From Vygotsky's point of view, the two processes, the development of spontaneous and non-spontaneous concepts as shown in Table 1, are parts of a single process (Vygostky, 1934/1962). Moreover, the total system of concepts in the course of individual development has been found to be important (Vygotsky, 1934/1962; Piaget, 1962). The development of the total system of concepts is based on the psychological system (Леонтьев, 1982). The psychological system is defined as a change in the relationship between functions for individual development, and not the development of each function (Леонтьев, 1982): 'scientific and spontaneous concepts start from different points but eventually meet' (Vygotsky, 1934/1962). Thus, the rudiments of systematisation first enter the individual's mind by way of his contact with scientific concepts, and are then transferred to everyday concepts, changing their psychological structure from the top down (Vygostky, 1934/1962), thereby developing the system of external and internal perspectives. It should be emphasised that before starting the development of scientific concepts, the individual course of the development of spontaneous concepts or the mother tongue must take place (Vigotskis, 2002).

An analysis of the relationships between spontaneous, scientific and professional concepts and the mother tongue, foreign language and professional native language (Vigotskis, 2002) reveals that

- inner and outer conditions for forming spontaneous concepts coincide with inner and outer conditions for acquiring the mother tongue;
- inner and outer conditions for developing a scientific concept coincide with inner and outer conditions for learning a foreign language;
- inner and outer conditions for forming a spontaneous concept and acquiring the mother tongue are different from the inner and outer conditions for developing a scientific concept and learning a foreign language.

The concept formation by Vygotsky (Vygostky, 1934/1962) is analysed in the theory of the zone of proximal development formulated by Vygotsky (Vigotskis, 2002). It should be mentioned that the *activity* concept originated with Vygotsky's theory of the zone of proximal development (Blunden, 2009). The concept formation by Vygotsky (Vygostky, 1934/1962) in the zones of proximal and actual development is interpreted by Leontiev (Леонтьев, 1982) as depicted in Fig. 4 (Zascerinska, 2013).
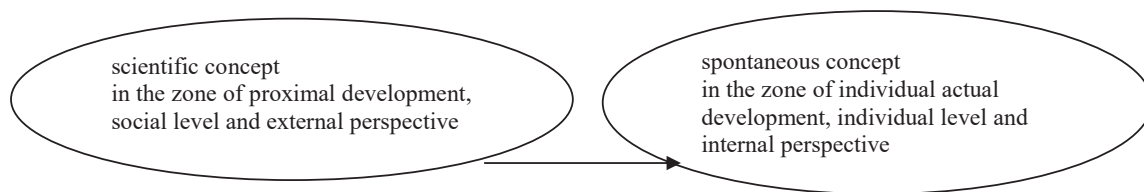
Figure 4. Concept formation in the zones of proximal and actual development

An analysis of the unity of scientific (academic) and spontaneous (everyday) concepts on the basis of the methodological approach to the development of the system of external and internal perspectives allows us to draw the conclusion that the external perspective comprises the development of scientific concepts, and the internal perspective the spontaneous concepts as described by Vygotsky (Vygostky, 1934/1962) and shown in Table 3 (Zascerinska, 2013). Moreover, scientific concepts include professional concepts (Mylett, Gluck, 2005). This means in the present research that the external perspective comprises the development of scientific and professional concepts.

The concept of the psychological system (Леонтьев, 1982) allows for the positioning of the quasi-concept within the quasi-autonomous zone, as depicted in Fig. 6 (Zascerinska, 2013). The quasi-concept is defined as asymmetrical, in flux at various stages, and interpreted differently at different points in time (Robbins, 2007).

Table 3. Theses of Vygotsky's theory on the development of scientific and spontaneous concepts

External perspective	Internal perspective
Scientific and professional concepts	**Spontaneous concepts**
- can be construed only if individual spontaneous concepts reach a definite level - characterised by individual reflective awareness and deliberate control - decisively influenced by adults - part of a single process - scientific concepts develop from the top down, from features of a higher type to a low one	- developed through individual mental efforts - individual lack of conscious awareness of relationships - part of a single process - the direction of development is from the bottom up, from elementary and low features to features of a high type

Positioning the quasi-concept within the quasi-autonomous zone is based on
- first, the importance of change in the relationship between functions for individual development, and not the development of each function (Леонтьев, 1982);
- second, the significance of the quasi-autonomous zone for individual development (Цукерман, Елизарова, Фрумина, Чудинова, 1993);
- thirdly, the relationship between scientific and professional concepts and the zone of proximal development.

From Vygotsky's point of view of 'the scientific concept, learning differs from the acquisition of the spontaneous concept, just as foreign language learning differs from native language acquisition. The development of the scientific and spontaneous concepts is interrelated, as foreign and native languages relate to each other' (Vigotskis, 2002). Thus, the development of scientific concepts relates to foreign language learning, the spontaneous concept to the mother tongue, and the professional concept to the professional native language. The professional native language initially appeared when science and trade developed (Lubīna, 2002). The professional native language includes certain scientific notions and methods (Lubīna, 2002).
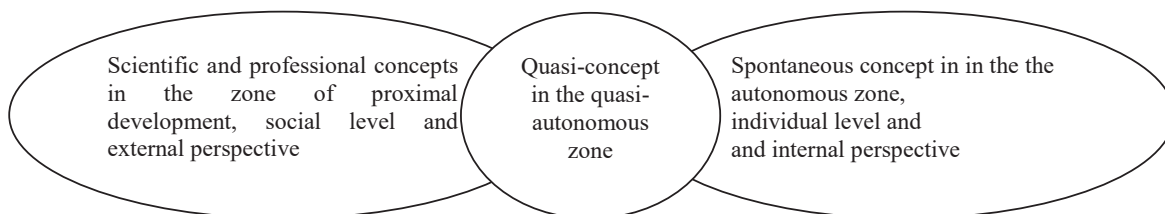
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Figure 5. Concepts in the zones of development

Hence, an analysis of the law of development or interiorisation by Vygotsky (Vigotskis, 2002), the theory of the zone of proximal development by Vygotsky (Vigotskis, 2002), and the *activity* concept that originated with Vygotsky's theory of the zone of proximal development (Blunden, 2009) determine foreign language for professional/academic purposes as a quasi-autonomous zone in the course of individual development. Moreover, an analysis of the zones of proximal, quasi-autonomous and actual development reveals that the development of an individual's concept and/or language proceeds from the zone of proximal development, through the zone of quasi-autonomous development, to the zone of actual development as interpreted in Table 4 designed by Surikova (Surikova, 2007), and complemented with a description of the zone of quasi-autonomous development (Zascerinska, 2013). It should be pointed out that the quasi-autonomous zone implies peer mutual interaction or peer learning (Myllet, Gluck, 2004).

Table 4. Descriptions of the three zones of development (Zascerinska, 2013)

Zone of proximal development	**Zone of quasi-autonomous development**	**Zone of actual development**
The zone is - a phase between the zone of actual development: an individual is able to use his/her foreign language and/or professional native language at a certain level of difficulty, and - the possible level of his/her potential development to use his/her foreign language and/or professional native language with others' assistance or zone of social interaction or instruction (teaching)	The zone is the sub-phase between individual activity with others' help and his/her autonomous action: an individual is between his/her levels of actual and proximal development being able to use his/her foreign language for professional/academic purposes at a certain level with others' particular assistance, or zone of peer mutual interactions or peer-learning	The zone presents the individual mother tongue at the present moment: an individual is able to use his/her mother tongue at a certain level without others' assistance, or cognitive activity or reproductive zone (learning)

The varied influence on the development of the individual's concepts and language as the unity of language is provided by the individual's different interactions:
- social interaction in a foreign language and professional language;
- peer mutual interaction in a foreign language for professional/academic purposes, and
- cognitive activity in the mother tongue.

The individual's development as the basis for provision of the development of the system of external and internal perspectives is centred on an individual's mutual interaction in a foreign language for professional/academic purposes based on knowledge variety provided by every individual individually in the foreign language for professional/academic purposes.

Considering the varied influence of an individual's different interactions, the notion of the personality's emotions is extended to describe the emotions as an individual combination of abilities and experience based on the individual's social interaction and cognitive activity in a foreign language, the professional native language, a foreign language for professional/academic purposes, and the mother tongue.

Findings. The theoretical analysis based on the research methodology, the development of the system of external and internal perspectives, and complexity theory allowed for finding the notion of the emotions as an individual combination of abilities and experience. The extension of the theoretical analysis based on the present research methodology by the integration of the theories of Vygostky and Leontiev, the law of development (interiorisation) and activity respectively, contributed to the widening of the notion of the emotions with social interaction and cognitive activity. The inter-connections established between the external and internal perspectives, as well as concept formation, word meaning and language as the unity of languages (foreign language, professional language, foreign language for professional/academic purposes and the mother tongue) in the theory of the zone of proximal development helped to reach the notions of the emotions defined in this work.

With regard to features of the emotions, the emotions are found to be (Ahrens, Zaščerinska, Lange, Aļeksejeva, 2021):

- a system process as its properties are linked;
- a complex process as its elements are intertwined;
- a linear process as it proceeds from one stage/phase to another;
- a cyclical process as it can be repeated;
- of a social nature as it changes in and by society;
- of a bi-module nature as it includes both external (scientific/academic concepts) and internal (spontaneous concepts) perspectives (Zascerinska, 2013). It should be noted that a bi-modal phenomenon is a phenomenon that obtains or exhibits two contrasting modes or forms (Ahrens, Zaščerinska, 2014b).

The main function of the emotions, being the movement of the 'mechanism' of activity (Leont'ev, 1978), from a psychological point of view, is to drive the further development of social activity.

Discussion. While emotional experience has received a lot of attention from researchers, emotional ability has not been seriously taken into consideration. However, emotional ability plays an important role when considering emotional change. As we might observe in everyday life, people have different emotional abilities: 'emotionless' people talk about people who do not show or do not hide very well their emotions.

The established inter-connections between the emotions and the meaning of the word, as well as the unity of language, allow us to consider the emotions as part of every aspect and process of our life. The emotions here serve as an indicator of the direction of the development of the life of an individual and society. As the psychological processes discussed in this work provide the basis for pedagogical developments (Ahrens, Zaščerinska, 2014a), in education it is important to change a learners' negative emotions to positive ones, or vice versa. For example, when we speak about smoking, which is considered by most of society to be a negative phenomenon, it is conventionally described with negative emotions. For the learner's emotional change, the cyclical development of the emotions as reflected in Fig. 7 is proposed.

The cyclical nature of the development of the emotions reveals that the process of emotional change can be repeated.
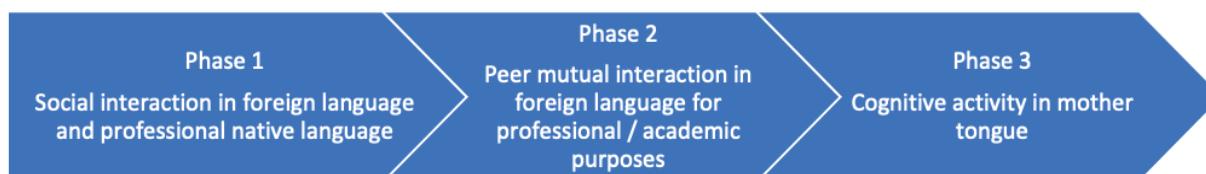

Figure 6. The cyclical development of the emotions

Compared with the milestones and mechanisms of emotional development according to the internalisation model designed by Holodynski (Holodynski, 2013) and shown in Fig. 7, a particular level of the development of the emotions, based on his concept of emotional development in accordance with progressing age, can be reached once in a lifetime.
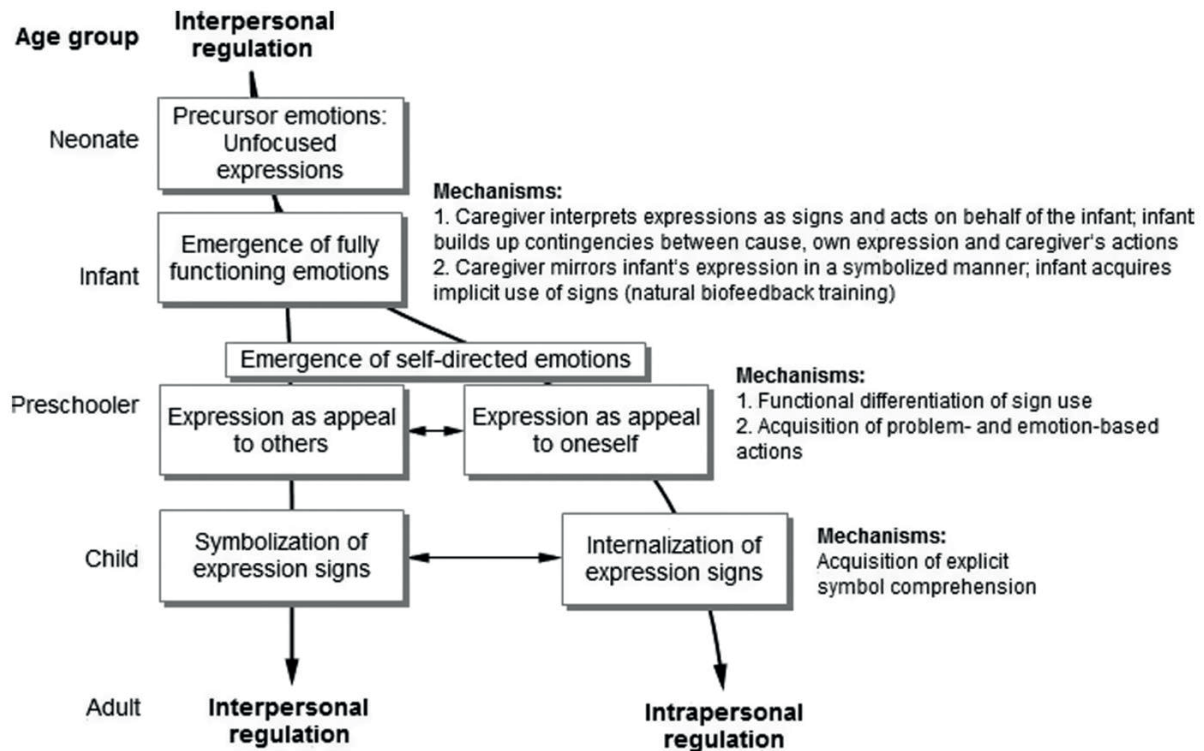
Figure 7. Milestones and mechanisms of emotional development according to the internalisation model (Holodynski, 2013)

Observations of different life situations allow us to draw the conclusion that an individual's emotions can change much faster, not in years but in seconds. For example, when a child is crying, a parent tries to change the child's mood from crying to a happy one.

In psychology, learning a new language is very often recommended for the development of the brain, healthy ageing (Bak, Jack, Nissan, Allerhand, Deary, 2014), and other similar reasons. Our results, the inter-connections established between external and internal perspectives, as well as concept formation, word meaning and language as the unity of languages (foreign language, professional language, foreign language for professional/academic purposes and the mother tongue) within the theory of the zone of proximal development, and a definition of the psychological system defined as a change in the relationship between functions for individual development, and not the development of each function (Леонтьев, 1982), allow us to propose that not any language has to be learnt, but the intersection of learning languages, which are considered to include scientific concepts, has to take place. This will motivate further actions by individuals in education and life. Language learning, which implies the intersection of languages based on scientific concepts, is a novel approach to language learning. This serves as a new approach in psychological assistance, neurolinguistics and neurolinguistic programming.

Conclusions

The findings of the theoretical analysis allow us to draw the conclusion that the emotions are part of a single process in an individual's life. The emotions are factors that impact an individual's development. In pedagogy and education, the emotions are a factor that impacts the individual's motivation. The individual's emotions can be changed and manipulated, as the emotions refer to social activity and not to individual action. Along with the cyclical nature of the individual's development, the emotions also change in a cyclical

manner. Each phase of change in the emotions is separated from the previous one, and the next phase is based on the previous one. The cyclical nature of the change in the emotions does not coincide with the individual's advancing age. Young people might be emotionally intelligent, while the older generation can remain at the beginning of the cycle of their emotional development.

The implications for efficient language learning imply that intersections of languages based on scientific concepts motivate learners. Motivated learners are able to achieve better academic results.

The present research has some limitations. The theoretical analysis was limited by the theories of Vygotsky and Leontiev relating to the emotions. If other theories on the emotions were applied, different scientific results would be attained. Another limitation is that only theoretical results are presented. Empirical studies could contribute to the validation of the hypotheses formulated in this work.

Future research will focus on the implementation of empirical studies for the analysis of the emotions within the research methodology of the development of the system of external and internal perspectives. Empirical studies carried out in different scientific disciplines, such as psychology, education, neurolinguistics and neurobiology, are also of great research interest.

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Acknowledgement

EMOCIJOS L. VYGOTSKIO IR A. LEONTJEVO DARBŲ ŠVIESOJE: SĄVOKOS, SAVYBĖS IR FUNKCIJOS

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Santrauka

Emocijų tema sudėtinga. Straipsnyje analizuotos emocijos, pagrįstos L. Vygostkio ir A. Leontjevo darbais. Atlikus *google scholars* (mokslininkų) paieškoje atrinktų mokslinių darbų analizę matyti, kad temos sudėtingumą atskleidžia tyrimų metodų fragmentiškumas analizuojant emocijas. Šio darbo tikslas – minėtų mokslininkų mokslinių darbų kontekste apibūdinti emocijų savybes ir funkcijas. Tyrimo objektas – emocijų sampratos, savybių ir funkcijų nustatymas.

Atlikta teorinė analizė leidžia teigti, kad emocijos yra kiekvieno žmogaus gyvenimo dalis. Emocijos – žmogaus vystymąsi veikiantys veiksniai. Edukologijoje emocijos yra individo motyvaciją lemiantis veiksnys. Asmens emocijas galima keisti ir jomis manipuliuoti, nes jos susijusios su socialine veikla, o ne su individualiu veiksmu, kartu su individo vystymusi, raida. Emocijos kinta cikliškai: kiekviena jų kaitos fazė atskirta nuo ankstesnės, o kita fazė remiasi ankstesne. Emocijų kaitos cikliškumas su asmens amžiumi ir jo nulemta pažanga nesusijęs: jaunimas gali būti emociškai stabilus ir išprusęs, o vyresnioji karta gali likti savo emocinio vystymosi ciklo pradžioje. Pagrindinė emocijų, kurios yra veiklos „mechanizmas", funkcija psichologiniu požiūriu – skatinti tolesnę socialinės veiklos raidą. Nors emocinė patirtis tyrėjų nemažai tirta, į emocinius gebėjimus, kurie vaidina svarbų vaidmenį vykstant žmogaus raidos pokyčiams, rimtai neatsižvelgta.

Nusistovėję emocijų atpažinimo ir atitinkamos sąvokos vartojimo kalboje vienovė leidžia emocijas laikyti kiekvieno mūsų gyvenimo aspekto ir proceso dalimi. Emocijos čia tarnauja kaip individo ir visuomenės gyvenimo raidos krypties rodiklis. Emocijų raidos cikliškumas atskleidžia, kad jų kaitos procesas gali kartotis.

PAGRINDINIAI ŽODŽIAI: *emocijos, kalba, Leontjevas, psichologinė sistema, Vygotskis.*

JEL KLASIFIKACIJA: I1, I2, I21.