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THE ADVANTAGES AND DISADVANTAGES OF THE FOREIGN LANGUAGE REMOTE TEACHING IN THE CONTEXT OF COGNITIVE PSYCHOLOGY

Kovalchuk O. S.

INTRODUCTION

The importance of remote teaching has risen unprecedentedly in a present-day situation of combating the COVID-19 all over the world. After the authorities of many counties have implemented nation-wide quarantine measures, people have to live in lockdown and come to terms with new reality that will never be the same. This caused changes in all life areas, i.e. political, economic, educational, social and business. In the sphere of education, remote teaching has become an inevitable alternative to face-to-face study process, moreover, at present it is considered to be an independent form of education. Some Ukrainian Universities have implemented a hybrid teaching strategy that includes asynchronous podcasts and synchronous online sessions. In comparison with face-to-face study process, remote teaching implies the mediated process of interaction between undergraduates and academic staff members, where the participants of educational process do not meet in the classroom, they are separated from each other.

What is more, there has been a sharp increase in the number of people studying foreign languages on-line. A great demand for leaning a foreign language leads to creation of various on-line courses on the e-service platforms (Moodle, google classroom, Microsoft Office 365 etc).

The role of academic staff members is rather challenging in the context of the foreign language remote teaching as it requires the ability to use the state-of-the-art informational technologies for creating their on-line courses, knowledge how to download the instructional materials on the e-service platforms, to make up tests in special format that allows the participants of educational process to get their mark after submitting the test results.

Leading experts in the field of remote teaching emphasize that of the three main forms of interaction in the educational process, namely: the interaction of the academic staff members and undergraduates, the interaction with other participants of the educational process and with the educational material, methodologically the most difficult task is the latter, i.e. is to stimulate the undergraduate's interaction with the course instruction materials[175].

The simple transformation of the texts of lectures, textbooks and manuals into electronic analogues preserves the status of the undergraduate as a passive recipient of information without allowing him/her to realize the significant psychological and pedagogical potential of distant learning[176].

According to Ukrainian researchers E. Nosenko and M. Salyuk, the materials of electronic textbooks, manuals, educational programs should provide formation and development of so-called person's "cognitive structures"[177].

A number of scientists L. Vygotskyy[178], P. Galperin, H. Kostyuk[179], S. Maksymenko[180], M. Holodna[181] state that only when in the process of cognition there are the conditions that create the formation of generalized schemes, which become the new structures of thinking, then the person's intellectual development takes place. Significant studies into metacognition (A. Brown[182], A. Karpov[183]) have proved the importance

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remote teaching for creating undergraduates' effective self-management cognitive activity.

1. Development of personality's cognitive structures with the help of informational technologies

One of the crucial tasks in on-line courses creation is to organize the information in such a way that it helps develop cognitive structures of learners.

The Encyclopedia of the Sciences of Learning defines the ***cognitive structures*** as a psychological construct that accounts for a form of human knowledge. Cognitive structure provides meaning and organization to experiences and guides both the processing of new information and the retrieval of stored information[184].

Cognitive psychologists define the following types of ***cognitive structures***[185]:

Prototypes are the combinations of the most frequent and typical sensory-perceptual features stored in human memory and allow a person to relate a particular object to a definite category[186].

Anticipatory schemes are the spatial representations formed under the influence of past experiences responsible for perception, collection and organization of information that appears in the sensory registers[187].

Hierarchical perceptual schemes are multilevel cognitive structures that are organized on the principle of a hierarchical networks and include spatial images of objects that reflect meaningful connections between their elements[188].

Frames are the schematic representations of certain stereotypes situations consisting of a generalized "framework" that reproduces stable

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characteristics of this situation, and "nodes" that reflect it probabilistic characteristics and can be filled with new data[189].

Scenarios are cognitive structures that reveal the temporal sequence of events expected in a particular situation[190].

Cognitive maps are the cognitive schemes that explicit the transfer of the objects of knowledge in the environment[191].

Deep semantic and syntactic universals are basic linguistic ones structures that determine the nature of the use and understanding of language signs in real speech activity[192].

M. Kholodna classifies the cognitive structures into two categories: structures that are formed by horizontal principle (prototypes, frames, scenarios, anticipatory schemes, semantic universals) and cognitive structures as an integrated form of experience that have a vertical way of formation (classification schemes, ideographic descriptions). These cognitive structures are of great importance for understanding the ways of information processing[193].

The model of cognitive structures development consists of three components, i.e. declarative memory, procedural memory and working memory (executive)[194].

Declarative memory includes facts and events that can be consciously recalled. Declarative memory is also known as explicit memory, it is based on the concept that this type of memory consists of information that can be explicitly stored and retrieved. It is a profound system of notions, by which a person can operate regardless of the context and situation.

Procedural memory is a part of the long-term memory that is responsible for knowing how to do things, also known as motor skills.

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As the name implies, procedural memory stores information on how to perform certain procedures, such as walking, talking and riding a bike.

Working (executive) memory deals with the usage of information that is necessary for a definite situation.

In the context of the foreign language learning, this model can be described in the following way:

At ***the declarative level of knowledge***, the undergraduates learn how to use Present Simple Tense, they get acquainted with the rules and schemes how this tense is formed. They memorize time indicators, as well as can explain the differences between Present Simple and Present Continuous. In other words, the participants of educational process have a profound knowledge of grammar and can use it correctly in different contexts. This level is a basis of rules and notions. The professionals have complex hierarchal system of rules and definitions.

At ***the procedural level of knowledge***, the undergraduates can work with different types of information, skillfully switching from one format of the information representation to another. For example, using short schemes make up a sentence. At this stage, the learners know how to decode the information.

At ***the executive level of knowledge***, the undergraduates can use Present Simple Tense in practice, fulfill different tasks, they are able to operate with collocations and use them in the context.

The ways in which the information is presented in the course have an impact on the cognitive structures development. The first researcher who proposed the classification of coding information was J. Bruner[195]. The scientist states that there are three modes of representation:

- enactive representation (action-based);
- iconic representation (image-based);
- symbolic representation (language-based).

There are the following factors, such as cognitive styles, age, gender aspects, that influence the cognitive structures development and the perception of information.

[195] Брунер, Дж. (1962) Процесс обучения. М. : Наука, АН РСФСР, 84 с.

According to M. Kholodna[196], cognitive styles are individual-specific ways of processing information that characterize the features of person's mind and intellectual behaviour. Gordon Allport, an American psychologist and trait theory developer, defines style as a way to realize a person's motives and goals, taking into account his/her individual characteristics, personality traits, selectivity of perception, and so on. The formation of style is the ability to self-realization, it is a high level of mental organization "Self". Later, a number of scientists specified the concept of "cognitive style" to the individual characteristics of human intellectual activity. In the 80s of the last century there was an expansion of the concept of cognitive style, there are such expressions as "thinking style", "learning style", "lifestyle", "metastyle". Metastyle includes "articulation – globality", "analytic – synthetic", "imagery – verbality", "integrity – detail".

H. Whitkin has made a significant contribution to the psychology of perception by describing the theory of psychological differentiation. The basis of this theory was the concept of the field, borrowed from the gestalt of psychology and human behavior. According to H. Whitkin, the field is a social and objective environment that affects individuals in various ways. The author divides people into two categories: field-dependent and field-independent. The category of field-dependent people are the individuals whose behavior is influenced by the field, such people can change their minds under the pressure of authority, hesitate in making decisions. Instead, field-independent individuals focus on their inner activity, such people have their own clear position, are able to make decisions independently, to rely on themselves. The theory of field-independence is consistent with J. Rotter's theory of the level of subjective control of personality[197, 198].

One of the determinants of this characteristic is age. For example, young children are characterized by field-dependent behavior, but with

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age the child's behavior acquires more field-independent features. This suggests that field-independent perception is a higher level of mental development than field-independent. M. Kholodna notes that the most important aspect of mental development is the degree of psychological differentiation of different forms of experience. The more differentiated system is complex in terms of elements and connections between them, the higher degree of variability it has. H. Whitkin emphasizes that the achievement of a higher level of psychological differentiation indicates the presence of articulated experience, which contains two characteristics: the ability to analyze experience and the ability to structure it. In particular, a person with articulated experience can easily distinguish details in a complex text, establish connections between events, trace the plot line, i.e. transform the field based on their rules, value system and internal attitudes.

Another important aspect of the information perception is highlighted in the experiment of John Ridley Stroop. The subjects were shown the words in two stages. At the first stage, words were shown – the names of colours, where the meaning of the word coincided with the colour. In the second stage, participants were represented with words where the name of the colour differed from the colour in which the word was written. For example, the word "blue" was represented by yellow, the word "red" – green. The experimenter then named the colour and asked the subjects to choose a card with that colour. The results of the study revealed the following: participants in the experiment made mistakes when choosing a word with the name of the colour instead of the colour itself, or lost more time to show the desired card in the second stage. This phenomenon has been called the Stroop effect. Reading for a person is an automated action, as a result, the perception of the text dominates over the perception of colour. This feature must be taken into account in on-line courses development.

2. Psychological personal characteristics development in the foreign language remote teaching

The personal characteristics, which are nurtured due to the remote teaching and distant learning, are increasingly being studied by psychologists to gain insight into changes in personality's development.

The Ukrainian psychologists came to conclusion that distant learning teaches the undergraduates to be autonomic, independent, open to new experience, tolerant to the situations of ambiguity and internal[199]. It is empirically proved that people who demonstrate the high level of tolerance to ambiguity have the lower level of trepidation in comparison with those who show the low level of tolerance to ambiguity, besides that, they also have the higher level of creativity.

The tolerance for ambiguity phenomenon was investigated by G. Norton[200]. The author defined it as the degree to which an individual is comfortable with uncertainty, unpredictability, conflicting directions, and multiple demands. Tolerance for ambiguity is manifest in a person's ability to operate effectively in an uncertain environment.

Distancing the undergraduates from academic staff members stimulates the participants of educational process independent work, self-organization, problem-solving ability, self-consciousness, time management.

Some findings obtained after spring pandemic period 2020 have shown that the undergraduates who studied on-line felt themselves more confident and demonstrated higher level of psychological well-being. This may be due to the removal of stressors within the school environment, such as pressure of academic work. The concept of psychological well-being is described in number of interdisciplinary research. The psychological well-being has a complex structure and connected with the following factors: physical and mental health, longevity, happiness, quality of life, positive emotions, social and economical development and social responsibility. Nowadays there are two widespread approaches to conceptualization well-being: hedonic and eudaimonic. The correlation between social responsibility as a value and the psychological well-being of Ukrainian youth is considered based on Carol Ryff's model of psychological well-being (WB) that includes six factors: autonomy, environmental mastery, personal growth, positive

[199] Салюк М. А. (2010). Емпіричне дослідження ефективності засвоєння знань за допомогою комп'ютерного навчального посібника. *Вісник Дніпропетровського університету. Серія : Психологія*. 18 (9/1).

[200] Norton, R. W. (1976). Measurement of ambiguity tolerance. *Journal of Personality Assessment*. № 39. P. 607–619.

relations with others, purpose in life and self-acceptance. Sixty Ukrainian students (N = 60; 11 males; 49 females) of Ukrainian University took part in the research. The positive correlations of social responsibility with such factors of PW as personal growth, positive relations with others, purpose in life and general indicator are stated. The concept of values by Shalom Schwartz was chosen for researching the social responsibility as a value. It is defined that social responsibility mostly corresponds with such values as universalism that demonstrates the young people's understanding, appreciation and protection for the welfare of all people and for nature, tolerance that stands for acceptance and understanding of those who differ from oneself, benevolence that is explained as promoting the welfare of one's in-groups and care that means devotion to the needs of the in-group. Values general indicator has positive correlations with all scales of social responsibility, i.e. civil consciousness, law consciousness, awareness of the results of one's actions, moral consciousness, and altruism that proved social responsibility belonging to the basic values of personality.

CONCLUSIONS

In conclusion, the information technologies have more priorities over traditional forms of education as they give the opportunity to deal with different types of language activity, to combine them in various ways. As remote teaching is mediated with special e-service platforms at Universities, the academic staff members can observe and control all undergraduates' activity, their performance and time in tasks completing.

In the context of remote teaching, the academic staff members play the key role in creation of the on-line courses that contribute to undergraduates' cognitive structures development. Cognitive structure provides meaning and organization to experiences and guides both the processing of new information and the retrieval of stored information. The model of cognitive structures development that consists of three components, i.e. declarative memory, procedural memory and working memory (executive) showed the algorithms of effective information processing and its usage in practice.

It is proved that knowledge of cognitive psychology is of vital importance in organizing, designing, classifying the instruction materials

on-line. The development of learners' cognitive structures shows the effectiveness of academic materials included in the on-line courses.

Digital culture stimulates the participants of educational process to do several things simultaneously, in other words, they are adept at multitasking, they have to deal with amounts of information and filter it, less paying attention to particular bits of information.

At the same time, there are some deliberative questions connected with remote teaching. On the one hand, this is a problem of identity. The distance interaction between the academic staff members and undergraduates is based on the principles of trust and respect. However, it is impossible to check who exactly fulfills the test tasks in the asynchronous mode, especially in the situation of taking exams. On the other hand, the participants of the educational process who don't possess the appropriate technological devices might be left behind. It is marked that some undergraduates who live in remote villages have poor internet connection or even, worse, are out of it at all.

As for personal characteristics, remote teaching encourage undergraduates to be independent, resolute, open to new experience, tolerant to the situations of ambiguity and internality.

SUMMARY

In the process of education, the academic staff members should create the conditions that help the formation of generalized schemes, which become the new structures of thinking in the person's intellectual development.

The effective usage of Information technologies in the educational process requires from the authors of different on-line courses the knowledge of cognitive psychology basis, i.e. the principles of person's intellectual development, metacognition, cognitive structures formation, specifics of text, symbols and colour perception, psychological aspects of distance learning and remote teaching, the effective technologies of knowledge transfer and decoding. All in all, the materials of electronic textbooks, manuals, educational programs should provide formation and development of so-called person's "cognitive structures".

Remote teaching stimulates confidence in the participants of the educational process. The personal characteristics studied by

psychologists to gain insight into changes in personality's development. The Ukrainian psychologists came to conclusion that distant learning teaches the undergraduates to be autonomic, independent, open to new experience, tolerant to the situations of ambiguity and internal. Distancing the undergraduates from academic staff members stimulates the participants of educational process independent work, self-organization, problem-solving ability, self-consciousness, time management.

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