

PERSONALITY AS A FACTOR IN THE LEARNING PROCESS OF TEACHING – THE CONTEXT OF THE BIG FIVE THEORY

^aJAKUB JERZY CZARKOWSKI, ^bJANKA BURSOVÁ,
^cEVA DOLINSKÁ, ^dVÁCLAV ŠIMEK, ^eDÁŠA
PORUBČANOVÁ

Academy Justice, Wiśniowa 50, 02-520 Warszawa, Poland,
Catholic University in Ružomberok, Faculty of Theology,
Hlavná 89, 041 21 Košice, Slovakia, Catholic University in
Ružomberok, Faculty of Education, Hrabovská cesta, 1, 034 01
Ružomberok Slovakia, Internal Security University in Lodz,
Prague workplace, Hovorčovičká 1281/11 182 00 Praha 8,
Czech Republic, University DTI, Dubnica nad Váhom,
Sládkovičova 533/20, 018 01, Slovakia
email: ^a*jakubczarkowski@gmail.com*, ^b*janka.bursova@ku.sk*,
^c*eva.dolinska@ku.sk*, ^d*vsimek@seznam.cz*, ^e*porubcanova@dti.sk*

The research was done as part of KEGA project No. 016KU-4/2020 "The Applying of Creative Drama Methods in the Process of Preschool Education" & EEIG/EU P.Kr/04/04/21. "Positive psychology as a new paradigm of high school education aimed at the development of personal competencies for life".

Abstract: The five-factor model of personality, popularly known as the Big Five, is a simple yet universal model of personality structure that defines five basic personality traits: extraversion, neuroticism, conscientiousness, agreeableness and openness to experience. The personality dimensions specified in the Big Five model allow describing the set of human behaviours, including learning and teaching. Regarding the organisational behaviours, including the managerial ones, the Big Five descriptors are recognised prognostics of behaviours at work. This may also be the case in the area of behaviours related to education and the learning-teaching process. Characterizing educational behaviour based on the model of five traits enables determination of the desired personality profile in a learning situation and will allow for the conscious shaping of educational processes and more effective teaching of adults.

Keywords: Five-Factor Model of Personality, personality, personality traits, adult education, learning - teaching.

1 Introduction

According to many scientists, the Big Five is a proposition of a universal model of personality which allows effectively predicting and understanding human individual behaviours. We can also associate it with the learning-teaching process. The aim of the paper is to present the five-factor model of personality, also known as the Big Five, with regard to the functioning of adults in the learning process using digital technologies. In addition, we would like to show certain relationships between the personality dimensions and the set of activities of adults in the learning-teaching process.

In the traditional learning-teaching process, a teacher/lecturer is a person designated by a school as a supervisor of a particular student team and assigned appropriate decision-making and control roles. As a result, a traditional school is a hierarchical, subordinate team concentrating on knowledge transfer and imposing a general course of action, a final goal and, frequently, instructions placed on both students and teachers for performing tasks. Regarding adults, the model of learning organisation within the general education system was still commonly used in the previous century although the differences in the learning process between children, adolescents and adults had been strongly emphasised since the 1950s. Despite these facts, adult teaching is comparable to teaching children and adolescents, while in practice, the above argument is not reflected in many cases (Han, Pistole, 2017). The contemporary, recognised authors support the thesis about a basic difference between the pedagogic and andragogic approaches to the educational process (De Haro, Castejon, Gilar, 2020). For example, they draw attention, in a slightly poetic manner, to pedagogy as the art and the science of teaching children and adolescents, and to andragogy as the art and the science of helping adults in the process of learning (Bastian, McCord, Marks, Carpenter, 2017; Rochovská, Švábová, 2021, 2022). Following this assumption, Lahey remarks that pedagogy concentrates on the "supervisory" education while andragogy focuses on the problems of education and development of "the equals". The learning process in this interpretation is described by Lahey (2009) as follows: "[...] It is

located in human biography and the social and cultural life environment. Their interactions lead to the creation of experience".

In the pedagogic model regarding the education of children, adolescents and frequently young adults, making decisions about what to learn, how to learn, when to learn, why to learn, etc. is the role of teachers, while students must be only obedient recipients of the content and tips provided by educators. The basis of the discussed solution is a currently not always recognised assumption that children and adolescents are not independent individuals, have too little experience in learning and, therefore, should learn everything provided by teachers or other adults. In fact, the main reason is to get promotion to the next stage of education. In the process of learning, students are subject-oriented, and the main sources of their motivation are external influences, primarily rewards and punishments associated with the school marking system. The basic strategies of this learning process are expository methods.

Despite a rapid dissemination of adult learning, the education systems offered only this model and, as a result, adults were treated like children. This approach has become established, and it is still resistant to changes. In researchers' opinion, the reason was not only the conservatism of teachers and individuals responsible for adult education. Typically, teachers are aware of the fact that adults should be taught differently from children and adolescents, but they do not always know how they should do it (Klassen, Kim, 2019). Thus, it seems logical to seek an andragogic model or a theory of education. Such attempts have already been made but they may have been inadequately disseminated (Patterson, Koczwara, Sofat, 2016) The aim of the present paper is to try determining the assumptions of this model which are associated with individual traits and the personalities of learners.

1.1 The process of learning-teaching among adults

The considerations about adult learning should begin with a definition of an adult person (Göncz, 2017) claims that "an adult is a person who has grown up to meet the requirements of the society". This approach to the problem is associated with the necessity of determining the criteria and it makes the category itself an issue of feelings or aspirations but not a subject of objective and transparent cognition. Here, the term of subjective adulthood appears which is defined by an individual and perceived by an individual but not by the society. For further considerations, a little older proposition is worth mentioning. Kaub et al. (2016) describes adulthood in the following way: "An adult is a person who is responsible for himself/herself, has a job, decides about his/her life plans, copes with the difficulties with fulfilling these plans and is responsible for his/her actions before the society. This definition of adulthood includes the following factors: the age, work, psychological and social maturity, and self-reliance". This makes the concept of "adulthood" clearer for further considerations. The dynamics of social change requires continuous improvement, development of competences and, increasingly often, requalification. It makes individuals work on various forms of educational tasks. As a result, adult education which used to have a supplementary role now becomes a popular form of learning activity. Development of the culture, growing requirements and motivations and an increasingly greater availability supported by new technologies leads to its dissemination. Gatzka, Hell (2018) remarks that continuous learning becomes not only a goal but also the basic form of modern education.

The analysis of studies presented in the subject literature and my own experience allows for certain observations regarding adult learners. Both the studies and the related idiographic experiences indicate specific properties of the participation of adults in the learning-teaching process.

One of the most common aspects is the observation that adults want to know and understand why they should learn something. Some research shows that before adults initiate the process of learning, they are ready to devote a lot of time and energy to clarify the potential benefits of learning something and the consequences or costs which are associated with the abandonment of the education (Anušić, Schimmack, 2016). As a consequence, one of the first postulates for organisers of adult education is to stimulate and reinforce the need for learning and to show its usefulness in life. Adults should be treated like individuals and partners in the common pursuit of knowledge.

It should be emphasised that according to the previously assumed definitions of psychological maturity, adults are individuals who have grown up to meet requirements, are responsible for their lives and are ready to take responsibility for their decisions. In other words, adults want to be perceived and treated as individuals who can take responsibility for themselves and their actions. Therefore, adults want subjectivity and independence in the learning-teaching process. This is also important because adults, while being completely self-reliant in various life situations, frequently return to patterns of behaviour and experience from their own school life, become submissive and resign from the subjectivity, activity and the related subjectivity and shared responsibility for the learning process when they initiate this process or the training course. This leads to a conflict as adult learners perceive themselves as dependent on others, but they feel a deep psychological need for independence. Therefore, the ways of supporting adult learners in achieving a greater learning autonomy and independence should be sought (Knowles, Holton & Swanson, 2009).

In addition, adults present a greater and more diversified experience than children and adolescents, which should be considered while designing and dealing with adult education. The variety of experience has an influence on the learning process. Adults bring a specific background or an empirical basis which itself is a valuable source of knowledge (Zapletal, Guzoňová, Rojšl & Lengyelalussy, 2023). Thus, a wider use of methods which refer to the experience, such as a discussion or solving problems by means of earlier acquired knowledge and skills, and methods that provide a lot of new experience, e.g., games and simulation tasks or didactic journeys, is observed. In addition, we frequently mention biographical learning. *Biographical learning is a holistic, integrated, situational and sociocultural form of learning which is adequate to the contemporary challenges. In the context of quickly changing life conditions and destabilisation of traditional social structures, there is a growing role of biographical learning with regard to individuals and the society, i.e., of the skill of using one's own and others' experience, a reflexive attitude to life which allows us to see the learning processes in daily activities and individual or shared initiatives. Beneficial factors for biographical learning are proactivity, involvement in various social roles, creativity, and criticism* (Kaufman, Pumacahua, Holt, 2013).

Most adults have experiences associated not only with school but also with life, including professional work. Compared to adolescents or children, adults look at experience from another perspective and it is an important source of their identity while for adolescents it is something that simply happens. Adults often recognise themselves in the categories of achieved unique experiences. The experience indicates who an individual is. When it is not considered, it cannot become a source of learning. Adults perceive ignoring their experiences as rejecting themselves as individuals. It is particularly observed among poorly educated individuals (Szököl, Dobay, 2022). Properly used and stimulated experience may motivate learning and reinforce its effects. However, experience may carry a negative potential as it is associated with a tendency to acquire thinking habits and prejudices and to formulate *a priori* assumptions which may (or may not) be wrong but are usually relatively stable. In the case of certain personal dispositions, experience is related to rejecting new ideas.

One of the main sources of a readiness to learn is that of transition to subsequent developmental stages. According to Knowles (1996), when we face a requirement to perform tasks typical for the next developmental stage, the readiness to learn these tasks appears. Therefore, adult learners demonstrate a greater readiness to learn when they feel they need to learn something so that they can act more effectively or gain satisfaction. As a result, it is beneficial for them to voluntarily make commitments. Such a perfect situation is rather uncommon. However, employees should not be forced to participate in various, sometimes potentially attractive and expensive training courses without respecting their true attitudes, needs and interests. Thus, it is worth building appropriate approaches and cultural patterns. A sequence of the professional career development may include the following stages:

1. The commencement of the process of career planning.
2. Acquisition of competences necessary to work in the first job.
3. Getting the first job.
4. Complete commitment to the first job.
5. Development of skills necessary to perfectly do the first job.
6. Planning and preparing for the next step in the professional career, which means resuming the above cycle.

Within this context, it is important to adjust (in the time aspect) the educational offer to the stages of professional development. Significant problems regarding adult training appear when individuals are forced to participate in various training courses before they feel ready or when it is too late.

The education of children and adolescents is subject-oriented. In this situation, students perceive learning as the process of acquiring knowledge and skills in particular areas necessary to pass the obligatory tests or examinations. Adults who undertake education are task-oriented (i.e., they concentrate such as writing formal letters, holding discussions, improving interpersonal skills, managing projects etc. A disrespectful on tasks-problems). This difference in orientation requires different ways of developing the educational content (Szököl, 2022). Therefore, the adult education needs the content that is built around less or gradually more complicated tasks or activities, approach to the above principle (sometimes observed) and building or planning the educational programme for adults which resembles that developed for children or adolescents leads to the educational and didactic failure. The key reason for this is the lack of motivation for an active and committed participation in the process which is not recognised as one's own one. Organising the education content around tasks, problems, or situations the participants deal with and indicating the relationship of the educational programmes with daily life help prove its usefulness and build a high motivation for learning (Kaub, Karbach, Spinath, Brünken, 2016). It is worth mentioning the research conducted by Danner (et al., 2019): *"The research conducted at the Pedagogical Academy of Krakow in 2005 among post-graduate students has shown that participants are mostly 24 to 42 years old and their motivation to undertake the course is strictly related to the strategy of professional development. The main motive for undertaking the course is a desire to increase the level and to expand the scope of qualifications, which primarily refers to understanding new information or trends and to shape the adequate skills in the study area"*.

While continuing considerations about the aspects of motivation for learning, it is worth noting that adults are motivated by both external and internal factors. The previous observations show the role of intrinsic motivation in the process of adult learning. Important factors in its development are the perception of action sensibility and the self-development of intrinsic satisfaction with one's own actions or meeting one's needs. However, adult learners are also predisposed to extrinsic motivation components, such as pay rises, better work conditions etc. As Göncz, (2017) remarks, *"Many studies show that adults usually have a greater motivation for learning than children. However, the problem is that this motivation not always refers to learning"*

things other individuals want to teach. Hence, it is very important to implement the first assumption placed in the list mentioned here: stimulation of the need for continuous learning". The key issue is to combine both these sources.

Referring to the previous definitions, we know that adults are individuals who have completed their developmental processes associated with adolescence and maturation. These aspects are particularly important for the course and effectiveness of learning. Their dynamics and course greatly determine the pace and the course of the learning-teaching process. When they are finished, individual traits become important in adult education. Educators have known this fact for a long time. Based on these beliefs, differentiated instruction has emerged. A similar situation is observed in adults. Although differentiated andragogy does not exist yet, it will obviously appear in the future due to a rapid development of this field. Considering the individual traits, it is worth mentioning the Five-Factor Model of Personality or the Big Five developed by P. Costa and R. M. McCrae.

1.2 The Big Five – the Five-Factor Model of Personality by P. Costa and R. M. McCrae

In personality psychology, there are many models of personality such as psychoanalytic, factorial, type, or trait ones. Considerations regarding personality result from the theoretical assumptions of their authors. They are checked within the related paradigms. In certain trends, traits are considered to be the basic units of personality development, which has led to a lot of research on the structure of the personality, its dynamics and hierarchy (Göncz, 2017). Traits should be defined as "stable properties of the personality which internally manage the thoughts and actions of an individual in various circumstances" (Zimbardo, Johnson & McCann, 2008). A trait is the basis for many important personality concepts. Common personality theories which refer to the personality traits were developed in the 1950s. These theories/concepts, developed by G. W. Allport, R. B. Cattell or H. J. Eysenck and based on the factor analysis of personality, were expanded by P. Costa and R. M. McCrae who devised the Five-Factor Model (FFM) of personality, also known as the Big Five (Zimbardo, Johnson & McCann, 2008). It should be emphasised that the Five-Factor Model of Personality is currently one of the most popular concepts which relate a personality to traits. As it seems, "The five-factor model of personality may be a valuable inspiration for academic teachers who run on-line courses. It should be noted that personality is an important controller of the cognitive structures and, as such, of the learning-teaching process" (Loehlin, McCrae, Costa & John, 1998).

The factors included in the Big Five model create five essential dimensions of personality i.e., neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Each dimension has separate characteristics. Some research instruments based on this theory also include subscales (Woods, Patterson, Koczwarra & Sofat, 2016). The characteristics of the dimensions are presented in the table below.

Table 1. Characteristics of the Five-Factor Model of Personality by Costa and McCrae

Factor	Basic characteristics	Characteristics referring to an individual
Neuroticism	A dimension describing emotional adaptation vs. emotional imbalance. Neurotic individuals have a tendency to irrational behaviour, less effectively control their emotions and find it more difficult to cope with stress. Individuals with poor neuroticism are emotionally stable and can cope with stress without internal tension or irritability.	Neuroticism is a tendency to experience various negative emotions such as embarrassment, fear, dissatisfaction, guilt, anger and, at the same time, sensitivity to psychological stress.
Extraversion	A dimension referring	Extraverts are talkative,

	to the quality and quantity of social interactions, the level of activity and energy and the ability to feel positive emotions. Extraversion is associated with gregariousness. In its opposite, i.e., introversion, certain shyness and secretiveness as well as the need to be alone are observed. When a contact with other individuals is made, it is usually very important.	friendly and fun-loving, and they search for stimulation. They are cheerful and highly optimistic about life. On the other hand, introverts are reserved in social settings, which not necessarily means pessimism or unhappiness.
Openness to Experience	It is a dimension referring to a tendency to search for various life experiences and their positive valuating, cognitive curiosity, and tolerance for novelty.	Individuals with great openness to experience are curious about the world and internal phenomena and have more experiences. On the other hand, individuals with poor openness are more conservative and conventional in behaviour and beliefs.
	This dimension refers to the level of persistence regarding organisation and the motivation for tasks aiming at a goal's accomplishment, including the attitudes of a human to work. Conscientiousness is often described as strong will or achievement striving. It is perceived by others as meticulousness and reliability and is most commonly associated with professional achievements. However, very strong conscientiousness is related to workaholism, compulsive perfectionism or an excessive tendency for tidiness.	Conscientious individuals are strong-willed, strive to achieve their goals and are motivated to act. Individuals with poor conscientiousness demonstrate lower levels of the above traits but many studies show they have a tendency for a hedonic life.
Agreeableness ¹	A dimension referring to a positive or negative attitude to others. It may be considered as a personal orientation to altruism or antagonism and experiencing related feelings, thoughts and actions. In the cognitive aspect, this trait manifests itself as: <ul style="list-style-type: none"> • trust in others or lack of it at the emotional level • sensitivity or indifference to others' matters • belief in cooperation or rivalry 	Agreeable individuals are (or try to be) kind to others and ready to help them. They are convinced that others' attitudes are the same or similar. Individuals who are not very agreeable are egocentric and sceptical about human intentions. As a result, they tend to compete with others.

Own data based on: (McCrae, Costa, 2002; Zimbardo, Johnson, McCann, 2008)

Even a cursory analysis demonstrates that the traits listed in the Big Five model, despite their separate terms (neuroticism, extraversion, openness, agreeableness, conscientiousness), are a bipolar spectrum of the intensity of the particular trait. This means that they form a certain continuum and human behaviours may be located and described between each of its two ends. (Zimbardo, Johnson & McCann, 2008). Many researchers think that individual differences may be usefully considered within the above five bipolar dimensions. In the table below, a bipolar description of the traits with the extreme points of the continuum for each of them is presented.

¹ Altruism or antagonism in some papers.

Table 2. Five big personality traits: examples

Characteristics of individuals with high scores	Scale	Subscales used in research instruments	Characteristics of individuals with low scores
Usually worried, nervous, emotional, insecure, sometimes ineffective, showing a hypochondriac tendency	NEUROTICISM (N) The scale measures stability vs. emotional instability	<ul style="list-style-type: none"> • fear • aggressive hostility • impulsiveness • hypersensitivity • shyness 	Calm, usually relaxed, sometimes impassive, resistant, self-confident, self-satisfied
Sociable, active, talkative, people-oriented, usually optimistic, fun-loving, tender	EXTRAVERSION (E) The scale measures a number and intensity of interpersonal relationships, activity level, need for stimulation, joyfulness	<ul style="list-style-type: none"> • sociability • cordiality • activity • sensation seeking • emotionality 	Reserved in social settings, factual, restrained, lacking vital energy, task-oriented, shy, calm
Inquisitive, with many interests, creative, original, imaginative, unconventional	OPENNESS (O) The scale measures seeking activity and new experiences for themselves, the level of tolerance and interest in novelty	<ul style="list-style-type: none"> • imagination • aesthetics • action • ideas • values 	Conventional, realistic, rather narrow-minded, lacking artistic and analytic abilities
Organised, persistent, reliable, disciplined, punctual, meticulous, tidy, ambitious	CONSCIENTIOUSNESS (C) The scale measures the level of organisation, persistence and achievement striving of the person	<ul style="list-style-type: none"> • competences • tidiness • achievement striving • self-discipline • sensibility 	Lacking precise life goals, unreliable, careless, too relaxed, neglectful, weak-willed, hedonistic
Understanding, kind-hearted, helpful, forgiving, naïve, straightforward	AGREEABLENESS (A) The scale measures the quality of interpersonal relationships in the continuum and sympathy or hostility regarding thoughts, feelings and actions.	<ul style="list-style-type: none"> • trust • straightforwardness • compliance • modesty • tendency for self-pity 	Cynical, indelicate, suspicious, uncooperative, vindictive, unscrupulous, irritable, manipulative

Based on Woods, Patterson, Koczwara, Sofat, 2016.

There are many studies which show relationships between effective actions and the personality traits included in the Big Five. In our pilot study, we searched for ways to observe the relationships between these traits and functioning in the learning-teaching process and adult education.

2 Methods and course of the pilot study

A group of students with high levels of one or several measured traits were interviewed to understand the influence of the personality traits described in the Big Five. Overall, 60 students of pedagogy, 5 students of Information Technology, 9 students of economics and 6 students of nursing were the study subjects. The study group consisted of 7 men, 72 women and one person with undeclared gender.

In the study, the most popular short method of the "Big Five" traits (neuroticism, extraversion, conscientiousness, openness to experience and agreeableness) measurements, i.e., the Ten-Item Personality Inventory" (TIPI) devised by Gosling, Rentfrow and Swann (2003), were used. The conducted studies (Woods, Patterson, Koczwara, Sofat, 2016) show that this two-minute test is a relatively accurate and reliable instrument for personality measurements in scientific research. The studies confirm high levels of accuracy and reliability of the Polish version of the TIPI inventory. Moreover, the equivalence of the Polish version in the forms of a classical paper and pencil interview and an on-line version was verified. The research showed that the Polish adaptation might be used in both conventional and on-line interviews. The findings of the paper and on-line interviews were comparable. In addition, similarly to the TIPI original version (Gosling et al., 2003) and independently from the applied TIPI-PL version, a significant negative relationship between all pairs of items referring to the particular personality traits was observed. The research was conducted in the first half of 2018. Based on the test results, 15 subjects out of 80 students with very high TIPI-PL scores were selected. Among the subjects, three individuals were identified with the highest TIPI-PL scores for each trait, i.e., Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience. This group consisted of 12 women and 3 men.

Each subject was interviewed (conversation). This was an idiographic study, but the interview was narrative, which allowed for relatively free statements about the subjects' learning activities. The interview, which was a kind of social interaction between the researcher and the study subject who answered specific questions associated with the research issue, also aimed at seeking other possible relationships. Subjective biographic constructs were sought. This research method assumes that a subject has the knowledge and subjective constructs which refer to the research issue and the importance of personal experience. Understanding these constructs and experiences becomes the primary research task. However, it should be noted that according to the hermeneutic tradition, a researcher also has his/her own constructs and based on them, interprets subjectively subjects' answers during the interview focusing on social constructs. Moreover, the interview interaction demonstrates specific dynamics based on continuous interpreting and establishing of meanings between a researcher (asking) and a subject (answering).

The following open questions were asked:

- Do you readily undertake educational activities? How often? Why?
- Do you use modern technologies in learning? Which ones?
- What forms and methods of education are particularly important to you?
- Which forms and methods of teaching don't you like?
- Do you have or have you ever had learning difficulties?
- The questions were followed by a free discussion about adult education and learning.

The interviews were held in a free and nice atmosphere at the university canteen (when it was possible) or in an unoccupied classroom. All efforts were made to ensure that the place and the situation were comfortable for the respondents.

2.1 The Big Five traits as the prediction of adult learner/student behaviour

In light of the pilot study, the factors which form the personality and are listed in the Big Five model, i.e., neuroticism, extraversion, openness, agreeableness and conscientiousness, show a certain relationship with some aspects of the students' behaviours during the learning-teaching process. This would indicate an important relationship between the above-mentioned personality dimensions and the professional effectiveness where each of the five traits has been useful for understanding individual behaviour in organisations (Hurtado Rúa, Stead & Poklar, 2019).

The analysis of the interviews and free conversations of the subjects in the learning environment (most of the student subjects were supervised by the study researcher) allows for formulating tips regarding predictions of adult learner behaviours, both those with high- and low-graded results. However, these findings require verification on a larger research sample, both in the nomographic research and the research with extended idiographic methods. The analysis conclusions are presented in Table 3.

Table 3. Results of the qualitative analysis of the interviews

Conclusions for high scores	Conclusions for low scores (theoretical assumptions)
Extraversion	
Compared to introverts, extraverts generally better feel in life and group learning, which is probably associated with the fact they feel more positive emotions and are able to show them more freely. They absolutely prefer the forms of learning which require human interactions. Moreover, extraverts better deal with rapid information flow. In two cases, the respondents declared that they had had problems during their school education, which might have been related to the low conscientiousness score.	Introverts, i.e., individuals with a low extraversion score, do not feel comfortable during university classes. They absolutely prefer home studying or learning in a library (if necessary) and individual tasks. It is highly probable that introverts are better at reflexive solving of problems.

Neuroticism	
Individuals who have high neuroticism scores are not educationally confident, probably due to a low level of optimism and frequently perceived negative emotions. They are also not resistant to stress associated with practically all kinds of testing of knowledge, and when stressed, they are not able to focus on the issue at hand. It seems that neuroticism is the most significant reason for adult educational failure among all the Big Five traits. Neurotics (none in the research) rarely undertake learning activities when they are not forced to do so by external factors.	Individuals with low neuroticism scores are happier and they frequently find a lot of satisfaction from learning, probably due to a higher level of optimism and less negative emotions. They are also more resistant to stress and focus on the problem at hand in stressful situations. It seems that a low neuroticism score is associated with the best coping with testing of knowledge.
Openness to Experience	
According to the literature and many studies, individuals with high openness to experience demonstrated greater creativity. Moreover, such individuals feel better in conditions of ambiguity and changes in education – these did not discourage them and were even motivating. Therefore, open individuals more effectively and readily undertake unusual educational activities and use modern solutions such as e-learning. They also more willingly undertake education, more easily solve tasks, and achieve high results.	Individuals with poor openness to experience certainly prefer traditional (for them) teaching methods. They reluctantly accept new solutions and find it difficult to approve them.
Conscientiousness	
As a personality trait, conscientiousness is closely related to diligence and dutifulness. In education, these are individuals who always try to be prepared for classes and hand in their homework on time. As a result, they also achieve very good learning-teaching results. Conscientiousness, which is a controller of behaviour regarding long-term goals (DeYoung, 2010), has an impact on maintaining motivation for learning and not abandoning it even in the situation of external factor changes (confirmed in one case). Individuals with a high level of conscientiousness do not like changes of lecturers and teaching methods even when it seems beneficial.	Individuals with poor conscientiousness are certainly less sensitive to changes in the learning-teaching process, more willingly undertake new tasks and better respond to changes such as the way of examining.
Agreeableness	
No relationships between agreeableness and the learning-teaching process were found in the study. However, it may be observed that friendly individuals are more popular, often submissive, and obedient. They should achieve better results in tasks where interpersonal relationships are important, which was confirmed by self-reflection.	No relationships between poor agreeableness and the education processes were found in the study. However, it is observed that they more often provoke disputes both with colleagues and lecturers or the university administration in various educational situations. Moreover, they are brave and not afraid of adversities.

Based on own study results, interviews, and observation

Regardless of the observations, it should be noted that when the levels of the traits based on the five-factor theory are determined, a result not necessarily is good or bad. Each trait may have an adaptive character depending on the social situation, professional position or cultural perspective. Thus, a certain trait may be more welcome in a particular educational environment, but it will not be beneficial for the learning-teaching process in another one. For example, poor extraversion will be more wanted for writing an individual final paper, while high extraversion will be perfect for group research projects. A creative person will benefit from poor agreeableness, while excessive openness may prevent an individual achieving mastery in one field (Kim, Jörg & Klassen, 2019).

3 Summary and conclusions

The usefulness of the Big Five should not evoke a uniformity illusion. Each theory is somehow limited. Fauth (et al., 2019) indicates that *“in addition to the central components, there are peripheral ones which are external to the personality although they are closely related to it. These peripheral components are biological bases and external influences (i.e. inputs) and objective biography (the course of life, actions taken across the lifespan, collected records of everything an individual does and*

experiences)”. Nevertheless, the initial research is very promising. Summing up, It should be noted that personality is an important controller of the cognitive structures and, as such, of the learning-teaching process. In the work of an andragogist and educator, a properly selected and applied instrument, and a rational use of the Big Five theory may be very helpful in solving difficult situations or overcoming problems. It is an excellent instrument which supplements the repertoire of an andrologist-educator regarding planning and conducting the learning-teaching process. The development of various forms of adult education and the need for continuous improvement of these forms requires further, in-depth research.

Literature:

- Anušić, I., & Schimmack, U.: Stability and change of personality traits, self-esteem, and well-being: Introducing the meta-analytic stability and change model of retest correlations. *Journal of Personality and Social Psychology*, 2016. *110*(5), 766–781. DOI:10.1037/pspp0000066.
- Bastian, K. C., McCord, D. M., Marks, J. T., & Carpenter, D.: A temperament for teaching? Associations between personality traits and beginning teacher performance and retention. *AERA Open*, 2017. *3*(1). DOI: 10.1177/2332858416684764.
- Danner, D., Rammstedt, B., Bluemke, M., Lechner, C., Berres, S., Knopf, T., Soto, C. J., & John, O. P.: Das Big Five Inventar 2. Validierung eines Persönlichkeitsinventars zur Erfassung von 5 Persönlichkeitsdomänen und 15 Facetten [The German Big Five Inventory 2: Measuring five personality domains and 15 facets]. *Diagnostica*, 2019. *65*(3), 121–132. DOI: 10.1026/0012-1924/a000218
- De Haro, J. M., Castejon, J. L., & Gilar, R.: Personality and salary at early career: The mediating effect of emotional intelligence. *The International Journal of Human Resource Management*, 2020. *31*(14), 1844–1862. DOI: 10.1080/0958519.2.2017.1423365.
- Ertl, B., & Hartmann, F. G.: The interest profiles and interest congruence of male and female students in STEM and Non-STEM fields. *Frontiers in Psychology*. 2019. 10:897, DOI: 10.3389/fpsyg.2019.00897
- Fauth, B., Decristan, J., Decker, A.-T., Büttner, G., Hardy, I., Klieme, E., & Kunter, M.: The effects of teacher competence on student outcomes in elementary science education: The mediating role of teaching quality. *Teaching and Teacher Education*, 2019. *86*. DOI: 10.1016/j.tate.2019.102882.
- Gatzka, T., & Hell, B.: (2018). Openness and postsecondary academic performance: A meta-analysis of facet-, aspect-, and dimension-level correlations. *Journal of Educational Psychology*, 2018. *110* (3), pp. 355-377. DOI: 10.1037/edu000194.
- Gosling, S. D., Rentfrow, P. J., & Swann Jr. W. B.: A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 2003, *37*(6), pp. 469-584. DOI:10.1016/S0092-6566(03)00046-1
- Göncz, L.: Teacher personality: A review of psychological research and guidelines for a more comprehensive theory in educational psychology. *Open Review of Educational Research*, 2017.4 (1), pp. 75-95. DOI: 10.1080/23265507.2017.1339572.
- Han, S., & Pistole, M. C.: Big five personality factors and facets as predictors of openness to diversity. *The Journal of Psychology*, 2017 *151*(8), pp. 752–766. DOI: 10.1080/00223980.2017.1393377.
- DeYoung C.G.: Personality neuroscience and the biology of traits. *Social and Personality Psychology Compass*, 2010. *4*(12), 1165–1180. DOI: 10.1111/j.1751-9004.2010.00327.x.
- Hurtado Rúa, S. M., Stead, G. B., & Pöklar, A. E.: Five-factor personality traits and RIASEC interest types: A multivariate meta-analysis. *Journal of Career Assessment*, 2019. *27*(3), 527–543. DOI: 10.1177/1069072718780447.
- Jarvis, P.: *The Sociology of Adult and Continuing Education*, 1985. London, Routledge. 312p. ISBN 978-0203802717.
- Kaub, K., Karbach, J., Spinath, F. M., & Brünken, R.: Person-job fit in the field of teacher education – An analysis of vocational interests and requirements among novice and professional science and language teachers. *Teaching and*

Teacher Education, 2016. 55, pp. 217–227. DOI: 10.1016/j.tate.2016.01.010.

15. Kaufman, J. C., Pumacahua, T. T., & Holt, R. E.: Personality and creativity in realistic, investigative, artistic, social, and enterprising college majors. *Personality and Individual Differences*, 2013. 54 (8), pp. 913-917. DOI: 10.1016/j.paid.2013.01.013.

16. Kim, L. E., Jörg, V., & Klassen, R. M.: A meta-analysis of the effects of teacher personality on teacher effectiveness and burnout. *Educational Psychology Review*, 2019. 31(1), pp. 617–640. DOI: 10.1007/s10648-018-9458-2.

17. Klassen, R. M., & Kim, L. E.: Selecting teachers and prospective teachers: A meta-analysis. *Educational Research Review*, 2019. 26, 32-51. DOI: 10.1016/j.edurev.2018.12.003.

18. Knowles M. S., Holton III E. F., & Swanson R. A.: *Edukacja dorosłych*, PWN Warszawa. 2009. 322p. ISBN 9789301156596.

19. Knowles M. S.: *Adult Learning*, w: *The ASTD Training and Development Handbook*, McGraw-Hill, New York. 1996. pp. 253-265. ISBN 0-07-013359-X.

20. Lahey B. B.: Public health significance of neuroticism. *The American psychologist*, 2009. 64 (4), pp. 241–256. DOI: 10.1037/a0015309.

21. Loehlin, J. C., McCrae, R. R., Costa, P. T., & John, O. P.: Heritabilities of Common and Measure-Specific Components of the Big Five Personality Factors. *Journal of Research in Personality*, 1998. 32 (4), pp. 431–453. DOI: 10.1006/jrpe.1998.2225.

22. McCrae R.R., Costa P.T.: Personality in Adulthood: A Five-Factor Theory Perspective. *Management Information Systems Quarterly*. 2002. MISQ. DOI: 10.4324/9780203428412.

23. S. A., Patterson, F. C., Koczwara, A., & Sofat, J. A.: The value of being a conscientious learner: Examining the effects of the big five personality traits on self-reported learning from training. *Journal of Workplace Learning*, 2016. 28, pp. 424–434.

24. Rochovská, I., Švábová, B.: The use of the interpretation of works of art in pre-school education. *Problems of Education in the 21st Century*, 2021. 79(6), 956-970. DOI: 0.33225/pec/21.79.956

25. Rochovská, I., Švábová, B.: Dramatic art and dramatic expression through creative drama methods in preschool education. *AD ALTA: Journal of Interdisciplinary Research*, 2022. 12(1), 142-150. DOI: 10.33543/1201142150

26. Szökö, I., Dobay, B.: The use of Activating Methods in the Teaching of Vocational Subjects. *AD ALTA: Journal of Interdisciplinary Research*, 2022. 12 (2), pp. 247-251. ISSN 1804-7890, ISSN 2464-6733

27. Szökö I.: Learning Motivation and Quality of the Educational Process. In: Auer M.E., Hortsch H., Michler O., Köhler T. (eds) *Mobility for Smart Cities and Regional Development – Challenges for Higher Education*. ICL 2021. *Lecture Notes in Networks and Systems*, vol 390. 2022. 199-209 p. Springer, Cham, ISBN 978-3-030-93906-9.

28. Zimbardo, P.G., Johnson, R. L., & McCann, V.: *Psychology: Core Concepts*. Allyn and Bacon, 2008. 666 p. ISBN 978-0205547883.

29. Zapletal, L., Guzoňová, V., Rojšl, J. & Lengyelfalussy, T.: Education is a returnable investment for both individuals and the whole society. *AD ALTA: Journal of Interdisciplinary Research*, 2023. 12, (2), 262–269. DOI: 10.33543/1202262269.

Primary Paper Section: A

Secondary Paper Section: AM