

ERD 2022
Education, Reflection, Development**AUTOMATIC THOUGHTS AND PERSONALITY FACTORS IN
THE DEVELOPMENT OF SELF-EFFICACY IN STUDENTS**

Ana-Maria Eugenia Ispas (a)*, Cristina Ispas (b)

*Corresponding author

(a) Babeş-Bolyai University of Cluj-Napoca, University Centre of Resita, Piața Traian Vuia, Nr. 1 – 4
320085, Reșița, Romania, ana.ispas@ubbcluj.ro(b) Babeş-Bolyai University of Cluj-Napoca, University Centre of Resita, Piața Traian Vuia, Nr. 1 – 4
320085, Reșița, Romania, cristina.ispas@ubbcluj.ro**Abstract**

The paper aims to compare the level of self-efficacy, automatic thoughts and personality factors described by the "Big Five" model in students specializing in Pedagogy Primary and Preschool Education. The "Big Five" personality factors were assessed through the International Personality Item Pool (IPIP), Self-efficacy was measured through the Self-efficacy Scale, and Automatic Thoughts using the Automatic Thought Questionnaire. The research samples consist of a) Group 1 consisting of 30 participants - students in the Pedagogy Primary and Preschool Education (PIPP) specialization (27 females and 3 males) with an average age of 25.6 years; b) Group 2 consisting of 30 young people who are not students (27 females and 3 males) with an average age of 25.6 years. The results obtained indicate that there are no differences between PIPP students and other young people participating in research in terms of Self-efficacy and Automatic Thoughts, but in terms of personality traits there are differences between the two groups. At the same time, the research results indicate a link between a personality factor of the "Big Five" model and Self-efficacy in PIPP students, but also the existence of a link between Automatic Thoughts and at least a factor of personality traits of the "Big Five" model.

2672-815X © 2023 Published by European Publisher.

Keywords: "Big Five" Personality Factors, Students, teachers, efficiency, automated machines

1. Introduction

1.1. Self-efficacy

Self-efficacy is seen as a fundamental driver of people's interests, choices, actions, behaviour, and performance; in other words, self-efficacy is an individual's appraisal of his competence to complete a task successfully. According to Walter Mischel (1973), self-efficacy beliefs correspond to competences, or what we know about the world and how to behave in it. These competencies comprise the range and quality of cognitive and behavioural representations of normative behaviours that an individual is capable of Mischel (1973). Maddux and Volkmann (2010) write in their article titled "Self-Efficacy" that a person's ideas about self-efficacy are strongly tied to his judgments of his capacity to arrange oneself to undertake the acts necessary to create specific outcomes. The social cognitivism highlights the notion that when individuals think they have the potential to act in a manner that would produce good outcomes, they are more motivated to behave and act in order to attain the desired goals. From this perspective, self-efficacy might be described as the individual's conviction in his capacity to motivate oneself to complete a task or attain a future objective. "People's level of motivation, affective states, and actions are based more on what they believe than on what is objectively true" (Bandura, 1995).

In the individual's everyday existence, self-efficacy has numerous ramifications grouped on multiple levels. Individual conduct is affected by an individual's level of self-efficacy. Therefore, if a person has poor self-efficacy, he would prefer to shun things that are deemed above his ability. A person with a high degree of self-efficacy prefers to engage in tasks that are above his capabilities, even if there is a chance of failure. Therefore, the most effective beliefs are those that exceed the individual's real level.

Thus, the larger the level of self-efficacy, the bigger the amount of effort devoted to a task and its persistence. Bandura, citing Boyer et al., 2000; asserts that self-efficacy influences individuals' pessimism or optimism, the decisions they make, the goals they set, the challenges they face.

"People's perceptions of their capabilities for performance, or self-efficacy perceptions, are a cognitive mechanism underlying behavioural change" (Cervone, 2000). Self-efficacy should not be separated from the context of competence and circumstance, but rather conveys personal ideas about how a person may use his or her own abilities and knowledge in a specific scenario. In the educational context, self-efficacy is a self-regulatory mechanism that influences the student's perception of his own competence to perform a certain task and his ability to adapt and cope with future academic demands. (Del Rosal & Bermejo, 2017 as cited in Usán et al., 2022)

Self-efficacy is a concept that may be changed to different domains, situations, and actions, according to an objective examination. Self-efficacy beliefs can be generalized from one circumstance or activity to another, based on the similarity between the necessary task and the talents we possess for doing the required task. In addition, research has demonstrated that general self-efficacy beliefs may be enhanced by specialized strategies (e.g., Eden & Aviram, 1993). "Self-efficacy beliefs are important determinants of performance and mediators of other self- beliefs" (Pajares, 1996).

Individuals can enhance their psychosocial functioning by utilizing personal influence methods. Each individual can contribute to the development of self-efficacy as a construct. Individuals construct their self-efficacy beliefs by combining data from five sources: performance-related experience, proxy

experience, imaginal experience, verbal persuasion, and emotive and physiological conditions. Our personal performance experiences have the most effect on our self-efficacy views (Bandura, 1977, 1997). Self-efficacy is typically bolstered by an individual's efforts to attain anticipated achievement. When someone fails or does not attain the desired outcome, his self-efficacy often decreases. Analysing the behaviours and experiences of others might influence one's own behaviour and beliefs.

Self-efficacy is a relatively new, unpopular idea that has empirical basis. In recent years, psychologists have placed an emphasis on this concept. Bandura presented self-efficacy in his 1997 research titled "Self-Efficacy: The Exercise of Control" through a theory of personal and collective influence that functions in conjunction with other socio-cognitive elements to manage people's achievements. Bandura asserted that self-efficacy derives from social cognitivism. Later, in 1989, Hackett and Betz expanded the research to include its application to career theory, and in 1994, Lent, Brown, and Hackett departed from Bandura's study and concluded that the belief of an agency or an individual in their ability to exercise control over their own lives is innately human.

Significant prior events, vicarious experiences, verbal persuasions, and physiological and emotional states all contribute to self-efficacy beliefs. This data is only utilized following the cognitive processing of the efficacy data. The cognitive processing of this information serves two purposes: the first is to identify the type of information individuals use as an indicator of efficacy, and the second is to identify the cognitive structures individuals use to weigh and integrate efficacy information from different sources when forming beliefs about their own efficacy.

1.2. Automatic thoughts

Core beliefs are beliefs about the self, the future, and the world, based on which mental schemas, structures, or processes are understood. In contrast to automatic thoughts, beliefs or convictions are conditional, such as "if people like me, then I am a decent person." These ideas persist on both a conscious and unconscious level and are accessible through treatment. Automatic thoughts consist of self-statements such as "I am proud of my results" and "I am enjoying myself with..."

Cognitive theory proposes that automatic thoughts represent underlying ideas and schemas, both of which emerge during childhood to help children organize and make sense of encountered events. In addition to genetic factors, early bad experiences can impact the formation of an individual's self-perception, outlook on the future, and view of the world.

Changes in automatic thoughts have been found to improve psychological functioning, according to several studies. In instance, modifying automatic thoughts is an effective method for treating sadness, anxiety, poor self-esteem, and even resentment. In addition to improving academic and cognitive performance, this adjustment of automatic thoughts also improves adult task performance.

According to Reesa Donnelly, Kimberly Renk, Valerie K. Sims, and Jack McGuire's study, "The Relationship Between Parents' and Children's Automatic Thoughts in a College Student Sample," there is a connection between altering automatic thoughts and enhancing psychological performance. The study's premise that the positive automatic thoughts of kids and their parents are more closely associated than negative automatic thoughts is not substantiated. Likewise, it cannot be believed that the tie between males and their automatic thoughts and those of their parents would be stronger than that between girls

and their automatic thoughts and those of their parents. Despite limitations, the findings of this study imply that pleasant automatic thoughts of students and parents are associated. In addition, the positive automatic thoughts of moms predicted the positive automatic thoughts of their children.

The results of this study partially confirm the basic premise that the automatic thoughts of pupils will be highly tied to those of their parents. The prediction that good automatic thoughts of kids and their parents will be more connected than negative automatic thoughts is not supported. Similarly, the idea that the relationship between (male) students and their parents as a result of automatic thoughts about them is greater than the relationship between (female) students and their parents as a result of automatic thoughts is not recognized.

Despite constraints, the results of this study imply that pleasant automatic thoughts of students and their parents are associated. In addition, moms' positive automatic thoughts suggested that their children will also have positive automatic thoughts.

1.3. The "Big Five" Model regarding personality factors

The Big-Five Model (B5M) is a representation of the universe of personality traits in terms of five broad personality dimensions: Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Intellect or Imagination. These five dimensions emerged reliably over decades of research factor-analyzing the way people describe each other with ordinary-language traits such as aggressive, introverted, and sociable. (Johnson, 2017, p. 2)

The model of the five personality factors, or the Big Five model, was the result of two methods of analysis: lexical analysis, through which the majority of personality traits observed in multiple cultural environments were identified; and questionnaire analysis, in particular the results of the work of the psychologist H. J. Eysenck, who discovered that extraversion and emotional stability are core behaviours of psychological tests. A personality characteristic may be defined as "any habitual and persistent pattern of behaviour (chains of reactions) that occurs in a range of settings in which the individual is put" (Chaplin, 1985). As a result, personality questionnaires and inventories may be utilized to identify personality characteristics. The Big Five personality qualities include emotional stability or neuroticism, extraversion, openness, agreeableness, and conscientiousness. Extraversion is the capacity to have a lot of different types of relationships with other people. The Big Five refers to a set of behavioural patterns that people who have particular personality qualities tend to show throughout the course of their lives (Ezeakabekwe & Nwankwo, 2020).

The consensus among theorists about the "Big Five" Model is that all personality assessment tools contain the five elements, both individually and in groups. Therefore, they determined that this conceptual model is one of the most credible scientific perspectives in psychology. Goldberg (a proponent of the approach) compared the Big-Five to the longitude and latitude used to determine the location of a region in geography. Consequently, there is little question that all personality traits can be decoded using the combination model of the five elements (Sava, 2008).

2. Problem Statement

According to National Institute of Statistics from 2014, there are roughly 300,000 instructors in pre-university education in Romania. It works in primary and secondary schools for more than half of them, and in preschool education for roughly 18%.

3. Research questions

Q1: Does comparing the self-efficacy and automatic thinking levels of Pedagogy of Primary and Preschool Education students with those of non-students in Pedagogy of Primary and Preschool Education reveal a significant difference?

Q2: Exists a relationship between self-efficacy and automatic thinking and the personality components of the Big-Five model in Pedagogy of Primary and Preschool Education students and those of non-students in Pedagogy of Primary and Preschool Education?

4. Purpose of the Study

The purpose of this article is to compare students from the Pedagogy speciality Primary and Preschool Education's degree of self-efficacy, automatic thinking, and personality variables outlined by the "Big Five" model.

5. Research Methods

Students in the Pedagogy of Primary and Preschool Education program at Cluj, Romania's University of Psychology and Social Sciences, as well as non-students who agreed to take part in the study, make up the reference group from which sample selections were made.

Participants in the study were given the Automatic Thoughts Questionnaire (ATQ), the Self-Efficacy Scale (SES), and the International Personality Item Pool all at the same time during the assessment session. Participants' names as well as any personally identifying information were kept entirely secret during the experiment.

6. Findings

The data obtained in this work reveals the fact that between the level of automatic thoughts related to the students of the Pedagogy of Primary and Preschool Education and the level of automatic thoughts of the non-students participating in the research (people who are not currently enrolled in any form of university education, such as) there is no (significant) difference, as shown in the above Tables 1 and 2 respectively.

Table 1. Indications for the beginning stages of research on variables involving individuals who are students in education

		age	sex	ses	atq	Extraversion	Agreeableness	Conscientiousness	Emotional stability	Openness
N	Valid	30	30	30	30	30	30	30	30	29
	Missing	0	0	0	0	0	0	0	0	1
Mean		25.00	1.93	25.10	27.73	30.77	40.10	36.87	30.60	34.90
Median		24.50	2.00	25.50	27.00	30.50	41.00	37.50	31.00	35.00
Mode		22	2	27	27	35	41 ^a	39	31	35 ^a
Std. Deviation		4.077	.254	2.040	8.489	4.493	4.444	5.277	5.276	5.143
Minimum		20	1	20	15	22	30	25	22	23
Maximum		34	2	28	44	39	47	45	45	44

Table 2. Indications for the beginning stages of research on variables involving individuals who are not students in education

		age	sex	ses	atq	Extraversion	Agreeableness	Conscientiousness	Emotional stability	Openness
N	Valid	30	30	30	30	30	30	30	30	30
	Missing	0	0	0	0	0	0	0	0	0
Mean		26.23	1.83	31.03	26.60	32.87	39.63	38.17	29.20	35.80
Median		26.00	2.00	30.00	26.50	33.00	39.00	37.00	29.50	35.50
Mode		22	2	29	24	29	36	34	31 ^a	35 ^a
Std. Deviation		3.857	.379	3.034	6.218	4.925	4.056	4.749	8.260	4.318
Minimum		20	1	28	15	24	32	30	11	27

The "Big five" model represents a general framework for understanding and describing personality dimensions. Five-Factor Theory was designed to explain the development and functioning of the individual (McCrae & Costa, 1989, 2008). In the "Big Five" personality model proposed by Costa and McCrae (1992), personality traits or dimensions represent fundamental subdivisions of the human being, along with cognitive, physical, temperamental abilities, etc. McCrae and Costa formulate five big dimensions (Big Five) of personality: extroversion-introversion, agreeableness-unpleasantness, conscientiousness-negligence, neuroticism-emotional stability, mental openness-mental closure (Goldberg, 1993).

The 5 factors of the "Big Five" model appear as fundamental psychological dispositions. From the perspective of the "Big Five" model, the 5 personality factors are represented by the following personality characteristics: Extraversion, Conscientiousness, Openness, Agreeableness and Emotional Stability.

Extraversion factor is characterized by a special psychological inclination towards things outside one's own person, the focus being on the physical and social environment (objects and people in the environment). Intense desire to act on the environment, action orientation, ease of communication, sociability, need for continuous experimentation.

Conscientiousness refers to self-control in terms of the ability to self-organize, plan, will, complete the fulfillment of duties. At the same time, Conscientiousness represents the ability to be conscientious, correct, serious and scrupulous. The behavior is directed towards clearly defined goals, towards rigor, meticulousness and exactingness in carrying out the tasks by accepting the rules. It is an important indicator of value achievements in any profession.

Openness (to experience) is represented by active imagination, attention to life and inner feelings, aesthetic sensitivity, preferences for variety, independence of thought, aspects not necessarily associated with education or intelligence in general.

Agreeableness is a mostly interpersonal dimension of personality. It summarizes the behavior and habit of behaving politely, kind attitude, politeness and benevolence.

Emotional stability refers to the ability to maintain emotional balance under stressful conditions.

7. Conclusion

In this paper, the personality factors described by the Big Five model were analyzed in the two groups of subjects participating in the research: students from the Pedagogy of Primary and Preschool Education specialization and non-students participating in the research, respectively people who are currently not enrolled in either a form of university education, such as a bachelor's degree. It was observed that the non-students obtained a high score on the Openness factor, which suggests their greater openness to experimentation.

At the same time, the data obtained during the research highlighted in the students of the Pedagogy of Primary and Preschool Education an association between the level of self-efficacy and the extraversion factor, respectively an increased self-efficacy correlated with a high level of extraversion.

Also, following the research undertaken, an association between the level of automatic thoughts and the Openness factor was observed in the students of the Pedagogy of Primary and Preschool Education, i.e., an increased level of automatic thoughts correlated with a high level of the Openness factor.

References

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bandura, A. (Ed.). (1995). *Self-efficacy in changing societies*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511527692>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W H Freeman/Times Books/ Henry Holt & Co.

- Boyer, C. A., McAlpine, D. D., Pottick, K. J., & Olfson, M. (2000). Identifying risk factors and key strategies in linkage to outpatient psychiatric care. *The American journal of psychiatry*, 157(10), 1592–1598. <https://doi.org/10.1176/appi.ajp.157.10.1592>
- Cervone, D. (2000). Thinking about Self-Efficacy. *Behavior Modification*, 24(1), 30-56. <https://doi.org/10.1177/0145445500241002>
- Chaplin, J. P. (1985). *Dictionary of Psychology* (2nd Revised Edition). Laurel Books.
- Costa, P. T., Jr., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Psychological Assessment Resources.
- Eden, D., & Aviram, A. (1993). Self-efficacy training to speed reemployment: Helping people to help themselves. *Journal of Applied Psychology*, 78(3), 352–360. <https://doi.org/10.1037/0021-9010.78.3.352>
- Ezeakabekwe, S. U., & Nwankwo, E. A. (2020). Correlate of personality traits, self-efficacy and work coping among police personnel: the need for psychotherapy services for police personnel in Awka Metropolis. *International Journal For Psychotherapy in Africa*, 4(1).
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist*, 48(1), 26–34. <https://doi.org/10.1037/0003-066X.48.1.26>
- Johnson, J. A. (2017). Big-Five model. In V. Zeigler-Hill, & T. K. Shackelford (Eds.), *Encyclopedia of Personality and Individual Differences* (pp. 1-16). Springer. https://doi.org/10.1007/978-3-319-28099-8_1212-1
- Maddux, J. E., & Volkmann, J. (2010). Self-efficacy. In R. H. Hoyle (Ed.), *Handbook of personality and self-regulation* (pp. 315–331). Wiley-Blackwell. <https://doi.org/10.1002/9781444318111.ch14>
- McCrae, R. R., & Costa, P. T. Jr. (1989). The structure of interpersonal traits: Wiggins's circumplex and the Five-Factor Model. *Journal of Personality and Social Psychology*, 56, 586-595. <https://doi.org/10.1037/0022-3514.56.4.586>
- McCrae, R. R., & Costa, P. T. Jr. (2008). *The Five-Factor Theory of personality*. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 159-181). Guilford.
- Mischel, W. (1973). Toward a cognitive social learning reconceptualization of personality. *Psychological Review*, 80, 252-283. <https://doi.org/10.1037/h0035002>
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543–578. <https://doi.org/10.2307/1170653>
- Sava, F. A. (2008). Inventarul de personalitate DECAS/DECAS Personality Inventory, Artpress, Timisoara.
- Usán, P., Salavera, C., & Quílez-Robres, A. (2022). Self-Efficacy, Optimism, and Academic Performance as Psychoeducational Variables: Mediation Approach in Students. *Children*, 9(3), 420. <https://doi.org/10.3390/children9030420>