



Psychological features of the manifestation and dynamics of the cognitive structural component of the “professional self-image” of students of aviation specialities

Liubov Dolynska

PhD Psychological Sciences, Professor
Mykhailo Drahomanov National University of Ukraine
02000, 9 Pyrogov Str., Kyiv, Ukraine
<https://orcid.org/0000-0002-1817-1102>

Mariia Patrul*

Postgraduate Student
Mykhailo Drahomanov National University of Ukraine
02000, 9 Pyrogov Str., Kyiv, Ukraine
<https://orcid.org/0000-0001-6936-1320>

◆ **Abstract.** The relevance of the study lies in the need to train highly qualified specialists in various fields of society who are capable of addressing the tasks of Ukraine's development at the present stage. This is particularly true of the aviation industry, where the psychological characteristics that influence the formation of a motivated and responsible specialist remain insufficiently studied. The aim of the work was to identify the features of the formation and dynamics of the cognitive structural component of the “professional self-image” in future aviation specialists. The study employed a set of psychodiagnostic methods, in particular those developed by M. Kuhn and T. McPartland, and by A. Karpov and V. Ponomaryova, which made it possible to assess the content-related and structural characteristics of the criteria and indicators of the structural component of the “professional self-image”. The analysis included a comparison of results between first- and second-year students and third- and fourth-year students, as well as a quantitative and qualitative examination of respondents' statements regarding professional self-identification. The results of the study showed a moderate level of development of the cognitive component of the “professional self-image” with a tendency to increase over the course of study. Among junior students, situational reflection predominates, ensuring orientation towards current activity, whereas among senior students retrospective and prospective reflection become more active, facilitating the analysis of past experience and the planning of future professional activity. A transformation of internal self-perception was identified: the significance of the “active self” and the “social self” increases, while the “reflective self” decreases somewhat. At the same time, a proportion of students demonstrated a low level of reflexivity, which highlights the need for targeted psychological and pedagogical support. The practical value of the study lies in the possibility of using the obtained data to develop professional training programmes aimed at stimulating the development of the cognitive component of the “professional self-image” and professional self-identification of students of aviation specialities, as well as for the implementation of psychological and pedagogical support at different stages of education

◆ **Keywords:** specialist training; professional activity; reflexivity; self-identification; self-image

◆ Introduction

Modern conditions of societal development, in particular dynamic changes in the field of technology, globalisation processes, and the demand for highly qualified personnel,

give rise to specific requirements for the training of future specialists. In the aviation industry, which is one of the most highly organised and responsible spheres of professional

Suggested Citation:

Dolynska, L., & Patrul, M. (2026). Psychological features of the manifestation and dynamics of the cognitive structural component of the “professional self-image” of students of aviation specialities. *Bulletin of National Defence University of Ukraine*, 21(1), 37-45. doi: 10.33099/2617-6858-26-21-1-37-45.

Article's History: Received: 26.08.2025; Revised: 20.12.2025; Accepted: 27.01.2026; Published: 17.02.2026



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

*Corresponding author

activity, there is a need to form a mature professional self-awareness in future specialists. The professional development of students of aviation specialties involves not only the development of knowledge, skills and abilities, but also the formation of a positive system of perceptions of oneself as a professional in this field, that is, the development of a positive “professional self-image”. O. Vasylchenko & Ye. Batsman (2022) considered the self-image as a multidimensional personal formation that reflects a system of an individual’s perceptions of themselves and ensures the formation of an attitude towards one’s own self. This phenomenon encompasses several interrelated aspects: the “actual self”, characterised by a person’s perception of themselves at the present moment; the “desired self”, which reflects the image to which the individual aspires; and the “public self”, that is, perceptions of how the individual appears to others. The scholars noted that the interaction of these components ensures the integrity of self-awareness and contributes to personal development. The structure of the self-image includes a set of knowledge, emotional evaluations and expectations regarding oneself, which determine the direction of self-knowledge and self-improvement. A.O. Suprihan (2020) investigated the transformation of the self-image under conditions of complex life circumstances as a process that reflects the most dynamic component of self-awareness and changes under the influence of the social environment, changes in social status and lifestyle. The author defined the self-image as an integrative structure that includes cognitive, emotional-evaluative and behavioural components, each of which is characterised by high dynamism and the capacity for change depending on external and internal factors. Changes in individual modalities of the self-image occur under the influence of various life and social circumstances, which determines its plasticity and adaptability.

O.V. Stelmakh (2023) viewed the self-image (self-concept) as a relatively stable, partially conscious system of an individual’s perceptions and attitudes towards themselves, which determines their interaction with the environment. Its structure is a three-component model comprising a cognitive component, which includes processes of self-knowledge; an emotional component, characterised by the level of self-respect; and an evaluative-volitional component, aimed at regulating self-esteem and self-respect. O.V. Stelmakh emphasised that harmonisation of these components towards positive self-acceptance and adequate self-esteem contributes to the formation of constructive attitudes and behavioural strategies. The dynamics of this image are determined by the individual’s rethinking of their own life goals and value orientations. S. Breuer *et al.* (2023) emphasised that the success of pilot training and professional performance is determined not only by technical and cognitive abilities, but also by personality traits (in particular extraversion, conscientiousness, self-confidence, and others), while the concept of the “ideal pilot” remains debatable and requires further scientific clarification. In addition, S. Chernyavska (2022; 2024) found that the psychological

readiness of future civil aviation pilots is an integrative personal formation of a long-term nature, the structure of which combines motivational, content-operational, emotional-volitional, cognitive and personal components, and which should be formed with due regard to the specifics of aviation professional activity and the conditions of its implementation. In summary, based on scientific approaches to the interpretation of the structure of this phenomenon, a traditional three-component structure was identified, which includes a cognitive component (reflecting a system of knowledge and perceptions about oneself), an emotional-evaluative component (characterising emotional attitudes and self-esteem), and a behavioural component (manifested in forms of behavioural responses). At the same time, researchers do not share a unified approach to the study of the “professional self-image”. In particular, the study by O.O. Yevdokimova & Yu.Yu. Boiko-Buzyl (2023), devoted to the professional genesis of managers, emphasised that professional self-awareness encompasses various aspects of self-images: the “professional self in the present”, the “professional self in the past”, and the “professional self in the future”. Accordingly, these components determine the orientation, control and regulation of professional activity, forming the basis for professional development. In the study by Ye.M. Yakusheva (2021), devoted to examining the structure of professional self-awareness among employees of fire and rescue units of the State Emergency Service of Ukraine, it was found that the “professional self-image” constitutes a component of the cognitive element of professional self-awareness. Ye.M. Yakusheva emphasised that professional self-awareness reflects the content of an individual’s perceptions of themselves as a specialist, determines the level of their professional maturity, and represents a key part of professional consciousness, which manifests itself in the ability to recognise professional requirements, motives, goals and tasks of activity.

The analysis of professional self-awareness involves the study of perceptions of one’s own professional image, attitudes towards oneself as a subject of professional activity, and orientations towards self-development and the improvement of professional competences. The acquisition of professionally important qualities and professional competences is a necessary condition for the formation of a holistic professional self-awareness, since it is through the practical mastery of knowledge, skills and abilities that awareness of one’s own capabilities and limits of professional growth is formed. The development of competences ensures the effective performance of professional duties, contributes to a deeper understanding of one’s place within the profession, and promotes the formation of a positive “professional self-image”. As noted by N.F. Shevchenko *et al.* (2024), the personal and professional qualities of a specialist constitute an important condition for professional development and determine their ability to effectively realise professional functions and achieve high results in the chosen field of activity. The content of the components of the “professional self-image” directly depends on the

specifics of an individual's professional activity, and the analysis of scientific research demonstrates scholars' interest in studying this phenomenon among representatives of various professions. In particular, researchers have examined the development of this phenomenon among rescuers, lawyers, law enforcement officers, military officers, psychologists and nurses; however, insufficient attention has been paid to the study of the formation of a positive "aviation specialist self-image". The professional activity of aviation specialists belongs to the category of increased risk, as it is characterised by a high level of tension, frequent stressful situations and potentially unpredictable circumstances. The ability to make rapid and well-reasoned decisions within limited time frames is a crucial factor in ensuring passenger safety and the stable functioning of airspace. Thus, the formation and development of the "professional self-image" among students of aviation specialties must take into account the specific features of their future professional activity. The Federal Aviation Administration (2020) manual notes that the self-image of an aviation specialist is one of the key psychological factors that directly influences the effectiveness of the training process of future aviation professionals. A student's self-perception, in particular the level of confidence or lack thereof, significantly determines the quality of learning outcomes. When individual experience is consistent with a positive self-image, the student remains open to new experiences and motivated for further learning. Conversely, when previous experience contradicts established self-evaluations, a tendency to avoid new learning situations often emerges. A negative self-image creates psychological barriers that slow down perceptual processes and may limit the effective application of acquired knowledge and skills. Thus, self-esteem performs a regulatory function in learning activities: it determines an individual's readiness to perceive new information, influences confidence in one's own abilities, and affects task performance success. Students with a positive self-image typically demonstrate greater openness to instruction, demonstrations and new experiences in general. As a result of the theoretical analysis of a number of scientific works devoted to the study of the self-image phenomenon, the absence of a universal scientific approach to defining the content and structural components of this phenomenon was identified. The aim of the present study was to identify the psychological characteristics and dynamic changes of the cognitive structural component of the professional self-perception of students of aviation specialties.

◆ Materials and Methods

In the course of the study, a set of theoretical and empirical methods aimed at investigating the phenomenon under consideration was employed. At the theoretical stage, an analysis of the scientific literature on the problems of forming the "professional self-image" in students was carried out, scientific approaches were systematised, and key ideas and provisions were generalised. This made it possible to determine the theoretical and methodological

foundations and clarify the conceptual and categorical apparatus of the work. The empirical study was conducted at the State University "Kyiv Aviation Institute" in 2023-2024 using psychodiagnostic tools aimed at identifying the features of manifestation of the cognitive component of the "professional self-image" in students of aviation specialties. The obtained data were subjected to quantitative and qualitative processing using methods of mathematical statistics, which ensured the objectivity and reliability of the results. The sample of this study consisted of 180 students of aviation specialties from the first to the fourth year of study (78 women, 102 men), aged from 17 to 23 years. To analyse the dynamics of the cognitive component of the "professional self-image", the sample was divided into junior students (first-second year) and senior students (3rd-4th year). To study the specificity of the development of the cognitive component of the "professional self-image" in students of aviation specialties, psychodiagnostic methods were used, selected in accordance with the defined criteria and indicators. In order to investigate the processes of self-identification of students of aviation specialties, the "Who Am I?" method by M. Kuhn and T. McPartland was applied. This method was used to study the content characteristics of the personal identity of the future aviation specialist. The question "Who am I?" encourages the respondent to engage in reflection, self-analysis and awareness of the content of their own self-image. To examine personal reflexivity as an indicator of the cognitive component of the "professional self-image", the method for diagnosing the level of reflexivity developed by A. Karpov and V. Ponomaryova was used. This method focuses on two interrelated dimensions of reflection: awareness and development of one's own thinking and consciousness as factors of activity and personal growth, and the ability to interpret the internal state, position and motives of another person. Mathematical and statistical processing of quantitative results was carried out using Pearson's χ^2 criterion to assess the statistical significance of differences between indicators. The conduct of the study complied with ethical standards for research involving human participants as defined by the Declaration of Helsinki of the World Medical Association, in particular adherence to the principles of informed consent, confidentiality and prevention of harm to participants (WMA, 2024).

◆ Results and Discussion

Based on the theoretical analysis of the source base, the following content components of the "professional self-image" of students of aviation specialties were identified: the cognitive component, which reveals an individual's perception of themselves as a professional in the aviation field (the image of "I am a specialist in the field of aviation"); the emotional-evaluative component, which characterises professional self-esteem, a positive attitude towards oneself as an aviation specialist, and emotional stability in stressful situations; and the behavioural component, which includes self-regulation, self-control and readiness to take risks in

the aviation sphere. The cognitive component of the “professional self-image” of students of aviation specialties encompasses a system of an individual’s representations about themselves as a professional in the aviation industry. It reflects the level of awareness of one’s own professionally significant qualities, understanding of one’s role within the structure of aviation activity, and awareness of the need for continuous self-development, learning and adaptation to dynamic technological changes and the increasing demands of the profession. Thus, within the framework of the cognitive component of the “professional self-image” of students of aviation specialties, criteria and content indicators were defined that are determined by the specific features of the professional activity of representatives of the aviation industry. These criteria include self-awareness (awareness of one’s own “self”), which comprises a number

of content indicators: the “social self”, the “active self”, the “prospective self”, the “material self”, and the “reflective self”. In addition, an important component of the cognitive element is “personal reflexivity”, which is manifested through the level of development of reflection and the integrative and differentiating complexity of the self-image. The relevance of the process of forming professional self-identity is revealed through the content of the respondents’ answers to the question “Who am I?”. Among these were responses such as “I am a future aviation specialist”, “I am a future pilot”, “I am a future aviation engineer”, and similar statements, which indicate a formed awareness of oneself within the chosen professional activity. The quantitative distribution of significant self-identification characteristics of students of aviation specialties obtained during the empirical study is presented in Table 1.

Table 1. Quantitative indicators (%) of self-identification of students of aviation specialties

Indicator	1 st -2 nd year (n = 89)	3 rd -4 th year (n = 91)
“Reflective Self”	84.3	69.2
“Active Self”	49.4	87.9
“Social Self”	50.5	67
“Communicative Self”	22.4	32.9

Source: developed by the authors

During the empirical study, the analysis of the obtained responses showed that the following content categories were most frequently recorded among the respondents: the “reflective self” (identity) – 84.3% among 1st-2nd year students and 69.2% among 3rd-4th year students. It is also important to emphasise that 87.9% of 3rd-4th year students indicated the “active self”, which characterises personal activity and is a positive indicator at the senior stages of study. The “social self” (social identification) and the “communicative self” demonstrated somewhat lower indicators, but nevertheless were characteristic of the given sample. To identify statistically significant differences in the frequency of manifestation of the indicators of the cognitive component of the “professional self-image” among junior (n = 89) and senior students (n = 91), a comparative analysis was conducted using Pearson’s χ^2 test. The obtained results confirmed the presence of statistically significant differences between the samples ($\chi^2 = 10.07$; $df = 3$; $p = 0.018$), which indicates a different frequency of mentioning the indicators of the cognitive component depending on the year of study. Given that the significance level $p < 0.05$, it can be concluded that there is a statistically significant relationship between the year of study and the nature of students’ self-identification. In particular, senior students more often associate themselves with the “active self” and the “social self”, whereas junior students are more characterised by an orientation towards the “reflective self”. As shown in Table 1, among 1st-2nd year students the orientation towards the “reflective self” indicator predominates. This indicator reflects the personal-meaningful level of self-awareness and includes characteristics that

represent individual traits and personal reflection. Examples of respondents’ self-descriptions include: “I am creative”, “I am versatile”, “I am sincere”, “I am pragmatic”, “I am stubborn but fair”, and similar statements. At the same time, senior students referred significantly more often to the category of the “active self”, which may indicate a more intensive formation of professional self-identity in the process of professional training during the 3rd-4th years. This indicator characterises awareness of one’s own activity in the sphere of the future profession, interest in one’s speciality, readiness for professional self-realisation, and identification with a partially realised professional role. In the responses of 3rd-4th year students, self-definitions that directly reflect professional identity or intentions related to future activity predominate, for example: “I am an aviation engineer”, “I am a pilot”, “I am a future pilot”, “I am studying to be a pilot”. Such statements are complemented by expressions that reflect purposefulness and readiness to implement professional intentions, such as: “I will conquer the sky”, “I will operate unmanned aerial vehicles”, and similar formulations. A distinctive feature of such statements is the dominance of affirmative forms, which indicates the formation of professional beliefs, confidence in the chosen profession, and the integration of the personal role into the structure of personal identity. Ultimately, the “active self” indicator among senior students occurs more frequently and becomes more structured, demonstrating clarity and a more holistic understanding of the “professional self-image”. The dynamics of the indicators of professional self-identification of students of aviation specialties across all years of study are presented in Figure 1.

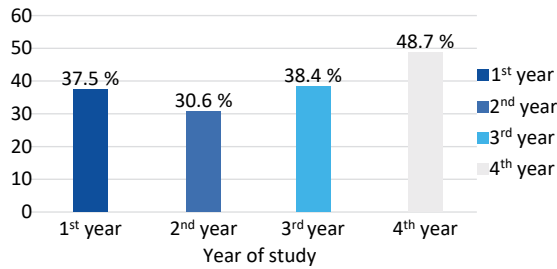


Figure 1. Quantitative indicators of the dynamics of professional self-identification among 1st-4th year aviation students

Source: developed by the authors

The analysis of the data presented in Figure 1 makes it possible to trace the dynamics of students' professional self-identification throughout bachelor-level training. The lowest level of professional self-identification was found among second-year students (30.6%), which is likely related to the process of adaptation to the requirements of the educational environment and the transition from general ideas about the profession to its actual content. At this stage of study, the curriculum is still dominated by basic and general education subjects, which do not always have a direct connection with future professional activity, leading to a temporary decrease in professional self-identification. First-year students are characterised by a higher level of interest in their future profession (37.5%), which can be explained by the novelty of studies, the romanticisation of the aviation field, and the high prestige of the chosen speciality. The responses of this group are dominated by emotionally coloured statements such as "I love aviation", "I will conquer the sky", and "I dream of becoming a flight attendant". From the third year onwards, a gradual increase in the level of professional self-identity is observed (38.4%), which is likely associated with the study of specialised and elective subjects, participation in practical training, and the first experience of professional interaction. The highest indicators were recorded among fourth-year students (48.7%), who demonstrate a stable awareness of their professional role. Their responses predominantly include clearly formulated statements reflecting the integration of professional identity, such as "I am a future pilot", "I will fly", and "I will restore the aviation industry of Ukraine". This indicates an increase in professional self-awareness and the development of the "professional self-image" in the course of training.

Despite the recorded positive dynamics in the development of professional self-identity by the fourth year, the results of the study indicate that this process is not complete for the majority of students. A significant proportion of respondents, even at the final stage of training, do not demonstrate a clearly formed awareness of their professional role. Insufficiently high levels of professional self-identification among senior students may indicate the need for targeted pedagogical influence and systematic support from the educational environment. It is likely that

some students are at the stage of rethinking or searching for their place in the profession, which necessitates the organisation of pedagogical guidance and psychological support. At the same time, another criterion of the cognitive component of the "professional self-image" of students of aviation specialities is personal reflexivity. To study this indicator, the method for diagnosing the level of reflexivity developed by A. Karpov and V. Ponomaryova was selected. A high level of reflexivity facilitates the aviation specialist's awareness of themselves as a subject of professional activity, the ability for continuous self-observation, analysis and correction of one's own actions, which is of crucial importance for ensuring flight safety and the effective performance of professional duties under complex and changing conditions. The analysis of the results obtained using this method showed that a high level of personal reflexivity was identified in 10.11% of 1st-2nd year students, whereas among 3rd-4th year students this indicator was recorded at 16.4%, which is 6.3% higher. A medium level of reflexivity was found in 23.5% of junior students and 30.7% of senior students, which is 7.2% higher compared to the junior group. In contrast, the proportion of students with a low level of personal reflexivity decreases from 66.2% in the junior years to 52.7% in the senior years, representing a difference of 13.5% (Fig. 2).

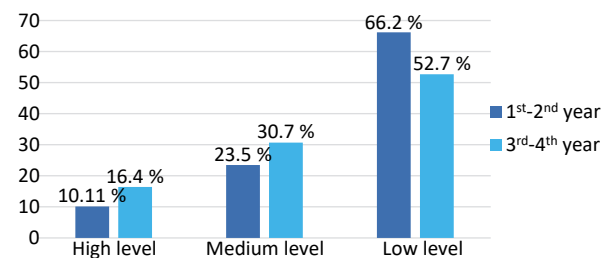


Figure 2. Differences in the dynamics of the level of reflexivity among students of aviation specialities in the 1st-2nd and 3rd-4th years, $n = 180$

Source: developed by the authors

The analysis of the obtained results demonstrated a gradual increase in the level of students' reflexivity depending on the year of study. This dynamic may be due to an increase in the level of professional self-identification, greater involvement in professional training, and a more detailed acquaintance with the future profession. This manifests itself in an increased ability to critically analyse one's own actions, correlate them with specific situations, and realise the need to make adjustments to one's own activities. At the same time, the predominance of a low level of personal reflexivity among junior students (66.2%) indicates an insufficient level of critical reflection on their own activity. At this stage of their studies, future aviation specialists are only mastering the basics of professional activity, so their reflective processes have not yet become systematic. The ability to analyse actions, self-assess and initiate changes in activities remains fragmentary, which

indicates the incomplete formation of the integrative function of reflection, which ensures awareness and regulation of professional activities. This psychodiagnostic tool makes it possible to assess the level of reflexivity in

three forms according to temporal criteria: situational, retrospective, and prospective. The mean scores on the scales were converted into sten scores in accordance with the instructions (Table 2).

Table 2. Mean scores on the scales of the diagnostic assessment of the level of reflexivity development by A. Karpov and V. Ponomaryova among students of aviation specialities

Scales	1 st -2 nd year (n = 89)	3 rd -4 th year (n = 91)
Retrospective reflection on activity	32.5	37.32
Situational reflection	39.3	35.12
Prospective reflection	33.28	36.5
Reflection on communication	30.14	32.8

Source: developed by the authors

According to the table data, the highest level of retrospective reflection is observed among 3rd-4th year respondents (37.32 points). This may indicate that senior students have greater educational and practical experience, which contributes to the comprehension of past actions, the analysis of mistakes, and reflection on their own professional development. In addition, compared to junior students, senior students demonstrate a higher level of prospective reflection (36.5 points), which points to the formation of professional self-determination, the actualisation of career plans, assessment of readiness for future professional activity, and anticipation of possible professional challenges. Among junior students, the highest score was recorded on the situational reflection scale (39.3 points). This indicator reflects direct involvement in a situation, analysis of its elements and conditions, as well as reflection on current actions, for example when performing learning tasks or practical exercises. Situational reflection helps 1st-2nd year students to orient themselves in a new educational environment, control their own actions, and adapt to the requirements of the educational process, which is natural at the initial stages of professional development. Retrospective and prospective reflection among junior students remain at a relatively low level (32.5 and 33.28 points, respectively), indicating a limited ability to establish connections between past experience, current activity and the anticipated future. This may also reflect a greater dependence on external circumstances and insufficient orientation towards shaping one's own professional future. Thus, an overall positive dynamic in the development of reflexivity among students of aviation specialities is observed as they progress from junior to senior years. In the 1st-2nd years, situational reflection predominates, ensuring orientation towards current activity, while levels of retrospective and prospective reflection remain low, indicating insufficient development of skills for critical comprehension of professional experience and limited capacity for strategic planning. In the senior years, retrospective and prospective reflection become more active as cognitive mechanisms that enable the analysis of past actions, forecasting the outcomes of future professional activity, and the formation of a holistic professional image. At the same time, it should be noted that a significant proportion of senior students

(52.7%) still demonstrate a low level of reflexivity, which highlights the need for systematic psychological and pedagogical support during the training of aviation specialists. The generalisation of the research results concerning the criteria of the cognitive component of the "professional self-image" of students of aviation specialities provides grounds to assert that its level of formation is moderate; however, it demonstrates positive dynamics and gradual growth in the process of professional training.

The results of the present study are consistent with the conclusions of K.Yu. Ushakova (2017), who focused on the professional self-concept of students of medical colleges and noted a tendency towards an increase in the number of highly moral traits in students' real and ideal self-representations. O.V. Stelmakh (2016), investigating the psychological conditions for the formation of the professional self-concept of future rescuers, pointed to the importance of activating self-awareness processes and ensuring the systematic development of all components of the concept, in particular the cognitive component, which determines the level of professional knowledge and perceptions of oneself as a specialist. These provisions are consonant with the present study, as they also confirm the importance of developing the cognitive component of the "professional self-image" for effective professional activity. R.V. Nevzorov (2018) noted that the motivational aspect in this context lies in the fact that the self-concept of a future pilot functions as an internal stimulus to acquire knowledge, develop skills and professional competences, forming interest, the need for planning, and the aspiration towards high professionalism. Studies by M.V. Patrul (2024; 2025) showed that the emotional-evaluative component of the "professional self-image" of students of aviation specialities is formed at a medium level with individual differences; it includes positive dynamics of self-respect and self-liking, while in some students an inflated self-esteem and unrealistic aspirations are observed, which emphasises the importance of developing this component for effective professional development and the formation of a responsible professional identity. With regard to gender differences, M.E. Chaparro *et al.* (2020) found that female pilots generally have a personality profile similar to that of male pilots, as indicators for most factors (neuroticism, extraversion,

agreeableness and conscientiousness) are largely equivalent; however, openness to experience among female pilots was found to be higher in most studies, while differences in agreeableness were inconsistent. In addition, the publication by N.D. Sazak & M. Rauch (2025) established that aptitude tests better predict practical success in flight training, whereas knowledge-based tests are mainly associated with the Airline Transport Pilot Licence, and personality questionnaires have limited predictive value in pilot selection. L. Onufrieva (2017) examined the process of forming the “professional self-image” as a result of gradual growth and self-identification of the individual in the chosen field of activity. The researcher emphasised that this image is formed in the course of maturation and professional self-determination, and that professional self-identification plays a key role in this process, ensuring an adequate awareness of one’s own capabilities and professional requirements. The obtained results are consistent with the conclusions of L. Onufrieva, as they also confirm the dynamic nature of the development of professional self-identification, which serves as an indicator of professional self-awareness (awareness of one’s role in professional activity and the formation of an appropriate attitude towards it). The identification of reflexivity as a criterion indicator of the cognitive component of the “professional self-image” corresponds with the findings of E. Simon (2024), who noted that a high level of development of reflective abilities is an important factor in the formation of a mature professional identity, manifested in a deep awareness of the content of professional activity and the image of the “professional self”. In the context of trait anxiety, which proved to be the only significant personality characteristic, J. Chen *et al.* (2025) established that it has a substantial impact on pilots’ stress responses in unexpected and threatening situations, whereas action style, error orientation and flight experience did not demonstrate a significant influence on cognitive and affective reactions, confirming the persistence of the role of anxiety even under conditions of professional pilot selection.

◆ Conclusions

The study showed that the cognitive structural component of the “professional self-image” of students of aviation specialities is characterised by a moderate level of development and a tendency towards gradual growth over the course of training. In the early years of study, situational reflection predominates, reflecting emotional

attitudes towards and interest in the profession, whereas in the senior years retrospective and prospective reflection become more active, contributing to the transformation of the “reflective self” into more concretised forms of the “active self” and the “social self”. This dynamic indicates a gradual awareness of one’s own professional self and highlights the need for systematic psychological and pedagogical support at different stages of training aviation specialists. An analysis of the source base confirmed the multidimensional nature of the “professional self-image”, which encompasses the past, present and future self and directly influences motivation, professional orientations and learning effectiveness. At the same time, the study of the content structure of the cognitive component revealed its heterogeneity: a high level of the “reflective self” in junior students decreases in senior years, which likely reflects the process of transition towards a more conscious and integrated professional self-determination. Despite positive trends, a significant proportion of students, even at the final stages of training, do not demonstrate a fully formed professional self-awareness, and the level of personal reflexivity remains relatively low, although an increase in the number of students with a medium level is observed. Thus, the formation of the cognitive component of the “professional self-image” occurs unevenly, which determines the need for targeted psychological and pedagogical intervention. Prospects for further research include the study of the features of manifestation and dynamics of the emotional-evaluative and behavioural components of the professional self, which will allow for a more comprehensive assessment of the process of forming professional self-identification among students of aviation specialities. In addition, it is advisable to analyse the influence of individual psychological characteristics and external professional conditions on the integration of all components of the “professional self-image”, which will contribute to the development of effective strategies for psychological and pedagogical support.

◆ Acknowledgements

None.

◆ Funding

None.

◆ Conflict of Interest

None.

◆ References

- [1] Breuer, S., Ortner, T.M., Gruber, F.M., Hofstetter, D., & Scherndl, T. (2023). Aviation and personality: Do measures of personality predict pilot training success? Updated meta-analyses. *Personality and Individual Differences*, 202, article number 111918. [doi: 10.1016/j.paid.2022.111918](https://doi.org/10.1016/j.paid.2022.111918).
- [2] Chaparro, M.E., Carroll, M., & Malmquist, S. (2020). [Personality trends in the pilot population](#). *The Collegiate Aviation Review International*, 38(2).
- [3] Chen, J., Landman, A., Stroosma, O., & Van Paassen, M.M. (2025). The effect of personality traits and flight experience on pilots’ cognitive and affective responses to simulated in-flight hazards. *Aviation Psychology and Applied Human Factors*, 14(2), 104-113. [doi: 10.1027/2192-0923/a000283](https://doi.org/10.1027/2192-0923/a000283).

- [4] Chernyavska, S. (2022). Psychological readiness of student-pilots of civil aviation to professional activity: Theoretical aspects of the problem. *Scientific Innovations and Advanced Technologies*, 1(3), 432-447. doi: [10.52058/2786-5274-2022-1\(3\)-432-447](https://doi.org/10.52058/2786-5274-2022-1(3)-432-447).
- [5] Chernyavska, S. (2024). On the methodology for studying the psychological readiness of future civil aviation pilots for professional activity. *Perspectives and Innovations in Science. Pedagogy, Psychology, Medicine*, 1(35), 684-701. doi: [10.52058/2786-4952-2024-1\(35\)-684-701](https://doi.org/10.52058/2786-4952-2024-1(35)-684-701).
- [6] Federal Aviation Administration. (2020). *Aviation instructor's handbook (FAA-H-8083-9B)*. Washington, DC: U.S. Department of Transportation.
- [7] Nevzorov, R.V. (2018). "I-concept" as a motivational factor of the cadets' professional flight competences formation in the Ukrainian system of military higher education. *Advanced Linguistics*, 1, 51-57. doi: [10.20535/2617-5339.2018.1.148842](https://doi.org/10.20535/2617-5339.2018.1.148842).
- [8] Onufrieva, L.A. (2017). Theoretical and methodological analysis of the "professional self-image" as a component of the self-concept of future professionals. *Collection of Scientific Papers "Problems of Modern Psychology"*, 39, 195-205. doi: [10.32626/2227-6246.2018-39.195-205](https://doi.org/10.32626/2227-6246.2018-39.195-205)
- [9] Patrul, M.V. (2024). Methodological toolkit for studying the "professional self-image" in aviation students. *Proceedings of the Kyiv Aviation Institute Pedagogy Psychology*, 1(24), 73-79. doi: [10.18372/2411-264X.25.19359](https://doi.org/10.18372/2411-264X.25.19359).
- [10] Patrul, M.V. (2025). Psychological features of the manifestation and dynamics of the emotional-evaluative component of the "professional self-image" in students of aviation specialties. *Journal of Modern Psychology*, 4, 86-93. doi: [10.26661/2786-7471/2025-4-10](https://doi.org/10.26661/2786-7471/2025-4-10).
- [11] Sazak, N.D., & Rauch, M. (2025). Predictive validity of psychometric assessments in ab initio pilot selection: A case study. *Transportation Research Procedia*, 88, 253-261. doi: [10.1016/j.trpro.2025.05.031](https://doi.org/10.1016/j.trpro.2025.05.031).
- [12] Shevchenko, N.F., Kuchynova, N.M., & Zhytnyk, N.V. (2024). Personal-professional qualities of a specialist: Conceptualization and justification. *Scientific Notes of V.I. Vernadsky Taurida National University. Series: Psychology*, 35(74), 6, 70-75. doi: [10.32782/2709-3093/2024.6/12](https://doi.org/10.32782/2709-3093/2024.6/12).
- [13] Simon, E. (2024). Cultivating professional identity: The vital role of practical teaching experience for future educators. *Education Sciences*, 14(5), article number 439. doi: [10.3390/educsci14050439](https://doi.org/10.3390/educsci14050439).
- [14] Stelmakh, O.V. (2016). *Psychological conditions for the formation of the professional self-concept of future rescuers*. (PhD thesis, National University of Ostroh Academy, Ostroh, Ukraine).
- [15] Stelmakh, O.V. (2023). *Fundamentals of psychocorrection: Lecture notes*. Lviv: Lviv State University of Life Safety.
- [16] Suprihan, A.O. (2020). *Transformation of self-image of personality in difficult life circumstances*. (PhD dissertation, H.S. Kostiuk Institute of Psychology, Kyiv, Ukraine).
- [17] Ushakova, K.Yu. (2017). *Psychological factors in the formation of the professional self-concept of medical college students*. (PhD dissertation, National Pedagogical Drahomanov University, Kyiv, Ukraine).
- [18] Vasylchenko, O., & Batsman, Ye. (2022). Self-image and representations of the future in youth. *Scientific Notes of KROK University*, 3(67), 147-152. doi: [10.31732/2663-2209-2022-67-147-152](https://doi.org/10.31732/2663-2209-2022-67-147-152).
- [19] WMA. (2024). *WMA Declaration of Helsinki – ethical principles for medical research involving human participants*. Retrieved from <https://www.wma.net/policies-post/wma-declaration-of-helsinki/>.
- [20] Yakusheva, Ye.M. (2021). *Features of the structure of professional self-consciousness with different coping styles*. (PhD dissertation, National Aerospace University named after M.Ye. Zhukovsky "Kharkiv Aviation Institute", Kharkiv, Ukraine).
- [21] Yevdokimova, O.O., & Boiko-Buzyl, Yu.Yu. (2023). *Psychology of professional genesis of the head of the Ministry of Internal Affairs system of Ukraine*. Kharkiv: FOP Brovin O.V.

Психологічні особливості прояву та динаміки когнітивного структурного компоненту образу «Я-професійний» студентів авіаційних спеціальностей

Любов Долинська

Кандидат психологічних наук, професор
Український державний університет імені Михайла Драгоманова
02000, вул. Пирогова, 9, м. Київ, Україна
<https://orcid.org/0000-0002-1817-1102>

Марія Патруль

Аспірант
Український державний університет імені Михайла Драгоманова
02000, вул. Пирогова, 9, м. Київ, Україна
<https://orcid.org/0000-0001-6936-1320>

♦ **Анотація.** Актуальність дослідження зумовлена необхідністю підготовки висококваліфікованих фахівців у різних сферах суспільства, здатних вирішувати завдання розвитку України на сучасному етапі. Особливо це стосується авіаційної галузі, де недостатньо досліджено психологічні характеристики, що впливають на формування вмотивованого та відповідального спеціаліста. Метою роботи було з'ясування особливостей формування й динаміки когнітивного структурного складника образу «Я-професійний» у майбутніх фахівців авіаційної галузі. У роботі застосовано комплекс психодіагностичних методик, зокрема М. Куна та Т. Макпартленд, А. Карпова та В. Пономарьової, які дозволили оцінити змістові та структурні характеристики критеріїв і показників структурного компонента образу «Я-професійний». Аналіз включав порівняння результатів між студентами 1-2 та 3-4 курсів, а також кількісний та якісний розгляд висловлювань респондентів щодо професійної самоідентифікації. Результати дослідження показали помірний рівень сформованості когнітивного компоненту образу «Я-професійний» з тенденцією до зростання протягом навчання. У молодших курсів домінує ситуативна рефлексія, що забезпечує орієнтацію на поточну діяльність, тоді як у старших курсів активізуються ретроспективна та перспективна рефлексії, що сприяє аналізу минулого досвіду та плануванню майбутньої професійної діяльності. Виявлено трансформацію внутрішнього сприйняття себе: зростає значення «діяльне Я» та «соціальне Я», тоді як «рефлексивне Я» дещо знижується. Проте частина студентів продемонструвала низький рівень рефлексивності, що підкреслює потребу в цілеспрямованому психолого-педагогічному супроводі. Практична цінність дослідження полягає у можливості використання отриманих даних для розробки програм професійної підготовки, спрямованих на стимулювання розвитку когнітивного компоненту образу «Я-професійний» та професійної самоідентифікації студентів авіаційних спеціальностей, а також для впровадження психолого-педагогічного супроводу на різних етапах навчання

♦ **Ключові слова:** підготовка фахівців; професійна діяльність; рефлексивність; самоідентифікація; «Я-образ»