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<https://doi.org/10.37493/2307-907X.2024.2.22>**ПРОБЛЕМА ПЕРФЕКЦИОНИЗМА И ЗРЕЛОСТИ ЛИЧНОСТИ
В СФЕРЕ ЭКОЛОГИЧЕСКОГО ОБРАЗОВАНИЯ****Мария Викторовна Косцова¹, Алла Григорьевна Михайлова^{2*},
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Аннотация. Введение. Феномен личностной зрелости является сложным, многоаспектным, но играет важную роль в сознании человека, и, следовательно, от него зависит эффективность экологического образования. В этих условиях все более актуальной становится задача усиления экологической направленности образования, поиска эффективных путей формирования экологической культуры и ответственного отношения людей к экологическим проблемам и процессам. В исследовании мы остановимся на проблеме перфекционизма и зрелости личности в контексте экологического образования. **Цель** – выявление значимых корреляций между рефлексивностью и самооэффективностью студентов, для этого следует: провести теоретический анализ проблемы зрелости личности; выявить взаимосвязь между зрелостью личности и перфекционизмом в контексте эмпирического исследования. **Материалы и методы.** Многомерная шкала перфекционизма Хьюитта-Флетта; дифференциальный тест перфекционизма А. А. Золотаревой и методы математической статистики. **Результаты и обсуждение.** Результаты метода А. Золотаревой, направленного на выявление перфекционизма у будущих специалистов, показывают, что у большинства испытуемых наблюдается нормальный тип перфекционизма, то есть для таких студентов характерно индивидуальное стремление к совершенству, способность повышать самооценку на основе достижения, успех, переживание легкого волнения, сосредоточенность на собственных силах, уверенность в себе. По данным опросника П. Хьюитта и Г. Флетта, показатель оценки самооэффективности субъективной деятельности находится в пределах средних значений. Респонденты оценивают результаты своей деятельности ситуативно, видят определенные недостатки в своей деятельности и её результаты. В ходе работы обнаружено, что формирование личностной зрелости как психологического феномена может помочь преодолеть экологический кризис. **Заключение.** Авторы пришли к выводу, что существует связь между личностной зрелостью и перфекционизмом студентов, а именно выявлена отрицательная связь между компонентами перфекционизма и личностной зрелостью. Таким образом, существуют значимые корреляции между рефлексивностью студентов и самооэффективностью.

Ключевые слова: система высшего образования, экологическая направленность образования, многомерная шкала перфекционизма, дифференциальный тест перфекционизма, ответственное отношение, экологическая культура, развитие личности, личностная зрелость

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Research article

**THE PROBLEM OF PERFECTIONISM AND PERSONALITY MATURITY
IN TERMS OF ECOLOGICAL EDUCATION****Maria V. Kostsova¹, Alla G. Mikhaylova^{2*}, Anastasia V. Grishina³**^{1,2} Sevastopol State University (33, Universitetskaya str., Sevastopol, 299053, Russian Federation).³ Sevastopol Economic and Humanitarian Institute (branch), V. I. Vernadsky Crimean Federal University (4, Acad. Vernadsky ave, Simferopol, Crimean Republic, 295007, Russian Federation).¹ mashasev@mail.ru; <https://orcid.org/0000-0003-1080-3053>² steba1971@mail.ru; <https://orcid.org/0000-0002-9419-543X>³ nast_kostsova@mail.ru; <https://orcid.org/0000-0002-0303-2222>

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Abstract. Introduction. The phenomenon of personal maturity is multidimensional. It plays an important role in human consciousness and, therefore, the effectiveness of environmental education depends on it. In these conditions, the task of strengthening the ecological orientation of education and finding effective ways to form an ecologically concerned culture and a responsible attitude of people towards the ecological issues and eco-friendly processes is becoming more urgent. The study focuses upon a problem of perfectionism and personality maturity in the context of ecological education. **Goal.** To identify significant correlations between reflexivity and self-efficacy of students it is necessary to conduct a theoretical analysis of the problem of personality maturity, and identify the relationship between personality maturity and perfectionism in the context of empiri-

cal research. **Materials and methods.** Hewitt-Flett Multidimensional Perfectionism Scale; Differential test of perfectionism by A. A. Zolotareva and methods of mathematical statistics. **Results and discussion.** The results of A. Zolotareva method aimed at identifying perfectionism among future specialists show that the majority of subjects have a normal type of perfectionism, that is, such students are characterized by an individual's desire for perfection, the ability to increase self-esteem based on achievements, success, experiencing slight excitement, excitement, easy entry into activities, focusing on one's own resources, self-confidence. According to the questionnaire by P. Hewitt and G. Flett, the indicator for assessing self-efficacy of subject activity is within the range of average values. These subjects evaluate the results of their activities according to the situational context. They also see certain shortcomings in their activities and their results. It is clear that the formation of personality maturity as a psychological phenomenon can help overcome the environmental crisis. **Conclusion.** The authors came to the conclusion that there was a relationship between the personal maturity and perfectionism of students, namely, a negative relationship was identified between the components of perfectionism and personal maturity. Thus, there are significant correlations between students' reflexivity and self-efficacy.

Keywords: higher education system, ecological orientation of education, multidimensional perfectionism scale, differential test of perfectionism, responsible attitude, environmental culture, personality development, personal maturity

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Introduction / Введение. Environmental education as a continuous process of training, education and personal development plays an integrative role in the higher education system. It is aimed at the formation of value orientations, practical knowledge and skills system and behavior. "In the era of building a post-industrial society, when the world is developing dynamically, environmental education is filled with new meanings: it is connected with problems of survival, national security, the problem of responsibility to oneself and the world, and the ability to measure one's actions with environmental imperatives" [1, p. 3].

In these conditions, the task of strengthening the environmental orientation of education and finding effective ways to form an environmental culture and a responsible attitude of people towards the environment is becoming more urgent. "Today's business environment is characterised by uncertainty, intense global competition, and evolving consumer expectations" [2, p. 108222]. So future specialists must encourage proactive behaviour compete effectively. "It is increasingly recognised that such human behaviour can support and shape supply chain management (SCM) decision-making processes, practices, and performance" [2, p. 108222]. We can say about the impact of environmental orientation on environmental performance.

The environmental education system is an essential component of the humanization of education. It contributes to the formation and development of a unified picture of the world and expands the possibilities of moral education in the learning process. A psychological phenomenon, the formation of which can help overcome the environmental crisis, is personal maturity. Its structure includes certain components: personal, reflexive, functional and environmental in the form of nature-centric ecological consciousness.

Numerous publications show the special importance of environmental education today. Accordingly, questions regarding the personal qualities of students that influence the formation of environmental consciousness and orientation are of interest. Roberto Chavez, Mohsin Malik, Hadi Ghaderi, Wantao Yu consider environmental orientation and performance. They stated that behavioural operations had emerged as a critical research topic, revealing implicit links between operations management and human behaviour" [2, p. 108222]. Mohamed Aboelmaged, contributes to both theoretical and managerial levels in the field of sustainability, eco-innovation, and environmental orientation [3].

Of course, domestic and foreign authors are right in their own way when analyzing personal maturity, since each of them interprets this problem based on their own scientific positions. Marguerite Grant, Sullivan Clyde, Douglas Grant described psychological development in terms of successive levels of integrations of: "separateness, nonself differences, rules, conflict and response, continuity, self-consistency, and relativity, movement, and change" [4, p. 373]. So, L. A. Golovey identified a discrepancy between the "real self" and the "ideal self" while studying the aspect of personal maturity. The highest significance of "I-Image" differences is manifested in self-confidence and health. That is, people in their lives demonstrate behavioral incongruity, namely, the desire to 'appear rather than be'" [5, p. 23].

Another study about personal maturity was carried out by E. L. Soldatova and I. A. Shlyapnikova [6]. They put forward a hypothesis about the role of ego identity in the personal maturity structure "from the point of the concept of normative crises of adult development as transitional periods from one age to another" [6, p. 29]. "Having gone through the path of self-knowledge, students acquire their own system of values, goals and beliefs with given ego-identity, which, in turn, determine mature forms of personal self-regulation, the presence of internal self-reliance and provide a sense of orientation, meaning and direction in life" [6,

p. 29]. Personal maturity is manifested not by the absence of contradictions and difficulties, but by the ability to accept, realize and evaluate these ones, resolving them in an adequate way [7]. The social state of personality development at student age is characterized by the fact that young people are faced with the task of starting independent work activities.

Research conducted by B. G. Ananyev, made it possible to discover that transformations of the intellectual system are carried out under the influence of professional and educational activity, which determines a high level of intelligence [8]. The structural transformations also affect self-awareness indicators of young people during student age. It is understood as “a set of mental processes through which an individual recognizes oneself as a subject of activity develop into a certain “image of the Self” [8].

Materials and methods of research / Материалы и методы исследований. The object of the paper is a phenomenon of personal maturity among students. The subject of one is a structure of personal maturity formed by interconnected components. The purpose of the study is identification of significant correlations between students' reflexivity and self-efficacy. The following research objectives are: to conduct a theoretical analysis on the problem of personal maturity; to identify the relationship between personality maturity and perfectionism in the context of the empirical study.

The certain methods are used in the empirical study: *Hewitt-Flett Multidimensional Perfectionism Scale* (MPS-H) [9]; *Differential test of perfectionism* by A. A. Zolotareva [10] and methods of mathematical statistics. MPS-H is “a measure of perfectionism traits: 1. Self-Oriented Perfectionism. 2. Other-Oriented Perfectionism. 3. Socially Prescribed Perfectionism” [9, p. 456].

The fundamental theoretical basis for the study of personal maturity in our paper was the work of domestic scientists B.G. Ananyev, L.S. Vygotsky, V.V. Davydov, P.F. Kapterev, A.N. Leontyev, S.L. Rubinshtein, D. B. Elkonin and others, as well as studies of foreign scientists A. Maslow, G. Allport, W. Frankl, Z. Freud, E. Fromm, E. Erikson and others. *Experimental base:* the study was conducted at the Sevastopol State University (SevSU).

Research results and their discussion / Результаты исследований и их обсуждение. In the philosophical encyclopedia, perfection is the highest standard, showing the relationship between goals and the results of a person's efforts. Ethics considers the concept of perfection through the concept of a moral ideal. Accordingly, perfectionism is a type of ethical and moral teachings, which are based on the idea of perfection, the achievement of which is seen as the ultimate goal of a person. There are indicators of perfectionism: “the scale of normal perfectionism measures an individual's healthy longing for perfection (setting high but reachable standards for oneself), whereas the scale of pathological perfectionism measures a person's unhealthy striving for perfection (setting unattainable and unreasonable standards)” [11, p. 107].

From a Christian perspective, perfectionism is viewed as the “spiritual growth” of a believer. Even St. Augustine wrote: “Perfection is a person's knowledge of one's own imperfection” Human perfection is only a moral ideal, unattainable as a result of the sinful fall of man. Augustine saw the path to perfection in celibacy and chastity, thus denying the possibility of achieving holiness in earthly life [12, p. 76]. Self-improvement in Christianity is a path to achieving afterlife bliss. A large role in this process is assigned to active love for people. It demonstrates man's moral duties towards God and our environment. Later, perfectionism was one of the directions of the movement, for which the main idea is persons' spiritual improvement. “Further development of civilization can only occur in combination with the laws of nature, with men realizing their real role in the system of biotic regulation. Humanity is faced with a very difficult task – to make fundamental deference in their consciousness. This, in turn, requires changing many behavioral stereotypes” [1, p. 7].

The desire for improvement was identified with the idea of achieving holiness, expressed in the “spiritual” growth” of the believer, when they are devoid of sinful thoughts and there is nothing in their hearts but love [13, p. 82]. From all the above ideas about “personal maturity”, it can be presented in the form of a structure formed from the following interconnected and mutually influencing components: value-motivational, emotional-volitional, operational and reflexive.

The value-motivational component includes the following values: autonomy, self-development, self-determination. Thanks to this, motives for personal maturity are formed, manifested in the desire for self-improvement and self-realization. It includes the values of interpersonal relationships as well, which indicates an orientation not only towards oneself, but also towards other people.

The reflective component of personal maturity is manifested in the ability to reflect, introspection, self-reporting about one's actions and deeds, and the willingness to take responsibility. The emotional-volitional

component of personal maturity comprises an ability to react in different conditions, emotional intelligence and stability, perseverance, self-determination. The operational component is manifested in an independence and internal self-regulation. It is characterized by a high degree of social adaptation and arbitrariness of behavior, and also includes the education of the individual [14].

Thus, perfectionism can be called the theological teaching that forgiveness from God can be earned through personal self-improvement, which is manifested in unshakable faith and good deeds that can change “human sinful nature”.

According to philosophical point of view, the desire for self-improvement is the main goal of the meaning of an individual's life. “Perfectionism (in Latin ‘Perfectus’) is a system of value orientations that indicates the presence of some absolutely positive moral model, the desire to get closer to which should be the meaning of human life” [15, p. 09011]. That is, this is a person who is constantly improving, thereby taking responsibility for one's weaknesses, training mind, emotions, knows how to control oneself and their behavior, orientation and is not subject to destructive motivations [15]. Self-improvement refers to the process of improving student's knowledge, career, or personality and includes gaining self-awareness of the course of one's lifespan, responsibility for nature and environment as well as

The analysis of perfectionism as a psychological issue begins with S. Freud's study, who considered the desire for perfection as an attempt to escape from the satisfaction of drives and associated it with the mechanism of psychological defense – repression, interpreting the process of self-improvement as a process of sublimation [16]. Having refined the concept of the “I-Ideal”, Freud came to the conclusion that mass psychology can be viewed through this category [16].

The problem of perfectionism began to be discussed in foreign clinical psychology and psychotherapy in the 1960–1980s. At first it was considered as a pathological addiction. Psychotherapists and psychiatrists believed that one should not confuse healthy motivation and perseverance, which are based on one's own capabilities and inclinations, with a painful obsessive desire to achieve an ideal based on externally given guidelines (to meet a certain level) and designated as perfectionism [17].

Thus, a historical analysis of perfectionism study shows that the desire for perfection has always been inherent in people. Only the goal changed between periods. So, for Christians, improvement was like a path to finding afterlife bliss, for philosophers – the meaning of life, and for psychologists – as a mechanism of psychological defense.

Environmental education should “provide the formation “such behavior patterns, norms and principles of action in the socio-natural environment that generate and reproduce environmental development » [1, p. 4]. It performs the following functions: develops students' communicative capabilities through understanding concepts; performs an important informative function; forms the personality of a student, developing the ability to think logically, their psycho-emotional and intellectual spheres, the ability to foresee the consequences of their behavior in nature and society.

Environmental education is a “system-forming factor” of the entire education system. That's why the desire for perfection must be developed and the personal maturity of students plays a major role in this. These indicators development was tested using MPS-H and Differential test of perfectionism by A. A. Zolotareva. It determines the value of a personal standards, regardless of the ability to achieve them, and the ability to measure one's actions with environmental imperatives [9]. The questionnaire consists of 45 questions and three scales (15 statements per scale), each of which measures the rate of the perfectionism component. These three scales correlate with the concept of P. Hewitt and G. Flett, which describes perfectionism through the prism of its social aspects and is based on the objective orientation of perfectionism: “self-oriented perfectionism”, “other-oriented perfectionism” and “socially prescribed perfectionism” [9].

The questionnaire by P. Hewitt and G. Flett is positioned as multidimensional, but, in fact, relies on only one parameter – “high standards”, which have different orientations – “I”, “Others”, “Others in relation to me” [9]. The MPS-H has demonstrated the greatest evidence of validity among clinical and non-clinical samples. Providing respondents with diagnostic material (forms) is accompanied by the following instructions: “Please indicate the degree of your agreement (table 1). There is no time limit for filling out the form. Items are answered on a 7-point Lickert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The results of MPS-H are showed in the table 2.

Table 1 / Таблица 1

**Hewitt-Flett Multidimensional Perfectionism Scale interpretations /
Интерпретации многомерной шкалы перфекционизма Хьюитта-Флетта**

<i>Possible answer</i>	<i>Direct statement</i>	<i>Converse statements</i>
I completely disagree	1 point	7 points
I disagree, but there are exceptions	2 points	6 points
Most often I disagree	3 points	5 points
50/50	4 points	4 points
Mostly agree	5 points	3 points
I agree, but there are exceptions	6 points	2 points
Completely agree	7 points	1 point

Differential test of perfectionism by A. A. Zolotareva. The test was developed in an attempt to find a new approach to diagnosis and study the ambivalent nature of perfectionism: normal and pathological. The test «showed acceptable validity and reliability rates and were therefore considered effective tools for quick assessment of perfectionism, in particular, in cross-cultural studies» [11, p. 107]. The technique consists of 24 statements, which are equally distributed between two scales: “normal perfectionism” and “pathological perfectionism”.

Table 2 / Таблица 2

**Calculating unfinished scores on the Hewitt-Flett Multidimensional Perfectionism Scale /
Подсчет незавершенных баллов по многомерной шкале перфекционизма Хьюитта-Флетта**

<i>Scale</i>	<i>Direct statements</i>	<i>Converse statements</i>
Self-oriented perfectionism	1, 6, 14, 15, 17, 20, 23, 28, 32, 40, 42	8, 12, 34, 36
Other-oriented perfectionism	7, 16, 22, 26, 27, 29	2, 3, 4, 10, 19, 24, 38, 43, 45
Socially prescribed perfectionism	5, 11, 13, 18, 25, 31, 33, 35, 39, 41	9, 21, 30, 37, 44
Integral scale	1, 5, 6, 7, 11, 13, 14, 15, 16, 17, 18, 20, 22, 23, 25, 26, 27, 28, 29, 31, 32, 33, 35, 38, 29, 39, 40, 41, 42	2, 3, 4, 8, 9, 10, 12, 19, 21, 24, 30, 34, 36, 37, 38, 43, 44, 45

The original methodology embodies the idea that there are two types of perfectionism: “normal”, reflecting the positive consequences of an individual’s desire for perfection, and “pathological”, which leads to negative consequences in the pursuit of an unattainable ideal. The technique has successfully passed the test of psychometric indicators of reliability and validity. The “normal type of perfectionism” means a harmonious individual’s striving for perfection, which does not conflict with other motives. It is based on the following parameters: the ability to receive satisfaction, the ability to increase self-esteem based on achievements, hope for success, concentration on one’s own resources and environmental orientation. The “pathological type of perfectionism” means the individual’s desire for a perfect result. It is based on an inadequately overestimated assessment of one’s capabilities or reality, chronic dissatisfaction with one’s life, oneself, disappointment in life and in oneself, a complete refusal to achieve the intended ideal goal is possible, inadequate testing of reality and oneself, a feeling of fatigue.

The results of A. Zolotareva’s method aimed at identifying perfectionism among future specialists show that the majority of subjects have a normal type of perfectionism, that is, such students are characterized by an individual’s desire for perfection, the ability to increase self-esteem based on achievements, success, experiencing slight excitement, excitement, easy entry into activities, focusing on one’s own resources, self-confidence. According to the questionnaire by P. Hewitt and G. Flett the indicator for assessing self-efficacy of subject activity is within the range of average values. These subjects evaluate the results of their activities situationally, they also see certain shortcomings in their activities and their results [15]. Under differential test of perfectionism by A. A. Zolotareva the majority of subjects had a normal type of perfectionism. That

is, such students are characterized by an individual's striving for perfection, which does not conflict with other motives, and the ability to increase self-esteem based on achievements (table 3).

Table 3 / Таблица 3

**Unfinished scores on the Hewitt-Flett Multidimensional Perfectionism Scale /
Неполные оценки по многомерной шкале перфекционизма Хьюитта-Флетта**

No	Normal type	Pathologic al type	Integral scale	Self-oriented	Other-oriented	Socially prescribed
1	59	41	188	48	80	60
2	57	55	100	42	19	39
3	55	49	180	71	58	51
4	68	49	166	61	52	53
5	49	56	151	62	40	49
6	48	52	118	42	38	38
7	55	34	113	34	44	35
8	55	52	193	75	61	57
9	63	59	174	66	45	60
10	57	55	140	49	45	46
11	51	42	151	65	52	37
12	60	47	187	58	61	39
13	65	59	122	41	37	41
14	49	35	174	71	66	53
15	66	51	145	53	61	49
16	57	55	159	80	62	57
17	48	36	158	44	38	36
18	59	52	146	42	70	63
19	60	44	180	59	45	56
20	49	39	147	39	40	37
21	57	55	182	81	66	50
22	68	59	159	48	37	59
23	53	36	195	60	65	41
24	49	56	150	45	61	48
25	51	57	177	81	66	56
26	54	59	152	46	41	50
27	49	57	173	49	45	46
28	50	55	184	59	61	37
29	48	53	140	38	41	46
30	49	56	181	55	45	46

Correlation analysis (Pearson's criterion) was used to identify the relationship between students' personal maturity and perfectionism. The Pearson correlation coefficient r reflects the degree of linear relationship between two sets of data. The indicator of the closeness of the relationship between two features is determined by the formula of the linear correlation coefficient:

$$r = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}},$$

where x – values accepted by the variable X; y – values accepted by the variable Y; \bar{x} – average for X; \bar{y} – average for Y.

The following significant correlations between students' reflexivity and self-efficacy were defined in our earlier study [15] namely:

– “a sense of civic duty is negative, moderately associated with the scale of the normal type of perfectionism ($r = -0.36$), pathological type of perfectionism ($r = -0.47$), self-oriented perfectionism ($r = -0.48$)” [15, p. 09011];

– “achievement motivation is negatively related to the scale of the normal type of perfectionism ($r = -0.58$)” [15, p. 09011];

- “the ability for psychological intimacy is negatively, moderately associated with the scale of the normal type of perfectionism ($r = -0.41$)” [15, p. 09011];
- “the self-concept is negatively, significantly associated with the scale of the normal type of perfectionism ($r = -0.52$), the integral scale of perfectionism ($r = -0.37$)” [15, p. 09011];
- “the total score according to Gilbukh is highly associated with the scale of normal perfectionism ($r = -0.75$), associated with the integral scale of perfectionism ($r = -0.4$)” [15, p. 09011].

Based on the obtained data from the correlation analysis, we can present a correlation galaxy (Fig. 1).

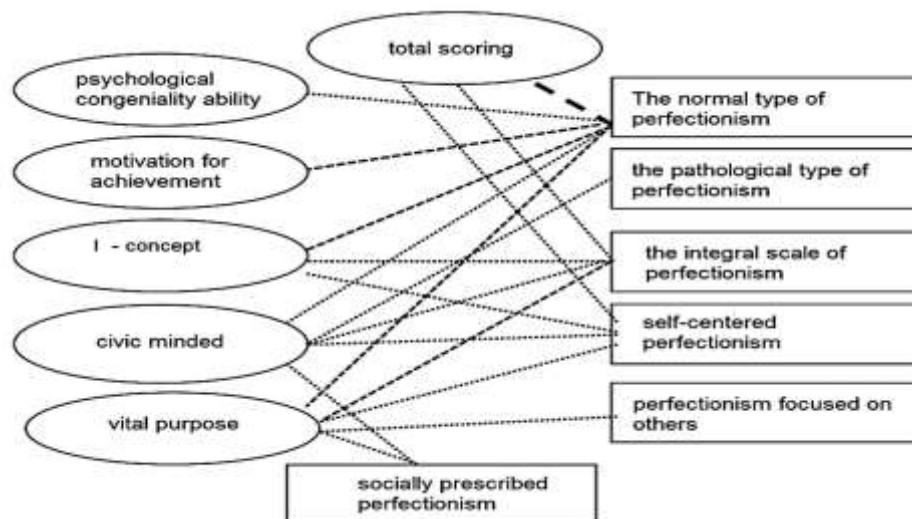


Fig. 1. The correlation galaxy between students' reflexivity and self-efficacy /

Рис. 1. Плеяда корреляций между рефлексивностью и самооффективностью студентов

Consequently, it became possible to conclude that there is a relationship between the personal maturity and perfectionism of students, namely, a negative relationship was identified between the components of personal maturity and perfectionism. In our case, with an increase in the value of personal maturity indicators, in most cases it corresponds to a decrease in the value of the level of perfectionism in students.

“Based on the results obtained, we can conclude that for all students (30 people), the self-efficacy indicator for subject activity is within the average range. These subjects evaluate the results of their activities situationally, and they also see certain shortcomings in their activities and their results” [15, p. 09011].

Conclusion / Заключение. Based on the results of the study, it is advisable to formulate the following conclusions: analysis of theoretical sources on the research topic allowed to focus on the following points: the fundamental theoretical basis for studying students in our work was the concept of the Russian psychologist B.G. Ananyev. From the point of view of the age period, studenthood is a transitional stage from maturation to maturity within the framework of the psychology of mature ages.

An important feature of personal development during student years is a personal maturity construct formation, manifested in a sense of adulthood, readiness to act, and self-determination and orientation through a revaluation of the value system. During this age period, the level of formation of mental and social maturity is the basis for identifying personal maturity. The phenomenon of personal maturity is a complex multidimensional phenomenon. It plays an important role in human consciousness and, therefore, the effectiveness of environmental education in the country depends on it. The structure of personal maturity is formed by interconnected components: value-motivational, emotional-volitional, operational and reflective. The components develop and can reach various levels of formation in their development. This determines the characteristics of the formation of personal maturity in students.

The empirical study conducted was aimed at studying the characteristics of perfectionism as well as significant correlations between students' reflexivity and self-efficacy. These ones were identified. In the course of the empirical study, it was revealed by means of Pearson correlation analysis that personal maturity and perfectionism are interconnected. Thus, the higher is the personal maturity, the lower is the level of perfectionism among students. The practical potential of this study can be in the possibility of developing an empirical model of psychological support for students in order to increase their personal maturity.

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