Abstract: The article examines the gender characteristics of the development of creativity in students of psychology who study at a higher education institution. In the process of research, it has been found out that the concept of "creativity" means the ability of a person to produce new and unusual ideas, think unconventionally, solve problems creatively and quickly. It has been found that creativity has many definitions, each researcher considers this concept from a certain point of view, highlighting one or another aspect of creativity. The article finds that students' creativity includes various indicators: originality, uniqueness, curiosity, developed imagination, propensity to reasonable risks, interest in complex things and ideas and more. Therefore, the authors of the article emphasize the need to use in the educational process of higher education methods that promote comprehensive training of future professionals and the development of their creative thinking. To study the gender features of the development of creativity in future psychologists, the authors of the article conducted an empirical study among students of psychology studying at Khmelnytsky National University. According to the results of the study, it is established that most students of psychology have average levels of development of personal traits of creativity, creative abilities and creative potential. But girls studying in Psychology have a slightly better level of development of creative potential and creative abilities than boys who also study in this specialty. Based on the results of the research, recommendations for students-psychologists on the development of creativity as an important component of their successful future professional activity have been developed.

Keywords: creativity; gender features; students of psychology; institution of higher education; development of creativity in students.

6 PhD in Pedagogy, Associate Professor, Department of Psychology and Pedagogics, Faculty of Health, Psychology, Physical Culture and Sports, Khmelnytsky National University, Khmelnytskyi, Ukraine, ludamixeeva@ukr.net
7 PhD in Pedagogy, Associate Professor, Department of Psychology and Pedagogics, Faculty of Health, Psychology, Physical Culture and Sports, Khmelnytsky National University, Khmelnytskyi, Ukraine, oksana.vargata@gmail.com
Introduction

The relentless and rapid development of information technology, increasing the power of science and technology, increasing the requirements for professional competence of modern sociocinics specialists places new demands on the formation and development of creative personality, which is a necessary condition for success. The present requires restructuring, which concerns not only the methods and forms of training, but also the content of teaching in the process of their preparation. Students of higher education institutions must be prepared for creative solutions to every problem situation in the competitive environment of future professional activity.

The main goal of the modern education system in Ukraine and abroad is to create conditions for the development and self-realization of each individual. In order to achieve this goal it is necessary to develop creativity, ie the ability to do something new (a new solution to a problem, a new method or tool, a new work of art, etc.).

In turn, the creative development of students is due to their general readiness for active life. Determinant in the formation of students' personality is their social self-determination - the priority and motives of activities, the content and nature of which depend on the success of creative learning activities.

Review of literature sources

The concept of "creativity" in the context of psychological knowledge gained importance only in the early 50's. The beginning of the study of creativity was the launch of the first satellite into space. The need for creative scientists has forced the American state and industry to fund and develop psychological research in this area.

Thus, in particular, the American psychologist J. Guilford (1990) describes creativity in the categories of thinking, considers "creative thinking" as the process of making assumptions, formulating hypotheses, as well as finding those deficiencies and gaps that are missing in information. According to him, creative thinking is plastic (creative people offer many solutions in cases where ordinary people can find only one or two), mobile (creative thinking is not difficult to move from one aspect of the problem to another) and original (generates new, unexpected, unusual decisions) (Guilford, 1990).

Taylor (1988) identified the following levels of development of creativity in humans: expressive creativity (spontaneous drawing in children);
productive creativity (limited and controlled by free play, produces scientific and artistic products); inventive (resourceful) creativity, when ingenuity is manifested in materials, methods and techniques; innovative creativity (improvement through modification); creativity that leads to a completely new principle or assumption around which new movements and schools may emerge) (Taylor, 1988).

According to R. Sternberg & T. Lubart (1991), a creative personality should have the following personality traits: the ability to take reasonable risks; willingness to overcome difficulties; tolerance for uncertainty; willingness to resist the opinion of others (Sternberg & Lubart, 1991).

Instead, the Russian researcher E. Yakovleva (1996) defines creativity as not a certain set of personality traits, but the realization of a person's own individuality. That is why the creative process is a manifestation of this individuality. Creativity is revealed through subject-subject interaction and is always addressed to another person. Thus, creativity is a presentation of one's individuality to others (Yakovleva, 1996).

In the modern interpretative psychological dictionary, it is noted that creativity is a property of a person to produce innovative ideas, think unconventionally, solve problems quickly, creatively and reliably. Among intellectual abilities, creativity is distinguished into a special type (Shapar, 2005, p. 225).

F. Barron & D. Harrington (1981), summarizing all studies related to the concept of "creativity", concluded that creativity is the ability to apply new approaches, produce new products. The specific properties of creativity as a process, as a new product or an individual are characterized by originality, staticity, reliability and adequacy to the tasks that need to be solved at the moment (F. Barron & D. Harrington, 1981).


V. Moliako (2007) notes that today the general trends of human development, individual countries, and trends in the lives of almost everyone require, in addition to classical knowledge and skills, such as those related to creativity, because everyone has a need successfully solve new tasks, new creative problems. He believes that one of the main qualities of a creative
personality is the desire for originality, for the new, denial of the usual, as well as a high level of knowledge, ability to analyze phenomena, compare them, sustained interest in certain work, relatively quick and easy learning of theoretical and practical knowledge. in this field, systematic and independent work (Moliako, 2007).

M. Hnatko (1996) proposes to differentiate the concepts of "creativity" and "inventiveness". He defines creativity and inventiveness as two sides of a single circle of phenomena and formations associated with socially significant human creative activity. At the same time, the author attributes creativity to the procedural-productive side of this unity, and inventiveness to the subjective-determining side (Hnatko, 1996).

N. I. Zambrano Yalama, analyzing the importance of developing students' creativity, emphasizes the need to use in the educational process methods that promote comprehensive training of future professionals and the development of their creative thinking (2019).

Quite interesting for our study are the views of Ukrainian scholars on the development of creativity in future socionics professionals. Thus, in particular, researchers I. Shaposhnikova et al. (2021) argue that the creativity of psychology students is a mandatory feature of their characteristics, which determines the high level of formation of their personal and professional qualities. Therefore, scientists propose to use the functional model developed by them as an effective means of developing the level of creativity of students of psychology (Shaposhnikova et al., 2021, p. 40).

According to V. Afanasenko et al. (2020), creativity in the professional activity of socio-economic specialists is manifested in their mobility, flexibility and critical thinking, openness to innovation, ability to solve professional tasks in a non-standard way (Afanasenko et al., 2020, p. 149).

Studying the problem of developing creative competence in teachers and educators of kindergartens, researchers L. Novakivska et al. (2021) consider it as the ability of professionals to create new professional achievements and creative products through the realization of creative abilities. Under the concept of "creative product" of teachers and educators of kindergartens, they understand the novelty of pedagogical decisions, their unusualness and usefulness, which affects the optimization of their professional activities (Novakivska et al., 2021, p. 69).

The study of the problem of the development of preschool children’s creativity and creative potential by Ukrainian researchers (Shulha et al., 2021) is also interesting for our research. The scientists came to the conclusion that for the first time the full creative potential is manifested in
preschoolers, but it still remains not fully defined, labile and symbolic in its expression. According to researchers, it is the child's creative potential that plays an important role in the formation as a personality, and also significantly affects the development of the self-identity (Shulha et al., 2021, p. 627-628).

So, as we see, creativity has many definitions, each researcher considers this concept from a certain point of view, highlighting one or another aspect of creativity. But despite this, they agree that creativity is the ability to create something new; it is a personal quality that is based on the development of higher mental functions, when inventiveness, as an automated skill, is included in all activities, behavior, communication, contact with the environment.

The problem and purpose of the research

The analysis of research paperes shows that today in scientific research the main attention of scientists is focused mainly on the problem of developing creativity in students as a factor in their competitiveness in the labor market. At the same time, the issues of gender peculiarities of creativity development in future psychologists as an important component of their professional activity remain little studied.

With this in mind, the aim of the article is to empirically study the gender characteristics of the development of creativity in future psychologists studying in higher education.

Research methodology

An empirical study of gender features of the development of creativity in students of psychology was carried out on the basis of Khmelnytskyi National University. It involved 48 students majoring in Psychology, namely: 24 girls and 24 boys. Note that students gave oral consent to participate in the study, which took place outside of school hours, without disclosing personal information about its participants and the results of its conduct.

The study used a set of diagnostic techniques: Methods of creative thinking Torrence; Questionnaire of personal propensity to creativity according to Davis (modified by Pashnev); method "Diagnosis of creative abilities"; test to identify the creative potential of the individual "What is your creative potential?".
Results of the research

Analysis of research papers (Petrovskyi & Yaroshevskyi, 2003; Vygotskyi, 1991; Skrypchenko et al., 2001) shows that the development of a student's intelligence is characterized by the development of his creative abilities, which is manifested in intellectual initiative and creating something new. It is possible to explore the mental potential of a young person if we determine his interests, where his abilities are maximally developed (Skrypchenko et al., 2001, p. 202).

Examining the problem of the development of creativity in boys and girls, L. Vygotskyi (1991) found that in adolescence there is a profound transformation of the imagination: in the construction of its images are increasingly taking into account the conditions and laws of objective reality. An important role in the development of imagination belongs to youth literary creativity.

In early adolescence, you can often come across attempts to find meaningless and create images of the unusual. Such creativity is characterized by unexpected combinations and the creation of feigned-original images, students "create" anything and as they wish, so as not to be the same, not as usual. Therefore, the features of creativity in adolescence are: a tendency to fantasize and dream, high productivity and originality of creative ideas, high flexibility and speed of thinking. Quite often students can be seen as "creative for the sake of creativity", i.e. creativity and inventiveness act as ways of self-expression on the one hand, and means of attracting the attention of other people, including people of the opposite sex - on the other. In addition, creativity can act as a means of protest of young people against everyday life, the monotony around it.

Given that the creativity of a young person includes a variety of indicators (originality, uniqueness, curiosity, developed imagination, propensity to reasonable risks, interest in complex things and ideas, etc.), we conducted an empirical study of gender in its development in future psychologists, students of Khmelnytsky National University.

To diagnose the levels of development of creative abilities in students of psychology, we used the Torrance Tests of Creative Thinking (Torrance, 1974). The Torrance Tests of Creative Thinking includes 12 subtests, which are combined into three groups. The first group of subtests diagnoses a person's verbal creative thinking, the second group of subtests is aimed at studying his non-verbal creative thinking, and the third group studies his verbal-sound creative thinking. The method is a set of unfinished pictures and the researched subjects need to complete them according to a
certain pattern. The diagnostic capabilities of this technique allowed us to evaluate two indicators of creativity of the studied students:

1) originality is an indicator that characterizes the ability of students to put forward ideas that differ from the obvious, well-known, generally accepted.

2) uniqueness is characteristic of successful students capable of inventive and constructive activities.

The results of the Torrance Tests of Creative Thinking among students of psychology are presented in Table 1.

Table 1. The results of the study of the levels of creativity in students of psychology by the Torrance Tests of Creative Thinking (in %)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Levels of creativity development</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>Originality</td>
<td></td>
<td>0</td>
<td>0</td>
<td>29.2</td>
</tr>
<tr>
<td>Uniqueness</td>
<td></td>
<td>4.2</td>
<td>4.2</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: Authors' own conception

Thus, as we can see, the results of the study suggest that for students of psychology is more original originality of thinking than uniqueness. Thus, in particular, we found that girls, unlike boys, have a more pronounced ability to originality and uniqueness of thinking. This means that they avoid easy, expected and uninteresting answers during training sessions, are active and non-conformist. But, at the same time, both boys and girls who study Psychology have a low ability to generate unexpected or rare ideas that are unique.

The next method used in our empirical study was the Questionnaire of personal propensity to creativity according to Davis (modified by Pashniev) (Pashniev, 2007). The purpose of this questionnaire was to study the propensity of students of psychology to creative behavior in everyday life. The methodology includes 21 questions to be answered "yes" or "no". The evaluation of the results was as follows: for each answer that matched the key, 1 point was awarded. Then the results were summarized.

The results of the Davis Personal Propensity Questionnaire (modified by Pashniev) among 48 student psychologists are presented in Table 2.
Table 2. The results of the study of the levels of development of personal propensity to creativity in students of psychology (in %)

<table>
<thead>
<tr>
<th>Psychology students</th>
<th>Levels of development of personal inclination to creativity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Boys</td>
<td>4</td>
</tr>
<tr>
<td>Girls</td>
<td>8,3</td>
</tr>
</tbody>
</table>

Source: Authors' own conception

The results of the study shown in Table 2 show that girls, in contrast to boys, have a fairly high level of development of personal propensity to creativity and creative behavior in everyday life. The data suggest that girls studying Psychology have the best indicators of the development of such personal traits of creativity as curiosity, self-sufficiency, a sense of harmony and beauty, risk-taking, disorder, need for activity and more.

Using the method of "Diagnosis of creative abilities" (Fetiskin et al., 2002), we explored four features of the creative personality of the subjects:

1. Curiosity is characteristic of a person who likes to ask questions, study the structure of things, use new ways of thinking, put forward new ideas, look for various ways of solving problems, read books, play games, draw pictures in order to get to know himself as best as possible.

2. A developed imagination is characteristic of those people who like to talk about places they have never been. They also like to imagine how others would solve an identical problem or task. They dream of visiting different places, like to think about unfamiliar facts and phenomena, and see what is depicted in pictures in a non-standard way.

3. Complexity as a personality characteristic is manifested in the fact that the person likes learning about complex things, ideas, phenomena. Such people like to perform various difficult tasks, learn without outside help, and show persistence in achieving the goal. Quite often, they offer complicated ways to solve a certain problem.

4. Propensity to risk is manifested in the fact that a person likes not to pay attention to others when he defends his thoughts and ideas. Risky people often set high demands and strive to fulfill them. They easily treat mistakes and failures, not succumbing to other people's words and views. Such individuals like to take risks in order to find out later what will come of it.

The method "Diagnosis of creative abilities" consists of 50 questions, 12 of which characterize a person's inquisitiveness, 12 questions
are aimed at studying his imagination, 13 questions reveal the ability to take risks, and another 13 questions diagnose the factor of personality complexity.

The results of the methodology "Diagnosis of creative abilities" among students of psychology are presented in Table 3.

**Table 3.** The results of the study of the levels of development of creative abilities in students of psychology (in%)

<table>
<thead>
<tr>
<th>Psychology students</th>
<th>Levels of development of creative abilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Boys</td>
<td>4,2</td>
</tr>
<tr>
<td>Girls</td>
<td>4,2</td>
</tr>
</tbody>
</table>

Source: Authors' own conception

Thus, as we can see, the data obtained from the study of the peculiarities of the development of creative abilities in students of psychology showed that boys, in contrast to girls, have a fairly low rate of creativity. They do not seek to master new ways of thinking, do not want to learn new things and ideas, find different ways to solve problems, ie uninitiated. Also, boys do not like to think about phenomena they have never encountered, do not dream of different places and things, have an underdeveloped imagination. Unlike girls, boys do not like to set themselves too difficult tasks, to show persistence and risk-taking.

At the end of the empirical study, we used a test to identify the creative potential of the individual "What is your creative potential?" (Mironova, 2006). With the help of this test we determined the levels of development of creative potential of the studied students, as well as the extent to which they are ready to accept best practices.

The results of the study of the levels of development of creative potential in students of psychology are shown in Table 4.

**Table 4.** The results of the study of the levels of development of creative potential in students of psychology (in%)

<table>
<thead>
<tr>
<th>Psychology students</th>
<th>Levels of creative potential development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Boys</td>
<td>4,2</td>
</tr>
<tr>
<td>Girls</td>
<td>8,3</td>
</tr>
</tbody>
</table>

Source: Authors' own conception
The data in Table 4 show that the majority of student psychologists (both boys and girls) are characterized by a normal level of creative development. They are endowed with the qualities that allow them to create, but they have some problems that slow down the creative process. It should be noted that girls have a slightly better level of development of their creative potential and creative potential. If they want to use their abilities, they will have access to various forms of creativity.

Thus, based on the results of the diagnosis, we can conclude that student psychologists are characterized by more original thinking than its uniqueness; they have average levels of development of such personal traits of creativity as: curiosity, self-sufficiency, sense of harmony and beauty, desire to take risks, acceptance of disorder, need for activity, etc.; the development of creative abilities and creative potential of students of psychology is also characterized by averages.

All these data suggest that the creativity of future psychologists needs to be developed, adjusted, given a certain form, awareness, to teach students to manage their creativity. Therefore, we have developed recommendations for students of psychology on the development of creativity:

1. Make a notebook and write down interesting ideas, because they can appear suddenly and disappear just as suddenly.
2. Learn from yourself. It is often the case that an idea comes before your time when you are not ready or able to implement it. Therefore, it is forgotten and falls to the dust in the notebook. But who knows, maybe in a year or two, you will look at your old records and realize that this forgotten idea is what you are missing right now. More than one great discovery was made this way!
3. Learn constantly. In the process of acquiring new knowledge or studying a course of a certain discipline, you have the opportunity to combine the latest information with your existing knowledge in order to create an innovative idea.
4. Be curious. Don't judge your ideas. Any idea can lead to victory, but stopping at the beginning, you will never achieve anything.
5. Do not focus on what others think, because creative people work on creating new ideas and they are absolutely not concerned that these ideas may cause disapproval from those around them.
6. Believe in yourself and that you can do anything. After all, any complex problem can be divided into a series of simple actions and simply perform these actions. The main thing is to know where to go and go no matter what.
7. Look for connections between completely different objects and concepts. After all, the properties of one object can be used for creative problem solving in various fields.

8. Make it a habit to do something new on a regular basis that you have never done before.

9. Do not get tired and rest more often. Go to the movies, meet friends, go to nature.

10. Regularly find time to be alone with yourself. Twitter, Facebook and checking mail every 15 minutes will definitely not allow you to think intently. You need to be properly secluded to "digest and synthesize your daily experience, which creates fertile ground for creative ideas."


12. Be useful, create value, do something for people. Usefulness and gratitude develop creative potential very well.

13. Develop imagination in different activities: in the process of creating fairy tales, poems; drawing, modeling; while guessing riddles, etc.

14. Do sports. Sport is very useful for creativity, because it strengthens your energy.

15. Be unique, be yourself.

16. Find something that inspires you.

17. Stop being afraid of mistakes and use all opportunities that come your way.

18. If you do not want to do anything, then try to improve what you already have. We are used to destroying the old to build the new. But as history shows, this is not the best choice. What you thought was a horrible picture or book, you can improve by adding only certain changes.

19. Adhere to discipline, organization and systematic work. Do everything on time, take on more difficult tasks than usual.

20. Find as many extraordinary answers to each task as possible, do not stop at one.

21. Satisfy your curiosity, watch science fiction movies, TV shows, read more.

22. Improve your IQ, because creativity directly depends on intelligence.

23. Be brave in any case, do not be afraid to show yourself.

24. Communicate more, show your sociability.

25. Be positive.
Note that these recommendations can be used not only by students of psychology, but also by all young people for the purpose of self-development of their own creativity.

**Conclusions**

Analysis of scientific sources suggests that the creativity of students of psychology should be purposefully developed, because it is an important component of the activities of socionic professionals. It is thanks to creativity that psychologists are "open" and ready for innovative changes and processes in society. Creativity affects their mobility and flexibility of thinking, the ability to evaluate critically and find new ways to solve professional tasks.

An empirical study has found that most psychology students have average levels of personality development, creativity, and creativity. They are more inherent in the originality of thinking than its uniqueness; they have well-developed personal traits of creativity, such as curiosity, self-sufficiency, a sense of harmony and beauty, a desire to take risks and the need for activity, and so on. But girls studying in Psychology have a slightly better level of development of creative potential and creative abilities than boys who also study in this specialty. Therefore, boys should learn to manage their creativity, develop and adjust their own creativity.

**Author Contributions**

Documentation – O. Vasylenko, Y. Potapchuk & L. Podkorytova; methodology – O. Vasylenko, Y. Potapchuk, L. Mikheieva & O. Varhata; data gathering – D. Karpova, O. Kulehsova & L. Mikheieva; data processing – D. Karpova, O. Kulehsova & O. Varhata; writing – preparation of the original text – O. Vasylenko; writing – review and editing – O. Vasylenko & L. Podkorytova. All authors have read and agreed to the published version of the manuscript.

**References**


Diagnosis of Features of Creativity Development of Future Psychologists: …

Olena VASYLENKO, et al.

https://www.annualreviews.org/doi/10.1146/annurev.ps.32.020181.002255


http://dspace.wunu.edu.ua/jspui/bitstream/316497/30250/1/%D0%9C%D0%BE%D0%BB%D1%8F%D0%BA%D0%BE.pdf


https://doi.org/10.24115/S2446-6220202131257p.64-70


https://doi.org/10.24115/S2446-6220202173A1362p.32-43


https://doi.org/10.18662/rrrem/13.4/501


