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### THE EMPIRICAL ANALYSIS OF THE MANIFESTATION OF GENDER CHARACTERISTICS OF CREATIVITY IN THE DECISION-MAKING PROCESS

Annotation

The article examines the manifestation of gender characteristics of creativity in the decision-making process based on empirical analysis. The study was conducted in the context of Uzbekistan and is linked to the state policy aimed at developing creative thinking through Presidential decrees and Cabinet of Ministers' resolutions. The literature review shows that there are contradictory opinions regarding the level of creativity between men and women: some researchers argue that there are no significant differences, while others emphasize men's superiority in research activities and solving fundamental problems, whereas women demonstrate higher achievements in verbal creativity and imaginative thinking.

**Key words:** Decision-making, creativity, gender characteristics, empirical analysis, risk-taking, curiosity, imagination, complexity.

### ЭМПИРИЧЕСКИЙ АНАЛИЗ ПРОЯВЛЕНИЯ ГЕНДЕРНЫХ ОСОБЕННОСТЕЙ КРЕАТИВНОСТИ В ПРОЦЕССЕ ПРИНЯТИЯ РЕШЕНИЙ

Аннотация

В статье рассматривается проявление гендерных особенностей креативности в процессе принятия решений на основе эмпирического анализа. Исследование проведено в контексте Узбекистана и связано с государственной политикой, направленной на развитие творческого мышления посредством указов Президента и постановлений Кабинета Министров. Обзор литературы показывает наличие противоречивых мнений относительно уровня креативности у мужчин и женщин: одни исследователи утверждают, что значимых различий нет, другие же подчеркивают превосходство мужчин в исследовательской деятельности и решении фундаментальных задач, тогда как женщины демонстрируют более высокие достижения в вербальной креативности и образном мышлении.

**Ключевые слова:** Принятие решений, креативность, гендерные особенности, эмпирический анализ, рискование, любопытство, воображение, сложность.

### QAROR QABUL QILISH JARAYONIDA KREATIVLIKNING JINSIY XUSUSIYATLARI NAMOYON BO‘LISHINING EMPIRIK TAHLILI

Annotatsiya

Maqolada qaror qabul qilish jarayonida kreativlikning jinsiy xususiyatlari empirik tahlil asosida o‘rganilgan. Tadqiqot O‘zbekiston kontekstida olib borilib, Prezident farmonlari va Vazirlar Mahkamasi qarorlari ijodiy fikrlashni rivojlantirishga qaratilgan davlat siyosati bilan bog‘langan. Ilmiy adabiyotlarda erkak va ayollar o‘rtasida kreativlik darajasi bo‘yicha turli qarama-qarshi fikrlar mavjudligi ko‘rsatilgan: ayrim tadqiqotchilar sezilarli farq yo‘qligini ta’kidlagan bo‘lsa, boshqalar erkaklarning izlanish faoliyati va fundamental muammolarni hal qilishda ustunligini, ayollarning esa verbal kreativlik va tasavvuriy fikrlashda yuqori natijalarga ega ekanligini qayd etgan.

**Kalit so‘zlar:** Qaror qabul qilish, kreativlik, jinsiy xususiyatlar, empirik tahlil, tavakkal qilish, qiziquvchanlik, tasavvur, murakkablik.

**Introduction.** In modern society, the decision-making process is considered an important psychological and social factor that determines the effectiveness of both individual and collective activities. Especially in complex and changing conditions, effective decision-making is directly related to a person's creative potential, ensuring the development of innovative solutions and the optimal use of available resources. The Decree of the President of the Republic of Uzbekistan dated March 1, 2022, "On measures to implement the National Innovation Development Strategy," and the Resolution of the Cabinet of Ministers dated April 15, 2023, No. 285, define systematic measures aimed at fostering innovative activity and creative thinking, emphasizing the encouragement of creative approaches as a priority direction of state policy. In the decisions of the President and the Cabinet of Ministers, the development of decision-making and effective management has been taken into account, with

creativity and gender characteristics recognized as possessing scientific significance in the process of elaborating decisions.

**Literature review.** The issue of gender differences in creativity has consistently generated scientific controversy. T.V.Vinogradova, V.V.Semyonov, V.N.Drujinin, I.V.Groshev, A.V.Chelnokova, and other scholars conducting research on creativity emphasize that there are no significant differences between men and women in terms of creativity. At the same time, G. Eysenck, L.Kemin, V.A.Geodakyan, V.D.Yeremeya, and T.P.Khrizman argue that men achieve higher results in research activities, generating new ideas, and solving fundamentally new tasks compared to women, while women are more effective in performing routine and stereotypical tasks. Women may indeed be more efficient than men in carrying out ordinary, patterned tasks.

**Research methodology.** A.V.Assovskaya, L.A.Tsvetkova, and T.G.Yanicheva studied the creativity of 8–9-year-old primary school students. According to the

results, a high level of creativity was observed in 45% of boys, while only 20% of girls demonstrated such a level; at the same time, a low level of creativity was recorded in 50% of girls and 23% of boys. The degree of creativity in men and women is likely dependent on the type of creativity, and scholars have not reached a consensus on this issue. According to some data Forisha, men are superior in creative productivity, while women achieve higher results in creative abilities and rich imagination. Other findings DeMoss indicate that women surpass men in verbal creativity, whereas men show higher results than women in imagination-based creativity Vinogradova T.V., Semyonov V.V., Razumnikova O.M., Galperin D[3]. However, according to O.M. Razumnikova, the superiority of men's creativity may diminish as a result of changes in social roles; for example, when women choose traditionally "male" professions. At the same time, in order for gender differences in imagination-based creativity to disappear, women must have sufficiently developed intellectual abilities. Based on this, it can be assumed that the profession chosen by women does not directly affect their

creativity; rather, it is important that women with "masculine" characteristics choose "male" professions. In such women, creativity is higher compared to women with feminine characteristics. O.M. Razumnikova found that women possess greater verbal flexibility than men, which corresponds to the results obtained by D. Galperin[5].

**Analysis and results.** In order to analyze the gender characteristics of creativity in the decision-making process, an empirical study was conducted. In our research, 165 participants aged 18–23 took part, including 83 women and 83 men. A primary statistical analysis using the Kolmogorov-Smirnov test confirmed the applicability of the Mann-Whitney criterion. Based on this criterion, differences in creativity between men and women were observed, and the results were as follows.

Results of Testing the Compliance of the Scales of E.E. Tunik's "Personal Creativity Diagnostics" Methodology with the Law of Normal Distribution Based on the Kolmogorov-Smirnov Criterion

1-table

N=165	Min	Maks	Avarage count	Std. devition	skewness	Kurtosis	z	p
Positive risk taking	6.00	19.00	12.3879	1.66231	-.007	2.392	2.351	.000***
Negative risk taking	6.00	19.00	9.8424	2.25224	1.726	4.861	2.499	.000***
Positive curiosity	7.00	29.00	19.3515	3.04400	-.123	3.685	1.962	.001***
Negative curiosity	1.00	2.00	1.5636	.49744	-.259	-1.957	4.797	.000***
Positive complexity	6.00	17.00	10.3576	1.68187	.005	.976	2.183	.000***
Negative complexity	7.00	27.00	12.0364	3.02004	2.810	10.741	3.180	.000***
Positive imagination	5.00	21.00	13.2848	2.25455	-.028	.976	1.248	.089
Negative imagination	2.00	14.00	5.2545	1.65888	2.240	9.334	3.261	.000***

Note: p<0.05; \*\* p<0.01

In our study, when analyzing the data obtained through E.E. Tunik's "Personal Creativity Diagnostics" methodology, it was found that the minimum value for the positive risk-taking scale was 6 and the maximum value was 19. In addition, the skewness (A) was -.007 and the kurtosis (E) was 2.392. Based on the Kolmogorov-Smirnov criterion, the analysis revealed that the positive imagination scale ( $Z=1.248$ ,  $p>0.05$ ) did not demonstrate a significant confidence level. However, in the positive risk-taking scale ( $Z=2.351$ ,  $p<0.001$ ), negative risk-taking scale ( $Z=2.499$ ,  $p<0.001$ ), positive curiosity scale ( $Z=1.962$ ,  $p<0.001$ ), negative curiosity scale ( $Z=4.797$ ,  $p<0.001$ ), positive complexity scale ( $Z=2.295$ ,  $p<0.001$ ), negative complexity scale ( $Z=3.180$ ,  $p<0.001$ ), and negative imagination scale ( $Z=3.261$ ,  $p<0.001$ ), a 99.9% confidence level was observed.

2-table

Scales	Average rank indicators		U	p
	Women n=83	Men n=83		
Positive risk taking	79.82	86.14	3142.000	.383
Negative risk taking	97.89	68.29	2182.000	.000***
Positive curiosity	93.52	72.61	2540.500	.004**
Negative curiosity	94.85	71.29	2431.000	.000***
Positive complexity	91.58	74.52	2699.500	.019*
Negative complexity	93.45	72.68	2546.500	.005**
Positive imagination	92.04	74.07	2662.000	.015*
Negative imagination	97.01	69.16	2254.500	.000***

In our study, when analyzing the gender differences in the indicators of E.E. Tunik's "Personal Creativity Diagnostics" methodology based on the Mann-Whitney criterion, no significant difference was found in the positive risk-taking scale ( $U=3142.0$ ,  $p>0.05$ ). In the negative risk-taking scale, a difference was identified at the 99.9% confidence level ( $U=2182.0$ ,  $p<0.001$ ). The results indicate that women engage in negative risk-taking more frequently than men. Accordingly, in society, women often strive to resolve problems more quickly, which leads to rapid decision-making and risk-taking. Men, on the other hand, are often perceived as responsible decision-makers, from whom consistent firmness is expected.

In the positive curiosity scale, a difference was observed at the 99% confidence level ( $U=2540.50$ ,  $p<0.01$ ).

None of these scales, however, conformed to the law of normal distribution. Johnson's methodology for assessing creativity is aimed at identifying and evaluating an individual's creative thinking abilities. E.E. Tunik adapted this methodology into Russian and improved certain aspects to enable a deeper study of creativity. The methodology helps to determine a person's ability to generate new ideas, solve problems through innovative methods, and apply non-traditional approaches. The test consists of 8 questions, and participants are required to select one of the following response options for each question: "never," "rarely," "sometimes," "often," or "always."

Gender Differences in the Indicators of E.E. Tunik's "Personal Creativity Diagnostics" Methodology Based on the Mann-Whitney Criterion

This suggests that women are more frequently engaged in various sciences and creative directions from childhood. Moreover, they tend to adapt to their environment and society, which in turn increases their need to acquire new knowledge. Men usually prefer knowledge and experiences that yield concrete results. They show interest only in things that are useful to them or applicable in real life. In the negative curiosity scale, a difference was identified at the 99.9% confidence level ( $U=2431.0$ ,  $p<0.001$ ). This indicates that women possess a higher level of negative curiosity compared to men. Women are typically taught from a young age to be cautious, to prioritize safety, and to avoid uncertainty and ambiguity. Men, however, are more often encouraged to be independent, to accept risks, and to remain open to new experiences, which is reinforced by adults. In the positive

complexity scale, a difference was found at the 95% confidence level ( $U=2699.50$ ,  $p<0.05$ ). According to the results, women's positive complexity indicators were considerably higher than those of men. This means that women tend to analyze complex and confusing situations and strive to derive positive outcomes from them. In problem-solving, they consider multiple alternative options and perceive uncertainty and complexity as part of the creative process. Men, however, when faced with complex situations, usually rely on more rigid, traditional, or standard approaches. They tend to depend on precise and straightforward strategies in problem-solving, which places relative limitations on their creative flexibility. In the negative complexity scale, a difference was identified at the 99% confidence level ( $U=2546.50$ ,  $p<0.01$ ). The results indicate that women's level of negative complexity is significantly higher than that of men. Since women often manage multiple responsibilities in their lives (such as work, family, child-rearing, and social obligations), complexity appears to them as an additional source of pressure. Perfectionism and a heightened sense of responsibility cause women to experience greater anxiety in relation to complexity. Men, on the other hand, usually attempt to find clear solutions to complex situations, express their emotions less, and tend to perceive complexity not as a problem but as a task that simply needs to be solved. In the positive imagination scale, a difference was observed at the 95% confidence level ( $U=2662.0$ ,  $p<0.05$ ). Accordingly, women's level of positive imagination was significantly higher than that of men. This suggests that women approach problems creatively and optimistically. Creative thinking and intuitive approaches are among the characteristics typical of women, which enhance their level of positive imagination. Men, however, rely more on logical thinking and realistic decision-making, which restricts their ability to engage in positive imagination. In the negative imagination scale, a statistically significant difference was found at the 99.9% confidence level ( $U=2254.50$ ,  $p<0.001$ ). The results indicate that women's negative imagination scores were higher than those of men. This suggests that hormonal changes affecting

stress and anxiety levels in women (e.g., cortisol and estrogen) intensify their emotional responses. Consequently, women are more prone to heightened emotional reactions and stress, which increases the likelihood of negative imagination. Men, on the other hand, are socially conditioned to "express emotions less," and therefore tend to suppress their anxiety, which lowers their negative imagination scores. Research shows that the level and expression of creativity in the decision-making process depend on a person's gender, age, and professional activity. Men often demonstrate superiority in research activities, generating new ideas, and solving fundamental problems, while women tend to be more effective in performing routine and patterned tasks. Moreover, gender-related differences in various parameters of creativity - such as verbal flexibility, imaginative thinking, and associative ability - begin to emerge from primary school age. In adult and leadership groups, creativity and professional approaches manifest in relation to gender and individual characteristics. Women with masculine traits exhibit higher levels of creativity compared to those with feminine traits, which is associated with their tendency to separate personal and professional spheres. Thus, in the process of decision-making, it is essential to consider gender, age, and professional characteristics in developing innovative and effective solutions.

**Conclusion.** The research confirms the complex relationship between gender and creativity. Women showed higher scores in negative risk-taking, complexity, and imagination, which can be explained by their social roles, emotional sensitivity, and multitasking responsibilities. Men, meanwhile, demonstrated relative superiority in positive risk-taking, reflecting their inclination toward responsible and decisive decision-making. Overall, considering gender characteristics in the decision-making process plays a crucial role in developing innovative and effective management strategies. The study shows that accounting for gender differences in creativity contributes to enhancing the effectiveness of both individual and collective activities.

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