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**THE READINESS OF FUTURE SPECIALISTS FOR  
PROFESSIONAL ACTIVITY UNDER CONDITIONS OF  
UNCERTAINTY**

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**Abstract**

The formation of graduates' readiness for professional work under conditions of uncertainty is carried out with the implementation of a set of modern approaches that contribute to a successful adaptation to work, and the development of educational and creative abilities of students. In this article, on the basis of the readiness of future specialists for professional activity under conditions of uncertainty, the authors examined the differentiation of the choice of alternative methods for solving urgent problems in working activities. The paper presents the results of the analysis of intolerance to the uncertainty of life situations, as well as tolerance to uncertainty, which consists in the ability to calmly endure various kinds of circumstances in professional activity. The data of the research aimed at identifying the students' abilities to manage their lives and their tolerance to uncertainties. The analysis made it possible to conclude that during the period of early professional development, tolerance to uncertainty is not stable, but it is a significant characteristic of future specialists with higher education, since they value their ability to manage their own lives rather highly. The study also showed that the self-esteem of tolerance is more consistent with their willingness to engage in interpersonal professional relationships than with tolerance or intolerance to uncertainty.

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**Keywords:** Uncertainty conditions, readiness for professional activity, future specialists



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## 1. Introduction

The dynamic development of global and Russian processes leads to situations of uncertainty in the labor sphere of any specialist and "is not only a satellite, but also a determinant of human existence" (Krieger, 2014). The models of professional activities are being transformed.

The Atlas of New Professions (Varlamova & Sudakov, 2020) indicates a high demand for over-professional skills of quick response to changes in work processes that affect the productivity of performing professional tasks. An important criterion for the competitiveness of university graduates is the formation of their readiness to carry out professional activities under conditions of uncertainty, in particular, identifying the causes of extraordinary situations and making optimal solutions to eliminate them, as well as adapting to the extreme conditions of the professional environment.

## 2. Problem Statement

Specialists in any professional field face to some extent problems of multitasking, fast change and/or contradictory context of processes and their successful execution, search and decision-making in conditions of lack of objective information, overcoming uncertainty requiring high productivity, which makes it important to build the readiness of trainees for future work in an unstable environment.

The theoretical analysis of scientific literature indicates a significant attention of scientists (S.M.Bustubaeva, E.A.Belorusova, M.N.Dudin and others) to the essence of the definitions of the concepts "uncertainty" and "situation of uncertainty in the professional environment" (Bustubayeva, 2020); considering the situation of uncertainty "as a source of personal growth and development, through a cognitive estimation of its positive aspects" (Belorusova, 2018, p. 456.); the formation of motives, needs, responsibility in a situation of making a decision, reflection based on critical thinking with the aim of successful adaptation (Dudina, 2018). Kondrashikhina (2015) associates these concepts with the development of professionally important qualities and skills of specialists to constructively force unexpected situations in the course of employment, while Gefele (2018) describes them as a psychological hazard. According to Bartash (2019) the analysis of problems of psychophysical preparation of a person for professional activity in special and extreme conditions (Bartash, 2019) and psychological readiness for the situation of uncertainty (Kucheryavenko, 2020) is not less important.

Kapustin (1993) understands uncertainty as "insufficient or complete absence of information in making decisions," (p. 108) which is important for the professional self-determination of an individual. In this case, uncertainty is directed at the endless choice of possibilities for achievement of the intended purpose of self-determination in professional activity.

According to Petrusevich and Safronova (2020) "professional activity is objectively complex and subjectively difficult to master, since it requires long-term special training of a person, as well as the presence of certain properties that ensure success in this area"(p. 140) The resulting uncertainty in solving production problems is characterized as an unforeseen situation requiring an optimal adequate decision that affects its localization.

According to numerous studies by Budner (1962), the following types of uncertainty situations are distinguished: unsignaled situations; the situation with the presence of necessary signals used in the sphere of activity and the contradictory situation that reveals the complexity of professional activity in general.

Within the framework of studying the readiness of future professionals to work in the absence of specificity of the current situation, by uncertainty we mean the differentiation of the choice of alternative ways and methods for solving urgent problems in the changing conditions of work life.

Based on the analysis of the concepts above, let us concretize them for our study, within the framework of which the tolerance of the uncertainty of the life situations of future specialists is of great importance, since it is due to that the effectiveness of professional activity is possible. It should be noted that uncertainty in professional activity arises in the process of a future specialist entering the labor sphere, in his interaction with the team, requiring him to be ready to independently make responsible decisions based on his knowledge and skills.

Readiness is formed throughout the entire period of study at the university and is aimed at mastering by students a set of competencies specified in the Federal State Educational Standards of Higher Education, professional standards and meta-subject necessary for productive professional activity, as well as professionally significant personal qualities.

### **3. Research Questions**

The practice of pedagogical activity shows that the formation of the readiness of graduates for professional work under conditions of uncertainty is carried out in the implementation of a set of modern approaches: competent, personalized, reflexive, meta-subject. Application of these approaches in the educational process contributes to the development of educational and creative abilities of students, professionally significant personal qualities and value orientations, critical thinking, readiness for rational planning, reflection, successful adaptation to uncertainty in the work activity, responsibility of decision-making (Chekanushkina et al., 2020); use of modern pedagogical technologies such as: brainstorming (a group search for innovative ideas to resolve contradictions); methods of "control questions" (finding ways to solve problems by means of inducing list of questions), morphological analysis and synthesis (search and selection of the most rational options for solving the problem situation); synthetics (generation of ideas by means of analogies and associations to solve the problem), allows to logically structure the algorithm, structure and to work out the optimal solution for the given problem in non-standard conditions (Mikhelkevich & Chekanushkina, 2019).

### **4. Purpose of the Study**

The purpose of this study is to determine the intolerance of life situations uncertainty and to measure tolerance to uncertainty, namely, the ability to tolerate various kinds of circumstances in professional activities.

## 5. Research Methods

The study used an author's questionnaire aimed at identifying students' ability to manage their lives and tolerance for uncertainty, and also a questionnaire by Kornilova (2010) containing three types of tolerance to uncertainty: tolerance for uncertainty, intolerance for uncertainty and interpersonal intolerance for uncertainty.

The basis of the study was presented by the Federal State-Funded Educational Institution of Higher Education "Samara State University of Social Sciences and Education", the direction of training 44.04.01 Pedagogical education, profile "Educational process management in the conditions of digitalization of education" during the study of the disciplines "Organization and management of team work" and "Support of an educator's professional development by means of ICT. The respondents were students of the I-II course, with a total number of 257 people.

## 6. Findings

According to the questionnaire conducted, where students were asked to note (from 0 to 100%) the extent to which they had developed the ability to manage their own lives, the result was as follows: a group with a relatively low self-esteem in the ability to manage their lives was composed of students with results ranging from 0% to 30%; average - 31-60%, high - from 61% to 100%. It was found that there are differences in the level of experience of subjectivity relative to their own life between boys and girls at a high level of significance ( $U=0,302$  at  $p\leq 0,05$ ). Typical for boys are high (42.73%), and for girls (31.25%) - average levels of subjectivity ( $\chi^2=18.814$  at  $p \leq 0.01$ ).

The analysis of the respondents' perceptions of the factors that hinder full control over their own lives showed that there are no significant differences in their content. Students mentioned the influence of people around them (boys - 24.58%, girls - 28% of mentions) and unforeseen circumstances - 25.38% and 27.43% respectively, as reasons for difficulties in exercising control over their own lives.

In determining the subjective assessment of students' tolerance for uncertainty, it can be observed that the data differs widely when the empirical distribution is shifted to the mean values ( $\min=7$ ,  $\max=100$ ,  $x=61,37$ ;  $d=648,731$ ), which indicates that students are not concerned about life uncertainty. According to this self-assessment, three groups of respondents were identified (from 0% to 30%, from 31% to 60%, from 61% to 100%).

There is no significant difference in the level of feelings of uncertainty between students ( $U=0.43$  at  $p>0.05$ ). In general, in the sample high (35.25%), medium (34.86%), low (29.89%) levels of experience due to life uncertainty are presented statistically equivalent ( $\chi^2=3,069$ ,  $p>0,05$ ).

The greatest variety of individual manifestations in students is found by intolerance to uncertainty ( $\min=26$ ,  $\max=90$ ,  $x=63,2$ ;  $d=83.51$ ;  $U=0.541$  at  $p>0.05$ ). Interpersonal intolerance ( $\min=4$ ,  $\max=48$ ,  $x=30.4$ ;  $d=62.47$ ;  $U=0.403$  at  $p>0.05$ ) and actual tolerance to uncertainty ( $\min=38$ ,  $\max=67$ ,  $x=52.7$ ;  $d=58.15$ ;  $U=0.437$  at  $p>0.05$ ) students show a smaller range of values for boys and girls.

As a result of the study conducted by the technique of T.V. Kornilova, aimed at determining the relationship between subjective self-assessment and objective assessment of tolerance to uncertainty, it was found that students with different levels of ability to manage their own lives had no significant differences.

Only at the established tendency level that interpersonal intolerance is more pronounced in students with medium, not high level of self-esteem of own subject ( $U=437$ ,  $p=0,05$ ). Interpersonal intolerance is expressed more in students with an average level of self-esteem of experiences due to the uncertainty of life compared to students with a high level of evaluation ( $U=163$ ,  $p=0.025$ ).

Considering the relationship of tolerance to uncertainty and self-esteem, one can conclude that there is no tolerance, which indicates that the respondents coincide with subjective abilities to control their own life and assess their tolerance to uncertainty. In addition, according to the questionnaire, they found a weak negative relationship between the self-assessment of tolerance to life uncertainty and the expression of interpersonal intolerance to uncertainty ( $rs= -0.254$ ,  $p = 0.057$ ).

## 7. Conclusion

Thus, it can be stated that during the early professional development, tolerance to uncertainty is not a stable characteristic, well understood by the students themselves, which explains the differences in responses to different questions of the questionnaire. However, the study makes it possible to consider tolerance to uncertainty as a significant characteristic of future specialists with higher education, because they tend to highly appreciate the ability to manage their lives. Given the significant individual differences in the self-assessment of their tolerance in general, students tend to overestimate their level of this quality. Students' self-esteem matches more with their willingness to engage in interpersonal professional relationships than with their tolerance or intolerance of uncertainty in general.

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