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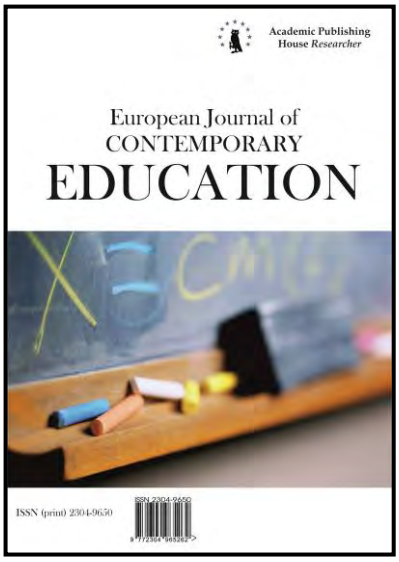

Case Study of the Formation of the Operational Component of the Psychological Readiness of University Graduates to Overcome Difficult Life Situations in Their Future Professional Activities

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Abstract

The present research featured the operational component of the psychological readiness to cope with stressful events in the workplace and its development in senior university students.

The authors believe that only practice-oriented technologies can provide the experience that will help new grades to overcome adversities they might face at work and choose an appropriate coping style.

The article introduces some theoretical prerequisites that develop the operational component of psychological readiness, which allow students to cope with stressful events in the workplace. The senior students defined the concept of stressful event, or adversity, as a certain state of uncertainty and ambiguity. The respondents evaluated such a situation as possible or impossible to cope with on their own and described typical stressful events they had to face in their lives or focused on their own experiences.

Finding themselves in a situation of uncertainty, the students tried to appraise the situation and plan the mode of action. Upon comprehending their actions in a situation of adversity, they strove to resolve it promptly. An intentional influence based on practice-oriented technologies diversified their responses to the stressful event. In addition, the experimental so improved their ability to compare their own needs and demands with the opportunities provided by the educational environment. In addition, the students learnt to analyze their own previous experience in order to find resources to cope with stressful events in the present.

The experiment registered positive changes in the parameters of the operational component of students' psychological readiness to cope with stressful events. Adequate ideas they acquired about adversities allowed the students to use adaptive coping strategies and use their experience in order to diversify their behavior strategies in stressful events.

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1. Introduction

The current stage of social development makes it important to teach future specialists how to work effectively in rapidly changing conditions. Therefore, students should develop psychological readiness to overcome adversity in everyday life and in their future workplace, as well as at university.

V.A. Lugovskiy considered psychological readiness for professional activity as a system of integrative properties and personality traits formed while working (Lugovskiy et al., 2018). A.A. Derkach interpreted readiness for professional activity as a set of functional, operational, and personal parameters, the relationship of which transforms during lifetime (Derkach, 2017).

I.A. Kalinina proved that psychological readiness for professional activity presupposes a change in its content, depending on the stage of university education (Kalinina, 2007).

L.M. Popov studied how psychological readiness develops during vocational training. They believe it depends on vocational training conditions and runs parallel to the development of professional attitudes, motives, and personality traits (Popov et al., 2015).

Psychological readiness for professional activity and its components become focus of numerous studies. For instance, E.A. Zakharova and Yu.M. Ezhova studied medical students. They proved that psychological readiness for a certain activity is, in fact, a complex structure. In their research, the psychological content of its components depended on the context of the activity in question, as well as on the student's personality with his or her capabilities, orientations, activeness, and inner world (Zakharova, 2018).

D.A. Vodopianov analyzed the phenomenon of psychological readiness in students of psychology.He believes that readiness reflects the degree to which one's personality correspondswith the requirements of this particular activity: ifperformedsuccessfully, this activity realizes one's personal and professional potential (Vodopianov, 2017).

The authors of the present paper have already reported results of a successful research that featured the development of psychological readiness for professional activity in future speech therapists (Morozova, 2015).

O.V. Pleshakova, who studied social workers and their professional readiness,also manifested the complex structure of this phenomenon: it consists of motivational, orientational, operational, personal, and reflexive components, which should be considered as a single system. O. V. Pleshakova suggests that professional skills are not the only parameters of operational readiness: it also includes such skills as communication, empathic communication, and competitive behavior (Pleshakova, 2007).

S.A. Falkina analyzed various theoretical aspects of professional and psychological readiness in future prosecutors. Their operational component of readiness included not only communication and deconfliction skills, but also flexibility in choosing appropriate communication style and good organizational skills (Falkina, 2016).

Thus, all scientists speak about a set of individual psychological parameters of psychological readiness for professional activity. However, the information remains incomplete without data on the attitude of future professionals to the problem of coping with stressful events, i.e. their ability to understand the essence of the adversity they face and choosing the best coping style.

According to D.M. Rogozin, stressful events destroy the balance between the system of personality relations and self-attitude, creating a discrepancy between aspirations, values, goals, and opportunities (Rogozin, 2013).

Psychology pays much attention to the way people appraisea situation and classify it as stressful. For instance, R. Lazarus and S. Folkman introduced parameters for subjective appraisal of stress and identified the following criteria for determining a stressful event: intensity, duration, loss of control, and taxingone's adaptation resources. They defined life strain as "a *process* of *categorizing* an encounter, and *its* various facets, with respect to *its significance* for *well-being*" (Folkman, Lazarus, 1980).

M. Sharpe linked the cognitive appraisal of a complex situation to the decision-making on how to cope with it. Making decisions in environments with few choice options is easy, as one

selects the action that results in the most valued outcome. However, they found it much harder to make decisions in more complex environments, where the same action can produce different outcomes in different conditions (Sharpe et al., 2019).

B. Fischhoff and St. Broomell distinguished three main elements of decision-making: judgment, or how people predict the *outcomes* that will *follow possible choices*; preferences, or how people weigh these possible outcomes; and choice, or how people combine judgment and preference to work out a decision (Fischhoff, Broomell, 2020).

A conscious choice increases the degree of satisfaction with the decision made and reduces the subjective character of one's appraisal of the stressful event. According to B.E. Compas et al., the use of cognitive strategies increases a person's sense of control over the situation and, as a consequence, *lowers the level* of *negative emotion* (Compas et al., 2001). E. Frydenberg proved that successful adaptation to complex and changing environment depends on how often these adaptive behavioral strategies are used (Frydenberg, 2004).

B. Little differentiated between such strategies of passive coping as avoiding, escaping, and denial of the stressor, which can be contrasted to active coping strategies, namely seeking social support, engaging in activism, or acceptance (Little et al., 2018).

M. Zeidner praised emotional intelligence, which allows people to identify, understand, control, and choose the best coping strategy in difficult life situations (Zeidner et al., 2018).

A.B. Soares identified the following ways of coping with interpersonal situations that are considered difficult in university context: focus on emotion, focus on social support, focus on religious coping, and focus on the problem (Soares et al., 2018).

2. Material and methods

The present study featured the development level of the operational component of the psychological readiness to cope with stressful situations in the future workplace. The research involved 54 fifth-year undergraduate students of the Institute of Education at the Kemerovo State University (Kemerovo region, Russia). The experiment included such empirical methods as testing and psychosemantic technique.

S.S. Goncharova's questionnaire "Ways to Cope with Stressful Events" made it possible to assess the parameters of the operational component of readiness. This questionnaire tests the frequency of using various ways to cope with stressful events in adolescence and is a modification of the Bern "Ways of Coping" *Questionnaire* (A. Blaiser, E. Heim, H. Ringer, M. Tommen). It includes 25 statements that describe possible ways to cope witha stressful situation. Respondents define how often they rely on each option using a five-position scale. The five scales include three adaptive coping strategies (seeking help, increasing self-esteem, self-blame) and two non-adaptive (problem analysis and seeking a guilty party).

Other methods included "The Methods of Coping Behavior" by R. Lazarus and S. Folkman, designed to determine coping strategies for stressful events in various areas, e.g. in the workplace, at university, in communication, in private life, etc. The coping test was adapted for Russian audience by T.L. Kryukova, E.V. Kuftyak, and M.S. Zamyshlyaeva.

R. Lazarus and S. Folkman defined eight coping strategies. The coping test shows how often the respondent uses each coping strategy and how effective proves to be. The questionnaire includes 50 statements, each of which reflects a certain behavior in a difficult or stressful situation. The respondent has to assess how often they appeal to these behavior strategies.

The psychosemantic technique consisted of an incomplete-sentence test, which helped to determine the peculiarities of students' perception of adversities and the ways to cope with them in their future professional career.

The incomplete sentences were based on the method of psychosemantics: the participants had to appraise stressful events according to various parameters, which corresponded to the criteria for choosing behavior in a stressful environment. The methodology tested the personal experience of the respondent, who was asked to evaluate behaviors, feelings, and actions theyassociate with a stressful situation.

The quantitative and qualitative analysis involved mathematical statistics (Student's t-distribution), checked using the Statistica 6.0 computer program.

The research involved two groups of the fifth (final) year of study. The experimental group consisted of 27 Bachelor students that majored in Primary Education, while the control group

included 27 students of Preschool Education. Their curricula have an almost identical study time and nearly the same number of disciplines; both presuppose in-depth studies of humanity subjects. Both groups had the same environment for the development of the operational component of psychological readiness for their future professional activity, hence the legitimacy of the comparative analysis. However, the environments changed during the formation stage, as a new discipline was introduced in the experimental group.

The educational experiment included a complex of practice-oriented technologies, which made it possible to adjust the interaction methods and technique, as well as to define the dynamics of the psychological readiness. The experimental group participated in a club called *I am a Teacher*, which exercised formative effect through regular discussion platforms, workshops, and simulation exercises. The students had to participate in the so-called educational events organized by the teaching staff of the Institute of Education. An educational event is a special environment which allows children to comprehend the experience obtained and turn it into a tool that helps them to achieve a new, higher goal. The students had to role-play children, thus gaining the experience of understanding the child's emotional stress. As a result, they learnt how to act professionally while solving various tasks.

The element of dialogue interaction allowed the students to accept their own emotions and feelings caused by the interlocutor. By projecting their interaction on the teacher – child communication model, the students learnt how to regulate their own emotional stress, while adjusting their own actions.

The formative influence developed the psychological readiness for future career. The present research measured the qualitative changes in the cognitive processes and personality characteristics of the students, as their ability to reproduce the environment improved and actions became more sophisticated. This idea has roots in various practice-oriented cases practiced by leading universities.

For instance, S.-S. Tseng and H.-C. Yeh (Tseng, Yeh, 2019) believe that this approach allows students of pedagogical departments to link new knowledge with their own studies and, thereby, build connections between content, activities, and tools. Another effective technology is the so-called flipped classroom, developed by V.I. Marín et al. First, students study new material on their own, and after that they discuss new concepts and their possible application together with the teacher (Marín et al., 2018). In general, educational innovations focused on active learning always prove highly effective (Arruabarrena et al., 2019).

3. Results

The ascertaining stage of the experiment focused on the way students perceive the phenomenon of a stressful event, or adversity, and the ways to cope with it.

When asked to finish the sentence "*For me, a stressful event means...*", most participants point out its uncertainty and ambiguity. 14.8 % mentioned conflicts with family and friends, as well as the lack of support. 18.5 % defined adversity as a situation that breaks the routine. 37 % defined a stressful event as a situation of choice or personal and professional self-identification. 29.7 % described it via negative emotions that they cause.

Thus, the students demonstrated diverse ideas about the essence of this phenomenon. The students appraised the possibility of coping with such a situation on their own. They also described their own experiences they perceive as stressful.

The incomplete sentence "*Realizing my actions in a difficult life situation, I ...*" triggered two types of response, namely behavioral and emotional.

The students often dwelled upon the strong negative emotions that prevent them from coping with a stressful event. 14.8 % of respondents mentioned a feeling of helplessness, inability to cope with the situation, and a lack of strength.

18.5 % of the respondents expressed a strong desire to cope with the difficulty on their own. Some even wrote that they see adversities as a resource for personal development.

All in all, 27.8 % mentioned their attempts to cope with a stressful event, while 39 % put stress on the fact that they tried to do it on their own.

Facing a situation of uncertainty, students try to assess the environment and plan the ways of action. After that, they strive to resolve it as soon as possible.

The results obtained made it possible to actualize the problem of developing psychological readiness in students, which would allow them to cope with stressful situations in the workplace.

In the experimental group, the formative influence combined the technology of managing one's own professional and personal development and the technology of competency development. While managing their own professional and personal development, the students became aware of their own individual and personal characteristics. The new knowledge let them build up and expand their self-concept, realize their own motives and aspirations, and experience the environment.

As a result, the students developed and realized their personal attitude to education and self-development, realized their potential, and, most importantly, learnt to compare them with the potentials of the educational environment. For the approach to be successful, the teaching staff must abandon both directive forms of work and judgment-based attitude. The students have to find the answers to the questions posed by the supervisor within themselves, and not receive them as an outside evaluation (Klochko, 2009).

Technologies of competency development usually feature non-specific competencies, i.e. the so-called soft skills, or universal, quasi-professional skills that determine one's success in almost any kind of activity (Salnaya, 2016). They include social, communicative, emotional competencies, etc. (Bogacheva, 2011).

The present research introduces a new model that unites various techniques as means of formative influence, which correspond to different groups of technologies, skill training and reflexive training being the most important ones. Skill training is connected with technologies of competency development, while reflexive training is part of technology of managing one's own professional and personal development.

Training is a traditional form of psychological support, which remains highly effective and easy. Training aims at both solving the existing problem and at preventing its reoccurrence in the future by developing various problem-solving skills (Vachkov, 2007).

Training presupposes a favorable safe environment, which allows students to acquire skills, develop habits, and receive feedback from other participants. This way the interaction happens easier than in traditional classroom environment.

E.A. Gorbatova formulated some specific requirements a successful training should follow in order to develop a favorable training environment. The list includes permanent members, a list of norms, appropriate spatio-temporal organization, and a professional trainer, who uses both active and reflective methods of work (Gorbatova, 2008).

The idea of skill training first appeared in behavioral studies as a way to develop effective patterns of behavior. In its contemporary understanding, the term encompasses cognitive and emotional components (Toropov, 2011).

Reflexive training allows participants to develop their reflective qualities through rethinking their experience together with an algorithm for analyzing new similar experience.

According to V.I. Slobodchikov, reflection is a set of human abilities, which make you aware of your own emotional and cognitive state, your place and status in the group, the limits of your skills and knowledge, etc. (Slobodchikov, 1990). Thus, reflection contributes to personality development and relationship with the outside world.

E.V Bityutskaya believes that reflection plays an important role in the process of cognitive appraisal of a stressful event (Bityutskaya, 2013). Therefore, good reflection abilities can develop readiness for coping with adversities. According to N.I. Avramenko, a well-developed reflection allows people to choose pro-social coping strategies, thus decreasing in the chance of impulsive reactions in stressful environment. In addition, the higher the reflection level, the greater the variability of coping strategies (Avramenko, 2016). Thus, a well-developed reflection makes it possible to choose a more effective coping behavior and cope with adversities. Reflexive forms of work also prove effective in that they prepare people for choice making situations (Kargina et al., 2020).

Thus, these technologies develop non-specific universal competencies, including their components, i.e. certain knowledge, skills, and abilities. In fact, they provide positive changes in the operational component of psychological readiness to cope with stressful events.

Table 1 illustrates the data obtained at the initial and final stages of the experimental study. They show the dynamics in the operational component of the psychological readiness of students to cope with stressful events.

Table 1. Operational component of the psychological readiness: Dynamics of the parameters

Index	Mean values in groups		Student's t-distribution	Significance of differences (p)
	Initial stage	Final stage		
Ways to cope with stressful events (S.S. Goncharova)				
seeking help	9.65	11.98	2.25	0.05
increasing self-esteem	20.82	24.18	-2.26	0.05
self-blame	13.29	10.76	2.43	0.03
problem analysis	16.06	18.71	-2.35	0.04
Seeking the guilty party	9.06	7	2.64	0.02
Methods of Coping Behavior (R. Lazarus, S. Folkman)				
Avoiding and escaping	13.41	10.58	3.14	0.01
Planning solution	10.26	12.56	- 2.44	0.03

As a result of the practice-oriented technologies, self-accusation was a much less frequent coping strategy in the experimental group ($t = 2.43$, variance = 52 at $p < 0.05$). Much the same could be said about the looking-for-someone-to-blame strategy ($t = 2.64$, variance = 52 at $p < 0.05$). Both strategies are non-adaptive; thus, they could not possibly contribute to coping with problems that arose during the considered period. Therefore, the students from the experimental group were much less likely to avoid the emerging problems by turning inward to pity and blame themselves for what happened, reproaching themselves for not taking actions, etc. The data are consistent with those obtained by R. Masiran et al., who wrote that introspection and self-blame result from psychological stress (Masiran et al., 2018). In the present research, the test subjects proved much less prone to blame external factors and other people, as well as to delegate responsibility for resolving the problem to somebody else ($t = -2.35$, variance = 52 at $p < 0.05$).

In addition, the students in the experimental group tended to accept the responsibility for their own failures, not only their own achievements and successes. This fact might indicate the harmonious development of self-control. The participants agreed that their own actions can help them to achieve their goals ($t = -2.44$, variance = 52 at $p < 0.05$). They were aware of the effect their actions have on the problem to solve. As a result, they believed that coping with those stressful events which they associated with failures demanded a conscious effort on their side. In addition, these participants felt more responsible for relationships with other people ($t = 2.25$, variance = 52 at $p < 0.05$). To sum up, they felt able to change events, responsible for relationships with others, and capable of winning the favor of other people through their own conscious actions. They saw their failures as an area of possible development and strengthening, which improved their adaptive attitude to coping with stressful events.

4. Discussion

As a result of intentional influence, the students learnt to see a stressful event as a source of opportunities. They were also able to harmonize their needs and demands with the opportunities provided by the educational environment. In addition, they saw their past experience as a resource for coping with stressful events in the present. The results proved similar to the data obtained by E. Santarnecchi, who interpreted coping as a separate psychological construct, not as a personality trait or a cognitive ability. As a psychological construct, coping consists of a locus of control, self-efficacy, and such skills as problem solving or ability to perform executive functions (Santarnecchi at al., 2018).

The strategy of seeking the guilty party was also poorly represented in the experimental group. This result confirms the data obtained by E. Keser: emotionally-oriented coping reduces conflict (Keser et al., 2020).

In this experiment, the participants were less likely to look for external causes of their problems, transfer responsibility for their resolution to other people, and experience negative emotions. They accepted responsibility for the situation and agreed that problem solving and related choices depended on them only.

The transformations that occurred in the test group were comparable to the results obtained by P. Gaudreau, who focused on active coping with its variety of behavioral and cognitive

strategies. Such strategies make it possible to manage the demands that arise in a stressful situation, as well as to cope with the resulting emotional and physiological reactions (Gaudreau et al., 2018).

Unlike the control, the experimental group students felt that their actions expressed their own aspirations and desires, while identifying their emotions and feelings with the events of their lives. These data correlate with the experiment performed by Y. Chishima, who identified a link between self-compassion and stress coping, mediated by cognitive appraisal (threat, controllability, etc.) of stressful events. The scientists emphasized that self-compassion improves adaptive coping, as it decreases the sense of threat and increases the controllability of a stressful event (Chishima et al., 2019).

The training enabled the students to master universal vocational and non-specific skills, which are helpful in any field of activity, especially in the university environment. The skills included their ability to understand other people, to employ diverse behavioral reactions, to be aware of their emotions and their triggers, to manage their emotional state and behavior, to exercise time management and planning skills, and to determine the motives behind their own behavior. All these prove quite useful, as higher education and formative years demand well-developed self-control and planning skills.

The reflexive training helped to develop self-regulation skills. The main objective of the training was to form a stable and conscious image of attitudes towards the trainees themselves, other people, and environment at the emotional, cognitive, axiological, and action levels. The participants developed such abilities as to identify and analyze their own emotions, thoughts, causes and consequences of their behavior, as well as to predict and correct it. According to M. Akhtar and B. Kroener-Herwig, reflexive coping increases the level of psychological well-being (Akhtar, Kroener-Herwig, 2018).

Thus, the reflective training proved to be a universal form of work, which could include various blocks, depending on its goals and objectives. In addition, the reflexive training made it possible to implement the principle of non-directive influence in teacher support, which allowed students to form a conscious self-image as a future specialist.

This statement correlates with the point of view expressed by S. Keng, who supported the idea that mindfulness contributes to adaptive coping with everyday stressful situations (Kengetal, 2018).

To sum up, the participants in the experimental group, who underwent a complex of practice-oriented technologies, proved more successful in developing the operational component of the psychological readiness to cope with stressful events than their fellow students in the control group.

5. Conclusion

The theoretical study, experimental research, and best practice analysis showed that the development of psychological readiness to cope with stressful events in students can be approached from several positions.

First, psychological readiness to cope with stressful events is a special case of readiness for professional activity. It is a complex structural and functional formation that enables individuals to make decisions based on several conscious procedures. The person analyzes the appraised situation, determines available alternatives, evaluates possible risks, studies his or her life experience, and comes to a variety of ways to cope with the stressful situation. Operational component is part of psychological readiness to cope with stressful events. It is a set of professional skills and coping strategies, as well as skills of empathic communication and competitive behavior.

Second, coping strategies are a set of actions and efforts aimed at resolving a particular situation. Its choice depend on the impact exercised directly in the stressful event, as well as on the resources and capabilities the individual obtained earlier in life, which are not associated with the stressful event. As a result, the skills and resources obtained by the individual in everyday life enables him or her to expand the range of behavioral patterns in a stressful event.

Third, a stressful event is part of the context of a subjectively appraised adversity taken in its connection with the particular value-semantic content. Students demonstrated a wide variety of ideas about stressful events. Their interpretations of professional choice and self-identification also proved diverse, as they approached the final stage and final exams. Most students appraised their coping abilities as low, the most popular coping strategies being self-esteem improvement, self-blame, and problem analysis.

The experiment involved an intentional influence via practice-oriented technologies, which increased the variability of responses to the current situation. Also, it enriched the experience of the participants in their ability to compare their own needs and demands with the opportunities provided by the educational environment. This set of means proved effective in developing the readiness to cope with stressful events, as it united the efforts of all members of the educational environment.

The participants resorted to adaptive coping strategies more often, as they developed adequate ideas about stressful events and diversified their coping strategies based on their previous experience.

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