



Потенциал образовательной среды технического вуза в социокультурном самоопределении будущего инженера в контексте формирования его человеческого капитала

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АННОТАЦИЯ

Введение. Актуальность исследования детерминирована экономическими и социокультурными трансформациями и социальным заказом на формирование технического специалиста нового формата: способного осуществлять таргетирование, поиск и выбор смысложизненных ориентаций с опорой на социокультурные ценности и на этой основе вырабатывать поведенческие модели, реализация которых позволит обрести свое место в обществе, культурном пространстве, при этом приобретая и наращивая человеческий капитал, позволяющий быть эффективным специалистом и успешным человеком.

Цель исследования – разработка модели социокультурного самоопределения будущего инженера в образовательной среде технического университета.

Материалы и методы. Материалом исследования послужили результаты работы, полученные в 2021-2024 гг. на базе факультета высшего образования Оренбургского института путей сообщения – филиала Самарского государственного университета путей сообщения (Российская Федерация).

Результаты. Выявлено, что социокультурное самоопределение будущего инженера – многогранный и многоаспектный процесс, успешность и эффективность которого детерминирована значительным количеством факторов и условий. Разработанные авторами критерии исследуемого процесса подчеркивают его сложный характер и важность в контексте осознанного выбора смысложизненных ориентиров и нахождения своего места в социокультурном пространстве. Обосновано, что конструирование и реализация предложенных педагогических ситуаций и научно-исследовательских и научно-популярных мероприятий позволит осуществлять процесс социокультурного самоопределения более успешно, а стратегия педагогического сопровождения данного процесса позволит сделать его максимально эффективным и социально одобряемым.

Заключение. Исследование показало, что образовательная среда технического вуза обладает значительным потенциалом в процессе осуществления будущим инженером свободного выбора индивидуальных траекторий в жизненном, социальном, профессиональном смыслах, при этом наращивается его человеческий капитал, что обеспечивает его успешную личностную и общественную реализацию.

КЛЮЧЕВЫЕ СЛОВА

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Potential of technical university educational environment in socio-cultural self-determination of future engineer in the context of forming his human capital

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ABSTRACT

Introduction. The relevance of the research is determined by economic and socio-cultural transformations and social order for the formation of a new format of technical specialist: capable of targeting, searching and choosing meaning and life orientations based on socio-cultural values and on this basis to develop behavioural models, the implementation of which will allow to find their place in society, cultural space, while acquiring and building up human capital, allowing to be an effective specialist and a successful person.

The article aims to develop a model of sociocultural self-determination of future engineer in the educational environment of technical university.

Materials and methods. The material of the study was the results of the work obtained in 2021-2024 on the basis of the Faculty of Higher Education of the Orenburg Institute of Railway Engineering - branch of the Samara State University of Railway Engineering (Russian Federation).

Results. It is revealed that the socio-cultural self-determination of a future engineer is a multifaceted and multidimensional process, the success and effectiveness of which is determined by a significant number of factors and conditions. The criteria of the process under study developed by the authors emphasize its complex nature and importance in the context of a conscious choice of meaningful life orientations and finding one's place in the socio-cultural space. It is proved that the design and implementation of the proposed pedagogical situations and scientific research and popular scientific events will allow the process of socio-cultural self-determination to be carried out more successfully, and the strategy of pedagogical support for this process will make it as effective and socially acceptable as possible.

Conclusion. The study showed that the educational environment of a technical university has significant potential in the process of a future engineer's free choice of individual trajectories in life, social, and professional terms, while increasing his human capital, which ensures his successful personal and social realization.

KEYWORDS

sociocultural self-determination, technical university, educational environment, human capital

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INTRODUCTION

The conditions of dynamic socio-political and economic transformations, the change of technical and technological vectors of the development of world civilization determine the cardinal transformations of all spheres of human life and activity. The field of education (including higher technical education) is no exception. These positions are relevant at the national and international levels, which correlates with key global trends in education. Thus, the UNESCO Education for All program [1] and the educational initiatives postulated by the United Nations «Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all» emphasize the crucial role of a young person's choice of meaningful and socio-cultural orientations, which, ultimately, will become the foundation of his human capital [35], the key to successful socialization and comprehensive development [36].

The socio-professional order of modern production, technical, technological and transport industries for engineers of a new format is obvious: technical specialists, professionally reliable [37], capable of producing creative ideas to solve production problems [12], developing and implementing scientific and technical innovation and innovative projects [17], while relying on imperative values human and humanity [18], to find their place in the professional and socio-cultural space [9], to realize the «human dimension» of their profession [14], its social purpose and value [6]. Russian and foreign authors put forward and substantiate the thesis about the increasing complexity of engineering and the need to build an up-to-date paradigm of higher technical education: N.D. Sorokina [20] focuses on increasing the prestige of the engineering profession, which is associated with modern social changes; S.A. Sveshnikova [34] explores the issues of motivation of future engineers and their development self-learning skills; M.A. Garanin [8] identifies trends in the development of modern technical (transport) education. At the same time, the humanitarian context of Russian technical education remains important [3], which in many ways is the basis for the modernization of all (including technical) education [10]. It is important to note the positions of foreign authors who focus on the innovative vector of development of modern higher education, which determines the revision of the educational paradigm of higher education (including technical). Thus, A.D. Lantada [29] believes that engineering education should be in a state of constant development, and C. Barreiro [23] considers it important to highlight the problems and difficulties of mastering engineering by the youth of generation Z.

The issues related to young people's determination of their own position in the cultural space, society, and profession are in the sphere of scientific interests of educators, psychologists, and sociologists. Thus, N.Y. Bolshunova calls the problem of young people's sociocultural self-determination significant in the context of studying the trajectories of their personal development and individuality, and defines the process under study as a serious task of upbringing and education [4]. N.N. Nikitina believes that personal self-determination is a sociocultural phenomenon, and the scientist notes the correlation between the process of self-determination and the real sociocultural situation that determines the conditions and possible result [16]. Pedagogue A.A. Karunina, investigating the characteristics of students' sociocultural self-determination, solves the problem of developing effective ways of forming the ability of self-determination [13]. I.G. Shestakova et al. put scientific emphasis on the potential of humanities disciplines in the context of students' sociocultural self-determination, defines the range of pedagogical conditions in which the effective course of this process is possible [21].

The considered positions determine the priority task – socio-cultural self-determination of youth, since a person who has predicted and found his place in the cultural space, society, profession, is able to consciously implement goal-setting and achieve these goals based on axiological universal postulates, while increasing his human capital [30]. In our opinion, in the context of this provision, the issues of socio-cultural self-determination of the future engineer require theoretical understanding, taking into account the identified civilizational challenges and the specifics of the future work of engineers, since this process is poorly studied in pedagogical science. Practical research is also relevant in the field of building a special educational environment of a technical university (including digital) [5], solving the tasks of innovative development of higher education [7], improving the quality and accessibility of education [11], expanding the value-semantic interaction of the student with the surrounding cultural world [32], becoming a reflective space [15], which, in our opinion, contributes to solving the tasks of activating the essential forces of personality.

The main contradiction is the dissonance between the requirements of pedagogical practice in scientific and methodological support of socio-cultural self-determination of a technical specialist and insufficient elaboration of theoretical and methodological foundations of this process during his professional training, taking into account the specifics of the educational environment of a modern technical university. An important problem is also the search and implementation of pedagogical conditions, in which the effective course of this process is possible. Finally, the correlation between sociocultural self-determination [16] and human capital of a future engineer requires research.

In this way, the analysis of theoretical studies in this problem field gives grounds to conclude that the process of modern professional training in higher technical school is complex and multidimensional. The positions of Russian and foreign authors are similar in many respects: the pedagogical paradigm of higher technical education has changed to a great extent: it is determined by modern socio-cultural realities, new educational trends, as well as the achievements of scientific and technological progress. However, the educational environment of higher education institution is still the main space where a future specialist not only acquires a profession, but also finds himself/herself, his/her place in culture and society.

Based on the theoretical analysis and secondary data analysis, the research objective was formulated - to develop a model of sociocultural self-determination of a future engineer in the educational environment of a technical university, the implementation of which will allow the latter to make a conscious choice of meaning-life, social, and professional dominants. The stated goal determines the following tasks:

1. Analysis of theoretical sources on the problem.
2. Formulation of the author's definition of the key concept (sociocultural self-determination).
3. Development of the system of criteria of successful sociocultural self-determination.
4. Identification and substantiation of the possibilities of technical university educational environment in sociocultural self-determination of future engineer and formation of his/her human capital.

MATERIALS AND METHODS

The choice of research methods is determined by the purpose and objectives of our theoretical research work. In the course of the work, interrelated theoretical methods were used: analysis of philosophical, psychological, pedagogical and methodological literature on the research problem (this method allowed us to identify key theoretical positions in the designated problem field); comparison, generalization, classification (these methods were used both in the process of theoretical research and in the analysis of student activity products); systematization allowed us to determine determinants of the educational environment of the university; pedagogical modeling was used to test the hypothesis. Empirical methods: a critical analysis of traditional and innovative pedagogical experience complemented theoretical research; pedagogical observation, study of the results of students' activities allowed us to substantiate the conclusions that the educational environment of the university has significant potential in the process under study.

Within the framework of this study, special importance belongs to the semantic content of the interdisciplinary concept of «socio-cultural self-determination», which organically combines philosophical, psychological, pedagogical and sociological aspects. Based on the analysis of interdisciplinary theoretical sources and based on our own pedagogical experience, we have formulated a working definition of the concept of «socio-cultural self-determination of a future engineer.»

Having carried out a theoretical and practical correlation of scientific sources in the designated problem field, we noted the lack of a universal criteria base in pedagogical science that allows us to assess the effectiveness of socio-cultural self-determination of a future technical specialist.

The analysis of the concepts of «socio-cultural self-determination of a future engineer», «educational environment of a technical university», as well as the building of a criterion system in

the designated problem field allowed us to move on to the next stage of our work - determining the pedagogical potential of the educational environment of a technical university, the implementation of which will allow a future technical specialist to socioculturally self-identify, increasing his human and professional capital.

In the comprehensive implementation of educational situations based on the concept of pedagogical support for the socio-cultural self-determination of the future engineer, strategic directions for the formation and strengthening of his human capital were enriched.

RESULTS

In accordance with the requirements of the basic professional educational program, upon graduation, graduates must have general cultural and professional competencies, which implies their readiness for professional activity, the indicators of which are personal, theoretical and practical preparedness. A strategically important logical and semantic addition to the acquired competencies is the successful socio-cultural self-determination of the graduate.

The fundamental personal mechanism that ensures self-determination of any kind (life, professional, value, socio-cultural, etc.) is choice. In the context of our research, this mechanism correlated with responsibility, since it is responsibility for the results of the choice made that acts as a criterion-significant indicator of successful socio-cultural self-determination, as well as initiates, activates, regulates and directs the activities of the future engineer.

Having formulated a working definition of the phenomenon under study, we emphasize that the socio-cultural self-determination of a future engineer is a process of targeted choice based on a social and personal value system, focused on the interiorization of existing socio-cultural experience, ensuring the formation of an integrative personality quality of a future technical specialist, allowing to acquire and multiply human capital – a key factor in the development of the economy, society and every single person.

Based on generalized theoretical experience and our own teaching activities, we have developed universal criteria for evaluating the socio-cultural self-determination of a future engineer.

Their arrangement and formulation were one of our tasks, since this allowed us to fully explore the pedagogical potential of the educational environment of the technical university and its possible impact on the effectiveness of the socio-cultural self-determination of the future technical specialist, which, in our opinion, is one of the strategic directions for building human capital.

The author's system of criteria for socio-cultural self-determination:

- motivational-targeted (conscious desire to become established a person, a competent specialist, to identify their unique features, identify personal resources, target goals and ways to achieve them; orientation towards dialogical cultural interaction),
- cognitive (knowledge of the essence and structure and tools of socio-cultural self-determination; high level of intelligence; extensive knowledge of culture as a form of social existence; fundamental practice-oriented professional knowledge; availability of evaluative information on the ways of implementation and effectiveness of socio-cultural self-determination);
- initiative-activity (possession of the ability to correlate one's own cultural needs and capabilities; the desire to master the traditional and innovative experience of cultural-like activities; the skill of rational adjustment of one's value-semantic discreteness; initiation and realization of one's own spiritual, moral and professional growth; the ability to develop responsible decisions based on one's own ideological orientations and social dominants);
- emotional and axiological (a sense of satisfaction with the success of one's social, cultural and practical activities; the desire to share with others the achieved results of intellectual work and practical activities; the desire and willingness to understand and accept a significant Other).

We believe that socio-cultural self-determination is expressed in the form of axiological orientations, internalized life meanings that have become an integral part of the personality, concentrated in memory reserves and in a state of constant readiness for actualization in appropriate situations. The structure of the concept under study includes informational, operational, value-semantic components. The conclusions of L.Ya. Bolshunova [4], N.E. Bulankina [6], A.A. Karenina [13] allowed us to consider socio-cultural self-determination as a specific component of the content of education.

We believe that the educational environment of a technical university is such an environment of a subject (in our case, a future engineer), in which conditions are created for the formation of a personality, in particular, socio-cultural self-determination is carried out.

An analytical review of scientific papers on the problem under study made it possible to articulate the features of the educational environment of the technical university:

- the educational environment is a system of both external and internal conditions (the specifics of the professional training of future engineers – technical and technological orientation is an important, largely determining circumstance);
- it is commensurate with the personality that is being formed in it;
- the teacher and the student act in it as equal subjects;
- her organization has a social and personal character.

Based on these features, we identify its properties, which, in our opinion, determine the effective course of the personality formation process of a future technical specialist in general, and contribute to his successful socio-cultural self-determination in particular:

- internal inconsistency/subjective difficulty, suggesting the need to choose from available alternatives (or design new alternatives);
- technical and technological orientation related to the specifics of the future work of students; a certain «focus» on the primacy of natural science and technical disciplines;
- cultural conformity, which implies both a rethinking of traditional and the creation of innovative/innovative cultural values and norms in relation to the academic and professional fields of activity of its subjects;
- variability: all its participants have the opportunity to build an environment taking into account personal needs and development trajectories;
- selectivity of the content of educational resources, in which the meaningful emphasis is transferred to the ways of activity of its participants;
- the creative, search-based nature of the activities of all its participants;
- focusing on the formation of a reflexive view of society, the surrounding cultural space and oneself for all participants.

Summarizing, we note: the educational environment of a technical university is an educational complex characterized by the possibility of choosing goals, vectors, content and ways of self-education, self-development and self-determination, which determines the adjustment of the student's perspectives on a personal, social and professional path [10].

The main goal of the educational environment of a technical university, within which a successful socio-cultural self-determination of a future engineer can take place, is to «immerse» the student in culture and various social relations, teach him to perceive and analyze socio-cultural norms and standards, produce new or innovative ones based on social and personal value-semantic dominants. In this context, it is important to state that the specificity of socio-cultural self-determination in the educational environment of a technical university is determined by the nature of activities in this environment. Based on our previously made scientific conclusions, we emphasize that the basic skills of culturally-based, reflexive, axiologically conditioned activity, which is one of the indicators

of socio-cultural self-determination, are born in a space free from dictate, allowing improvisation, critical thinking, entering into a discussion, making an informed choice, and being responsible for its results [15].

We believe that the main task of the teacher is to jointly determine the content of the educational space with the student: the choice of ways (methods, technologies and forms) of mastering the discipline based on the activation of cognitive activity, critical thinking and creative approach of students, that is, we focus on the strategy of pedagogical support for the socio-cultural self-determination of the future engineer.

Based on our earlier conclusion [15] that the socio-pedagogical design of the educational environment of a technical university, in which various types of activities (didactic, educational, etc.) are built, is a determinant that sets specific tasks for socio-cultural self-determination, we came to the conclusion that it is necessary to present this as an active process, since socio-cultural Self-determination is, on the one hand, a dynamic system, on the other, the result of a reasonably organized process. Thus, it can be concluded that the pedagogical support of the socio-cultural self-determination of a future engineer is a consciously organized and controlled process. The model of pedagogical support of the student's socio-cultural self-determination developed by us reflects the continuity of the latter.

Based on the position that choice and self-determination are separate concepts that can be used interchangeably, assuming responsibility for: one's goals, decisions, actions, assessments, results. Being responsible, i.e. determined, means: it is I who exercise power, decide and exercise control. This justification determines the selection of educational content that contributes to the socio-cultural self-determination of future engineers during their studies at the university.

In the process of theoretical and practical research of the potential of the educational environment of the technical university, the search and creation of conditions in it conducive to the socio-cultural self-determination of the future engineer, we have considered and tested various methods and forms. Based on the practical experience of research scientists A.Y. Zhurkina, S.V. Saltseva [19], we made a choice in favor of designing and implementing pedagogical situations. It is the strategy of pedagogical support that orients the student in the process of his educational activity to socio-cultural self-determination, which necessarily requires him to focus on self-education, self-development, a conscious choice of ideological positions, behavioral patterns in interpersonal interaction.

In the course of the work, various pedagogical strategies aimed at successful socio-cultural self-determination of students (pedagogical assistance, pedagogical support, pedagogical support) were developed and tested. We made a choice in favor of the strategy of pedagogical support, based on its correlation with the target settings and the specifics of the process under study. Implementing this strategy, we took into account advanced pedagogical experience and based on it designed pedagogical situations in which the student needed to immerse himself in the process of socio-cultural self-determination: he needs to carry out targeting, make an informed choice of social and cultural values, meanings, landmarks and build his activities on this basis, while strengthening and increasing his human capital.

The analysis of the above-mentioned possibilities of the educational environment of the technical university allows us to identify pedagogical situations that significantly affect the effectiveness of the process under study. All studied and experimentally tested pedagogical situations are conditionally grouped into three groups, differentiated by the purpose of the pedagogical technology used.

The first group of situations promotes personal self-realization and is conventionally designated by the symbol «Professional capital». They are aimed at:

- successful mastering by students of the ways of organizing activities;
- quantitative and qualitative accumulation of experience in various types of activities and future professional responsibilities;
- motivated involvement in joint activities with a teacher/professional practitioner/fellow student in order to acquire/share experience, arm new ways of activity;

- the presence of a model or elements of a future profession in educational activities;
- student's satisfaction with the success of their activities (work, actions, knowledge, achievements).

The second group of situations – «Personal capital» – involves:

- the student's awareness of the relationship between «Me and us»: am I able to understand a different personal/professional position, am I culturally tolerant;
- the opportunity to see myself in the position of «I am an employee»: what are my leadership abilities, can I work in a team, are the postulates and values of the corporate culture close to me;
- cognition of the correlation «I am like Me» (an autonomous acting subject of society and labor): optimist, pessimist, courageous, honest, responsible;
- monitoring and analysis of the state of «Me and my attitude to activities (social, professional)»: I do it with enthusiasm, carefully, consistently, easily solve complex, non-standard situations, I prefer an intuitive/scientific/creative approach;
- an opportunity to reflect on the projection of «Me and the future»: do I have a clear plan for it, how actively I perceive reality, what personal/social/professional prospects I see, whether I assume the desired career stages.

The third group – situations aimed at self-education, symbolically called «Educational capital», assumes:

- the focus of cognition, educational and research interest on the social and professional future, orientation towards socially and personally significant goals, standards that help predict a promising professional image;
- expanding the range of connections of the future engineer with the society around him, forming the image of the world, culture and profession to be acquired;
- familiarization with the system of professional activity based on an inventory of data about oneself, one's work opportunities and achievements [19].

The realization of situations requires appropriate forms of pedagogical support for the socio-cultural self-determination of the future engineer, set by their content. Thus, the situations of «Professional Capital» involve theoretical and practical exercises: individual, group and mass, as well as professional and creative auditions, master classes, excursions, business games. Situations of «Personal capital» are realized in hours of individual conversations, business games («We are different, but we are equal!», «Intellectual and intellectual», «Speech image of an engineer», «Constitution». The spectrum of «Educational capital» is carried out with the help of scientific research associations (the scientific circle «Socio-cultural space of modern Russia», the scientific research Dialogue club «The Power of the Word»), end-to-end and variable programs of educational and cognitive activities (including binary, interdisciplinary), the author's special course «Vectors of socio-cultural self-determination».

We combined the pedagogical possibilities of using the situations discussed above with building relationships with industry enterprises in order for students to gain practical experience in the context of their profession and ways of joining the future workforce. Thus, within the framework of studying the disciplines «Russian language and business communications», «Business Ethics of the Russian Railways Company», «Philosophy», «Methods of managerial decision-making», «Business communication and business etiquette», «Organization of an accessible environment in transport», discussion platforms (forums), lectures were organized-conversations, round tables (including using video conferencing) with representatives of industry enterprises. At these meetings, future engineers had the opportunity to exchange views in the format of a lively discussion on a number of practical issues related to future professional activities, draw conclusions about their readiness for work (including leadership); correlate the values of corporate culture, their own goals, professional expectations and personal, socio-cultural priorities; realize how much will be increased their human capital.

In the course of the research, a model of socio-cultural self-determination of the future engineer was developed based on the strategy of pedagogical support, which ensures the effective formation of his autonomous personal, social and professional position. During the experimental work, various methods and forms of educational work were developed and tested in the context of the implementation of the strategy of pedagogical support for this process, aimed at successful, effective self-discovery and determination of the future engineer's place in society, cultural space and professional sphere. The most successful method is, taking into account the peculiarities of the educational environment of a technical university, the purposeful construction of pedagogical situations in which a future technical specialist needs to set goals, demonstrate his intellectual level and the result of practical training, show teamwork skills in activities, identify his value-semantic guidelines, understanding the «human dimension» of his future professional activity. To control the success and effectiveness of students' socio-cultural self-determination, high, in-depth, basic and starting levels of socio-cultural self-determination are distinguished. The results make it possible to monitor changes in the level of socio-cultural self-determination at the initial and final stages of work in the context of pedagogical support of the process under study. The analysis of the results showed that the number of students at the entry level decreased to zero due to the redistribution between the high, advanced and reference levels.

DISCUSSION OF THE RESULTS

According to the positions of teachers (theorists and practitioners): the nature of a person's personal, selective [2], motivated connections with society and others [3], the choice of a personal life trajectory [27] is determined by an axiological system approved and assigned to them in the process of various activities, interaction with society [28]; it is these value orientations that form students' ideas about the goals of the activity and how to achieve them.

Let's justify the choice of the «pedagogical support» strategy in the socio-cultural self-determination of the future engineer. We believe that pedagogical support is the design and implementation of conditions for a future engineer to make rational decisions in various situations of value/professional/socio-cultural choice, interaction between a teacher and a student aimed at solving emerging problems of the latter's development. Support involves diagnosing the essence of the problem, its objective/subjective causes and a conscious choice of optimal ways to solve it. The scientific conclusion [21] is justified and interesting that referencing (consulting) and the creation of necessary conditions in which the future engineer is free to make decisions and which assume his responsibility for the choice made are integral attributes of the strategy of pedagogical support.

We agree with the scientific position [19], which focuses on the relative nature of self-determination; on the statement [6] that a person lives and acts in continuously changing political, economic, socio-cultural conditions, «loses» and «finds» himself in various spheres of life; conclusions [9] that in the process of self-determination, an individual axiological system and a person's worldview are formed; thesis [34] on the need to form lifelong learning skills. In our opinion, this implies the formation of an internal system of meaningful life orientations, concretization and filling with new content of established value dominants. It is important to emphasize that the established socio-cultural self-determination necessarily presupposes the correlation of one's worldview dominants, life strategies, and professional intentions, formed on the basis of free choice, with a personal and social position based on existing self-esteem.

Extrapolating scientific experience to the process of professional training of a future engineer, as well as on the basis of their own practical experience, it was found that socio-cultural self-determination provides a future engineer:

- building activities and behavior based on imperative universal values;
- social dialogic interaction;
- the use of socio-cultural knowledge in various types of communication;
- expansion of cultural horizons and intellectual growth;

- overcoming the possible technocratic thinking associated with the specifics of education and future work;
- formation of a value-semantic ideological core.

Also, as part of the work, our research [15] continued on the potential of the educational environment of the technical university, which, in our opinion, is a «fertile ground», a basic space for successful socio-cultural self-determination of the future engineer. This study allowed us to expand the range of possibilities of the educational environment of a technical university in the socio-cultural self-determination of a future technical specialist, while focusing on the collaboration of this process with increasing its human capital.

CONCLUSIONS

Based on the analysis of the results of the pilot work, the following conclusions can be drawn:

1. The socio-cultural self-determination of a future engineer is a complex process of his conscious choice, the results of which are expressed in the form of axiological orientations, life priorities and vectors that are in a state of constant readiness for actualization and implementation in real educational, socio-cultural and professional situations.
2. A model of socio-cultural self-determination of a future engineer in the educational environment of a technical university has been developed and tested.
3. The strategic directions of the success of the socio-cultural self-determination of the future engineer, which increase his human capital, are determined:
 - reliance on the potential of the educational environment of the technical university – a space in which there is an opportunity for the student to choose goals, vectors, content of self-education, self-development and self-determination;
 - pedagogical support of the student's socio-cultural self-determination by building specially designed pedagogical situations and motivated student participation in their solution;
 - the activity of the teacher, emphasizing the independence of the future engineer in decision-making and his responsibility for the choice made;
 - building a parity interaction of all subjects of the educational process in various forms of scientific and practical cooperation at conferences, round tables, scientific and practical seminars, master classes, interdisciplinary competitions, special courses, etc.
4. The implementation of the strategy of pedagogical support for the socio-cultural self-determination of a future engineer determines the qualitative restructuring and enrichment of professional and personal properties of students as future specialists and managers: rational use of theoretical knowledge, orientation towards social and corporate values, forms an active and grounded position in solving socio-cultural and professional tasks, enriches the experience of modeling life and work situations, invariably leading to an independent and responsible planning of their actions, the use of a critical approach to evaluating the results of their activities, the acquisition / formation of a «Self-concept», which involves forecasting their own socio-cultural trajectory and the implementation of an individual strategy to achieve the desired prospects in various spheres of life.
5. Successful socio-cultural self-determination (including using the strategy of pedagogical support) is an important result of a complex, multidimensional, determined by many objective and subjective factors of the process.

We have confirmed the hypothesis that the search and finding oneself in a team (in all diverse ways), cultural space, profession; the ability to make free choice and be responsible for its results allows a future engineer to assimilate, symbolize socio-cultural values and on the basis of this to increase and realize his human capital, realizing himself in intellectual, labor, social activity in the context of modern social and professional order. The stated goal has been achieved, the designated

tasks, in general, have been solved. Outlining the prospects, we note the need to continue work on studying the potential of the educational environment of the technical university; the search for new forms of interaction between all subjects of the educational process of the university, which will allow the future engineer to find his place in society and the professional community, as well as expand his socio-cultural horizons, increase human potential.

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