Е. В. Зюбан, Е. О. Муслимова

«Неформальные компетенции» как самостоятельная научная дефиниция: сравнительный анализ подходов к определению

Введение. В отечественном и зарубежном дискурсе обсуждается значение неформальных компетенций для успешной интеграции в рынок труда, общественную жизнь и т. д. Однако, несмотря на популярность понятия, единого определения того, что представляют собой неформальные компетенции, не существует.

Цель исследования – аналитический обзор подходов, методологии и результатов исследований, в том числе выполненных с использованием эмпирических данных разных стран, посвященных вопросу формирования неформальных компетенций.

Материалы и методы. Исследование проводилось методом качественного контент-анализа научных работ, методологических и других публикаций с использованием более 50 наименований источников и литературы по содержательно близким категории неформальных компетенций понятиям, в частности, «мягкие навыки», «социальные навыки», «жизненные навыки», «корпоративные компетенции» и т. д.

Результаты исследования. В рамках исследования показано, как неформальные компетенции способствуют усилению трудовой мобильности и повышению социальной активности индивида. Показано соотношение «личных», «социальных», «жизненных» навыков в модели неформальных компетенций, конкретным навыкам и компетенциям, включаемым в число неформальных. Отмечено что, индивид с широким спектром неформальных навыков успешно сможет компенсировать отсутствие формального образования благодаря своему опыту самообразования, а также оказать эффект повышения за счет неформальных навыков на социальный и профессиональный капитал.

Заключение. В ходе проведенного обзорного исследования были выделены основные блоки неформальных компетенций, освещаемые в научном и практическом дискурсе. Выявленные неформальные мета-компетенции, встроенные в модель LLL, переводят исследование на новый уровень и открывают широкие возможности для дальнейшего изучения.

Ключевые слова: неформальное образование, неформальные компетенции, корпоративные компетенции, социальные компетенции, мета-компетенции, модель формирования неформальных компетенций, обучение в течение всей жизни

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«Non-formal competences» as an independent scientific category: a comparative analysis of approaches to the definition

Problem and goal. Russian and foreign discourse discusses the importance of non-formal competences for successful integration into the labor market, social life, etc. However, despite the popularity of the concept, there is no single definition of what non-formal competences are.

The purpose of the study is an analytical review of approaches, methodology and research results, including those carried out using empirical data from different countries, devoted to the formation of non-formal competences.

Methodology. The study was carried out by the method of qualitative content analysis of scientific works, methodological and other publications using more than 50 titles of sources and literature on the conceptually similar categories of non-formal competences, in particular, "soft skills", "social skills", "life skills", "corporate competences", etc.

Results. The study shows how non-formal competences enhance labor mobility and increase the social activity of an individual. Shown is the ratio of "personal", "social", "life" skills in the model of non-formal competences, specific skills and competences included in the number of non-formal ones. It is noted that an individual with a wide range of non-formal skills will be able to successfully compensate for the lack of formal education due to his experience of self-education, as well as have the effect of increasing through non-formal skills on social and professional capital.

Conclusion. In the course of the review study, the main blocks of non-formal competences were highlighted, covered in scientific and practical discourse. The revealed non-formal meta-competences embedded in the lifelong learning model take research to a new level and open up wide opportunities for further study.

Keywords: non-formal education, non-formal competences, corporate competences, social competences, meta-competences, a model for the formation of non-formal competences, lifelong learning.

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Introduction

Non-formal education, its forms, characteristics, and potential in the implementation of a lifelong learning (LLL) model is attracting the attention of researchers and practitioners in many countries. In a general sense, non-formal education is understood as any organized educational activity outside the formal education system, aimed at a special group of students and educational results [40].

With the development of new trends in the educational space in recent years, interest has increased many times not only in the category of non-formal education, but also in the concept of non-formal competences. Russian and foreign discourse discusses the importance of non-formal competences for successful integration into the labor market, social life, etc. However, despite the popularity of the concept, there is no single definition of what non-formal competences are. The literature uses meaningfully similar concepts such as *soft skills* [31], *social skills* [18], *life skills* [6; 11], as well as the essential characteristics and functional potential of non-formal competences. Questions remain about whether all skills and competences learned outside the formal education system are non-formal; whether it is possible to apply to the development and assessment of non-formal competences the competence maps that are customary in formal education; how the measurement of educational outcome in non-formal learning is carried out.

The purpose of the study is an analytical review of theories, methodology and research results, including those carried out using empirical data from different countries, devoted to the formation of non-formal competences.

The article explores the key terms and concepts, special attention is paid to the ratio of personal skills, social skills, life skills in the model of non-formal competences, specific skills and competences included in the number of non-formal ones. In the final section of the article, based on the analysis carried out, the authors answer the questions about whether the formal educational system remains the main resource for obtaining the necessary knowledge and skills, whether an individual with a wide range of non-formal skills can successfully compensate for the lack of formal education due to his experience of self-education, what effect an availability of non-formal skills makes on social and professional capital of a person, etc.

Materials and methods

In the review study, the method of qualitative content analysis of publications in Russian-language and foreign scientific journals, the documentary base of international organizations in key conceptual categories was applied. The review made it possible to highlight the most cited works in this area, as well as conceptual works that did not gain wide popularity, but highlight the significant characteristics of the issue. At the first stage, the works devoted to the consideration of the general aspects of the concept of non-formal competence, distinguishing its characteristics and functions, were analyzed. Further, the publications were considered, clarifying the substantively similar categories of corporate, personal, social, life competences and skills. To clarify the concept, we analyzed the existing methods, indicators and indicators used by international organizations (UN, UNESCO, OECD, etc.), research

organizations, government agencies, corporations to evaluate non-formal skills and competences, their assessment and recognition.

The methodological basis of the study, as well as the questions put forward for fundamental analysis, introduced several restrictions into the content of the review. The review did not include a detailed consideration of the practice of recognizing non-formal competences and skills as a result of non-formal educational activities at the national and international level, since the topic of certification and validation of non-formal learning is an equally wide research problem. In foreign scientific discourse, the term “skill” often supplants the concept of “competence”. For this reason, the authors made an attempt to develop a unified approach to defining the category of non-formal competence in the analysis of Russian-language and foreign research works and materials of international organizations to clarify the definition.

Results

Skill, competences and competency: delineation of concepts

Despite the fact that the concept of non-formal education was formulated in the 1970s, the issue of studying and practical implementation of non-formal education is still relevant. Since socio-economic trends and global events demonstrate the interpenetration of various types of education. Formal learning borrows the methods of the non-formal as a response to the demand of learners and the educational environment in forms of learning that are different from traditional ones. In turn, non-formal education uses more familiar to the formal system mechanisms for assessing and certifying learning outcomes.

Initially, non-formal education was perceived as “supplementary”, “compensatory”, “learning outside the school”; its main goal was to overcome the shortcomings and contradictions of the traditional school system. However, it is now officially recognized as a full-fledged part of the lifelong learning model, along with formal and informal learning. The concept of non-formal education, proposed in 1991 in the UNESCO periodical devoted to education, included among its main features, along with short-term, specific educational goals, heterogeneity of the target audience – the functionality of educational content [13]. At the same time, the potential of non-formal education in the formation of the necessary *in situ* skills is noted [42]. Thus, the categories “*skill*” and “*competence*” in non-formal education have the same key meaning as in the formal educational system, and their core is based on the concepts of relevance and applicability. This raises a key research question what skills and competences are in non-formal education.

The problem of the category of “non-formal competence” researching requires an appeal to the concepts that are in the same semantic and research field. For the formation of a unified approach and the definition of “non-formal competences”, it is necessary to clarify such concepts as “*skills*”, “*competences*”, “*competency*”. These terms serve as the basis not only for highlighting of the semantic meaning of the category we are studying, but also for studying the model of lifelong education, professional and human capital: further we will review various approaches to these concepts, highlight and indicate their characteristics and correlation.

In Russian science, the concepts of competence and competency are reflected in the works of many authors who study them from the standpoint of pedagogy and psychology. In particular, it is noted that competence and competency are not interchangeable concepts:

"competence shows what people do, while competency focuses on how they do it" [24]. In a professional environment, competency is a concept that reflects those areas of activity in which an individual is competent. While competence is a measurable pattern of knowledge, skills, abilities, behavioral and other characteristics that are necessary for a person to successfully fulfill a professional role or job function [43]. In a different interpretation, competence is defined as externally specified requirement that should ensure the effective performance of a particular activity, and the term "competency" as a characteristic of a person, the ability to realize these competences [29]. Competency can be perceived through the prism of interaction with the environment [22]. However, in line with the constructive approach, there is a serious problem in the study of competences, which caused the separation of scientific developments from practice [23]. It lies in the fact that competences are considered as "the psychic reality of the subject" – its characteristics and properties. In fact, from the point of view of a constructive approach, competences reflect the expected results of each other's activities by participants in a social situation.

In the context of various national systems for the recognition and validation of the results of non-formal and informal learning, researchers call "*knowledge*", "*skills*" and "*competences*" as the main descriptors of the fundamental characteristics of educational progress, differentiating these concepts as follows: knowledge is the result of learning and assimilation of concepts, principles, theory and practice; skills – acquired cognitive and / or practical abilities; competence – the ability to use and integrate knowledge and skills in the educational, professional and personal sphere of activity [26]. At the same time, competence in this semantic range occupies a central place, being a pragmatic and functional concept of education.

Thus, a review of approaches to defining the concept of competence and related categories of competency and skills show several key trends. Some authors, mostly foreign ones, equate competence and "competency"; "competences" and "skills" can also be used without clearly identifying distinctions. The difference between these approaches is schematically shown in Figure 1.

Figure 1 Models of skills, competences and competency correlation

In the theoretical framework of our research, we will understand by "competence" the following definition, on the basis of which the study of the concept of "non-formal competence" will be developed. Competence is a complex superstructure to current

education and experience that makes it possible to act in a specific area and solve specific problems.

Non-formal competences: analysis of research approaches

A review of publications within the framework of the topics we have designated made it possible to identify several areas of non-formal competences, which we will present below.

1. Competences obtained in non-formal education

The most common approach in science to the interpretation of non-formal competences is their definition through the sphere of formation (non-formal education). In this case, non-formal means any soft (non-professional) or hard (professional) competence acquired by an individual in the process of non-formal learning. With the exception of the formation environment, such competences have no special, "non-formal" specificity; they can be obtained both in the non-formal and in the formal educational system.

Different researchers assign a different set of categories to soft competences and skills formed through non-formal education. These are interpersonal, group and organizational skills and competences: the ability to resolve conflicts, conduct intercultural communication, leadership, the ability to plan, organize, control, direct, coordinate activities, solve problems and tasks, work in a team, maintain discipline, and exercise responsibility [17]. The authors point out the importance of the following soft skills and competences developed in non-formal education as part of the transition to industry 4.0: the ability to work in a team and create professional connections, to carry out communication, personal efficiency and self-development, creative and innovative thinking, leadership [10].

A separate area in the study of competences obtained through non-formal education is information and communication (ICT) competences and skills. Their importance is emphasized by A. Grajcevci and A. Shala, referring to the need of development of computer and digital literacy, including for gaining access to online learning [12]. Several main blocks stand out within the framework of ICT competences: basic information literacy (search, processing and management of information and databases), digital communication (interaction through information and digital technologies), digital product creation (the ability to generate content), information security (data protection, their ethical and safe use), solution of technical problems in the use or creation of ICT [2].

In addition, non-formal education helps in the development of basic skills such as literacy (reading, writing, arithmetic), linguistic skills (knowledge of a foreign language), oral communication, and problem-solving skills. This is discussed by the authors of scientific publications [10], and is actively mentioned by the largest international organizations such as the UN, UNESCO, OECD, EU, etc. [45; 44; 30; 4]. The United Nations Organization introduces its own classification of competences and skills that can be obtained, including through non-formal learning: these are cognitive and non-cognitive skills [46; 47]. The first UN group includes basic abilities for reading, writing and counting. The second group of non-cognitive competences is much broader; it includes critical, systematic and creative thinking, interpersonal and intrapersonal skills, media and information literacy; these are what other sources call "soft", "horizontal" and "flexible" skills, as well as "21st century skills." The European Union includes communication in their native language, communication in a foreign language, competences in mathematics, science and technology, digital competences, learning skills, entrepreneurship and self-expression skills in culture, interpersonal, intrapersonal, social and civic competences [3; 4; 5].

An important area of application of non-formal and informal learning is volunteering. The importance of volunteering as an informal educational activity provides an opportunity for the formation of not only soft, but also professional skills and competences [27]. With the help of volunteering, the formation of several groups of non-formal competences identified by the researchers is available: methodical (problem solving, the ability to communicate and moderation, coordination of tasks and reflection), personal (the ability to take responsibility and show initiative, self-reflection), communicative (oral speech, listening, dissemination of information, use of information technology), organizational (time management, delegation of tasks, recruiting and involvement), interpersonal (the ability to establish and strengthen interpersonal relationships, flexibility) [28]. The specificity of volunteering and its applied nature allow the allocation of special, "*volunteer*", non-formal competences, which are based on a combination of leadership and analytical thinking [16].

In Table 1 we have identified several groups of competences and skills that exist in the scientific discourse and the agenda of international organizations that are classified as non-formal, that is, they can be mastered through non-formal education.

Table 1

Non-formal education competences

No	Groups	Source	Competences and skills
1.	"Soft skills"	Scientific discourse	Ability to cooperate and negotiate Ability to maintain discipline Conflict resolution Intercultural communication Leadership Planning, organization, control, coordination of activities Responsibility Show initiative Solving problems and tasks Teamwork
2.	Information and communication competences		Information security Digital communication Digital product creation Information literacy Solving technical problems when using or creating ICT
3.	Volunteer competences		Analytical thinking Leadership
4.	Hard skills		Narrow professional competences and skills necessary for the implementation of specific professional activities
5.	Basic (cognitive)	UN, OECD, UNESCO	Linguistic skills (knowledge of a foreign language) Literacy (reading, writing, arithmetic) Oral communication Problem solving
6.	Basic non-cognitive / "horizontal" competences	UN	Critical, systematic and creative thinking Interpersonal and intrapersonal skills Media and information literacy
7.	"New" basic competences, competences 4.0.	EU	Ability to learn Communication in a foreign language Communication in the native language Competences in mathematics, science and technology Digital competences Interpersonal, intrapersonal, social and civic competences Skills of entrepreneurship and self-expression in culture

Non-formal education has become widespread in the corporate environment; companies often use it to train and improve the skills of their employees. Since this trend is increasing every year, a new category of non-formal competences has appeared in the research discourse – competences obtained in corporate training, or *corporate competences*.

2. Corporate competences

During the scientific review, we identified a special category of non-formal competences; these are corporate competences that are formed through non-formal education. In scientific discourse, such a formulation is not often encountered, but the category of corporate competences fully meets the objectives of our research. In addition, the corporate ones reflect the requirements for the employee in accordance with the corporate culture of the organization [39; 25; 15]. The corporate culture forms specific corporate competences, specific for each organization.

As part of our research, we paid special attention to the practical application of non-formal education in the corporate environment and examined the models of employee education within companies, which are used to form certain corporate competences necessary for a particular company.

Table 2 examines Russian and international companies and corporate competences that they form in personnel through various non-formal educational technologies and platforms.

Table 2

Formation of corporate competences using non-formal learning

No	Company	Resources / technologies	Competences
1.	PJSC "Sberbank"	1. Corporate University of Sberbank 2. Books of the Sberbank Library series 3. Online library 4. Video lectures 5. Information and analytical bulletin 6. Social educational platform InSberria 7. Blogs, social networks 8. Training of internal trainers 9. Strategic sessions	Customer focus Communication Leadership Organization of work Working with talents Systems thinking Strategic thinking
2.	PJSC "Gazprom"	1. E-learning 2. Digital library 3. Webinars 4. Video conferencing 5. Online platform "We.Study" 6. Online library 7. Portal of the Corporate University 8. Virtual project teams	Flexibility Customer focus Focus on quality Finding information Problem solving Strategic thinking
3.	Yandex	1. "School of Data Analysis" 2. "Yandex workshop" 3. Online simulators 4. Mentoring	Communication Critical thinking Programming Team management
4.	GE (General Electric)	1. Mentoring 2. Strategic sessions 3. Corporate programs	Communication Customer focus Financial competences Leadership

The use of non-formal education in various sectors of the economy can significantly reduce the cost of training of a specialist for specific requirements of the organization. The banking sector, energy companies, restaurant business, transport companies are active users of non-formal education. Training in corporations is carried out through the creation

of corporate training centers, corporate universities, closed virtual schools or various educational platforms.

3. Social, personal and life competences and skills

A special group of informal competences are the so-called “competences for life”: social skills, personal skills, life skills, civil skills, cultural competences and citizenship skills. In scientific discourse, they are united by the formulation of “*transferable skills*” – such abilities and skills can be easily applied in completely different spheres of human life.

The study of competences for life assumes their multifaceted characterization, dominated by cognitive and behavioral approaches. These include the social, emotional, and cognitive skills and behaviors that are required for successful social integration. For this reason, social behavior is classified as social competence only when it contributes to social competency in the interaction of a person and the environment [7; 8]. Thus, social competence must be understood as an integrative characteristic of a person [21]. They provide effective social interaction, which is an integral part of a person's professional capital.

Life skills are interpreted as a tool for human development, the ability to solve the problems that he faces in modern society, and to adapt to living conditions. These can include both basic soft competences and skills: so, the ability to make decisions and solve problems allows you to evaluate options for action, as well as the consequences of these options, and to interact constructively with problems. Creative and critical thinking helps to analyze information, look for alternatives and respond adaptively to situations. Mindfulness and empathy make it possible to recognize and understand yourself and others, to cope with negative emotions and stress [50]. Specific skills and competences are also highlighted: egalitarian attitudes in relation to gender roles, awareness of civil rights, civic responsibility, etc. Personal competences and skills can act as an integral part of social and life competences, or they can be categorized independently.

The category “cultural competence” describes the degree to which an individual shares with others an understanding of his own and other culture [9]. Cultural and social competences in this sense are based on the cognitive definition of culture and social life: what you need to know in order to function adequately in a community.

In view of the fact that the discursive fields of social, life, personal and cultural non-formal competences have obvious intersections, in the analysis we combined the units most frequently repeated in scientific discourse into three main groups: interpersonal, intrapersonal and cognitive competences (Table 3).

Table 3

Competences for life within the framework of non-formal competences

Interpersonal competences	Intrapersonal competences	Cognitive competences
Ability to cooperate Communication Conflict Management Empathy Leadership Teamwork skills Time management Tolerance	Emotion management Self-control Self-regulation Stress management Sustainability	Ability to achieve goals Ability to make decisions and assess consequences Critical and creative thinking Management of risks Organization Planning Problem solving Use and management of information

Resources and methods of mastering competences for life imply the inclusion of not only formal and non-formal educational practices, the use of informal learning plays a significant role here: in the family, educational environment, social group. Socially significant activity (for example, volunteering) is also a source of designing a strategy for human growth, gaining experience in social interaction [20]. Community learning practices are becoming widespread. Learning in a community happens during the process of close cooperation within a social group.

4. Non-formal competences as an independent category.

Non-formal meta-competences

Numerous approaches to researching and defining of the non-formal competences have a significant common ground; non-formal competences, regardless of what exactly constitutes their basis, are built into the general system of the lifelong / lifewide learning model. Here, formal, non-formal and informal learning opportunities need to be closely linked in order to create a “culture of lifelong learning” that promotes social and professional integration. This is evidenced by the agenda of leading international organizations (OECD, UN, etc.).

A fundamental analysis of non-formal competences allowed us to come to our own understanding of this category. In our opinion, the non-formal competences, as such, should include the meta-competences formed in the process of the practical implementation of the LLL model. The formation and development of such meta-competences allows an individual to build a unique educational trajectory, systematically increasing his own human and professional capital.

We refer to the following non-formal meta-competences:

1. Ability to learn – the ability to control learning outcomes, independently plan the educational process.
2. Information management – the ability to find, use, analyze sources of information, create and transmit information.
3. Modeling the educational trajectory – the ability to assess and transform a set of competences in accordance with the conditions and circumstances.
4. Forecasting – the ability to assess the dynamics of educational and professional demand, consequences and risks, to form a response to the demand of society and the labor market.
5. Reflection – the ability to assess one's own competences, learning outcomes, to analyze the advantages and disadvantages of educational resources and a set of existing competences.

Such meta-competences are mastered exclusively in the process of lifelong learning, their formation is checked empirically, and their presence indicates a high level of integration of the individual into the LLL model. At the same time, the formation of non-formal meta-competences and the practical application of the lifelong learning model are interrelated and complementary processes.

Lifelong learning model based on non-formal competences

Our analysis of the category of non-formal competences made it possible to identify three interrelated competence groups that can be formed through non-formal learning:

Group 1 is formed with general or basic non-formal competence; it includes the following competences: 1) literacy; 2) communication; 3) basic digital competences; 4) problem solving; 5) critical thinking; 6) leadership; 7) teamwork.

Group 2 includes the necessary corporate competences: 1) systems and strategic thinking; 2) creativity; 3) professional digital skills; 4) specialized professional competences; 5) professional communication; 6) management.

Group 3 – “competences for life” combines such competences as: 1) self-control; 2) stress and time management; 3) adaptability; 4) empathy; 5) the ability to cooperate; 6) tolerance; 7) conflict management.

Each of the blocks can be supplemented and expanded in accordance with the competences that we considered earlier. The ratio of competence blocks in the LLL model is shown in Figure 2.

Figure 2 Non-formal competences in the LLL model

This model demonstrates the relationship between lifelong learning and the formation of non-formal meta-competences as part of a person's professional capital, including human and social capital. The educational process using non-formal education is continuous; when the competences of a certain basic level are formed, the individual moves to the next level of the educational trajectory. It is assumed that this model is completely dependent on the formation of such meta-competences as reflection, forecasting, and modeling of the educational path. The formation of the group of meta-competences makes it possible to move to the next level of education or return to the previous one to re-study the passed non-formal educational formats.

Discussion

As researchers (in particular, S. Romi, M. Shmida, J. Bimrose) point out, there is a significant imbalance between the wide range and constant development of non-formal education practices and the scarcity of its conceptualization and theoretical comprehension [35; 1]. We see a reflection of this trend in the field of non-formal competences; they find a significant response and are in demand by the professional, educational, social environment, but they remain poorly studied and theorized by the science.

For a significant period, the only way to formulate competences was formal education, which has a formed system of recognition and assessment of professional competences. However, the lifelong learning system expands the educational field to include non-formal and informal learning. Thus, a large number of competences and skills can be obtained

outside the formal educational system through non-formal and informal educational practices, which is consistent with the results of Russian and foreign studies conducted by T. Højgaard, K. Polymeropoulou, A. Kameas, I.L. Shelekhov, K. Surapunpichit, K. Scubic Ermenc and others [14; 32; 41].

The analysis of publications within the framework of the problem field allows us to conclude that in modern socio-economic conditions, the main requirement of students is the speed of mastering new knowledge, abilities, skills and competences. Non-formal education is based on the practice of "learning by doing", which is why it provides students not only with the transfer of knowledge, but the most important *in situ* skills and competences. We find confirmation of this thesis in the works of Russian and foreign researchers. A.Y Rahmi and A. Safitri emphasize that one of its features of non-formal education is maximizing education and minimizing other aspects that formal learning includes (hierarchical structure, chronology, discipline, certification, etc.) [33]. According to W. Widodo and W. Nusantara, the focus in non-formal education is shifted to a learner and his educational request, so it is more flexible [49].

In turn, the ability to quickly orientate in the educational space and expand the professional competence in a short time is in demand by employers and the labor market, which correlates with the opinion of M.N. Kicherova and E.V. Shestakova [19; 38].

It is obvious that the deepening and expansion of lifelong education entails the emergence of various classifications and groups of non-formal competences. The broad group of non-formal competences not only represents the subject of research for many scholars; the formation and development of these competences is reflected in the practice of leading intergovernmental and non-governmental organizations, national governments [34; 48]. Such competences and skills, according to the international political agenda, are the basis for successful integration into society and the labor market.

Conclusion

In the review study, we have identified the main groups of non-formal competences, highlighted in scientific and practical discourse. The analysis of the problem field and the developed approach to the categorization of non-formal competences allows us to conclude that non-formal meta-competences play a key role in the formation of an individual's professional capital (a complex of human and social capital), their definition has high scientific and practical significance. Questions about whether there are patterns in the development of non-formal competences, how individuals with different basic sets of knowledge and attitudes can form non-formal meta-competences, whether formal education remains the foundation of the LLL model, move the research to a new level and open up wide opportunities for further study.

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