THE IMPACT OF MODULAR LEARNING OF ENGLISH FOR SPECIFIC PURPOSES ON STUDENTS' SATISFACTION OF EDUCATION PROCESS

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Abstract. The development of the education system in Russia is considered as one of the most important strategic goals of the society. The professionalization of teaching a foreign language at the universities is a global trend. ESP (English for Specific Purposes) has become increasingly important as there has been an increase in vocational training and learning throughout the world.

The article reveals the key theoretical and practical aspects of the system of modular learning in the South Ural State University, the Higher School of Electronic Engineering and Computer Science, as a new design for the teaching and learning cooperation. The principle of modular organization of educational material involves the organization of training in the form of professionally-oriented modules. The paper defines the term "module", describes the criteria for selecting educational material, outlines the structure of a module and a set of exercises.

The aim of our research was to study the satisfaction level of students with the quality of education and to analyze the implementation process of the modular learning. The following tasks were solved: the experience of using modular learning in educational process was analyzed, the level of students' satisfaction with the quality of education system was evaluated. Theoretical (analysis of modern scientific and methodological literature) and empirical (questionnaire, mathematical processing of the obtained data) methods are applied in the study. The research shows that the implementation of modular learning had a positive impact on students' outcomes and the level of students` satisfaction with the education process increased.

Keywords: modular learning; modular approach, ESP, ESP modules

ВЛИЯНИЕ ПРОФЕССИОНАЛЬНО-ОРИЕНТИРОВАННОГО МОДУЛЬНОГО ОБУЧЕНИЯ ИНОСТРАННОМУ ЯЗЫКУ НА УРОВЕНЬ УДОВЛЕТВОРЕННОСТИ СТУДЕНТОВ УЧЕБНЫМ ПРОЦЕССОМ

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Аннотация. Развитие системы образования в России рассматривается как одна из важнейших стратегических целей общества. На современном этапе тенденция профессионализации преподавания иностранного языка в университетах ярко выражена, и ESP (английский для специальных целей) становится важным аспектом, поскольку во всем мире наблюдается рост числа совместных проектов и делового сотрудничества. В статье раскрываются ключевые теоретические и практические аспекты

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системы профессионально-ориентированного модульного обучения иностранному языку в Высшей школе электроники и компьютерных наук Южно-Уральского государственного университета. Принцип модульной организации учебного материала предполагает организацию обучения в виде профессионально-ориентированных модулей. В статье представлены различные определения модуля, критерии отбора учебного материала, структура модуля и набор упражнений. Цель исследования – изучение уровня удовлетворенности студентов качеством образования и анализ процесса внедрения модульной технологии обучения. Поставлены и решены следующие задачи: проанализирован опыт использования модульного обучения в образовательном процессе, оценен уровень удовлетворенности студентов качеством системы образования. В ходе исследования применены теоретические (анализ современной научно-методической литературы) и эмпирические (анкетирование, методы математической обработки полученных данных) методы. Был сделан вывод о том, что внедрение модульной технологии обучения в образовательный процесс оказало положительное влияние на обучение студентов и повысило уровень удовлетворенности студентов учебным процессом.

Ключевые слова: модульное обучение; модульный подход, ESP (английский для специальных целей), профессионально-ориентированный модуль

Introduction

The development of the education system in Russia is one of the most important strategic goals of the society. Our community is in need of specialists with high level of professionalism, demonstrating creativity and sharing the values necessary to live in a democratic society, to be its responsible citizens [1, 2, 13].

At present stage of the development of higher education at non-linguistic faculties of universities the professionalization of teaching a foreign language is the global tendency [15]. More and more people are using English for Specific Purposes (ESP) for increasing level of professional training. There is no denying the fact that globalization catalyzed international communication in English [6, 17].

The specific goal of the ESP is to aim at the needs of a specified group of learners. ESP is presented in English for Academic Purposes (EAP) and English for Occupational Purposes (EOP) [9].

The major features of ESP are:
• focus on learners' needs;
• usage of the concrete methodology and activities;
• highlighting the skills corresponding to the activities;
• ESP learners' involvement in cross-cultural communication and the sociolinguistic competence development;
• teaching aids are connected with the needs analysis results [9].

The core questions are the following:
• What should learners do with English?
• Which skills do they have to develop?
• What genres are they to master for the comprehension determination?

Bell emphasizes that the subject matter knowledge depth teacher requires depends on the following factors [3]:
• The depth of specialism knowledge of a student;
• Learners: pre- or post-experience stage in learning a foreign language;
• The level of specification of skills and the language.

There is the three Cs plan for improving teachers' work.
• Curiosity: the instructor needs to be interested in the subject and to know more.
• Collaboration: there should be a desire to find specialists, share the work and seek for the feedback.
• Confidence: exploring the new subject area, connecting with specialists and work experience [3].

The pedagogical vocabulary is rich in terms connected with "module": modular approach, modular technology, modular program, modular method, modular-rating technology. All these terms came from computer sphere and established in the science. But in these cases, it is connected with the methodology based on the educational modules' development for various courses [10, 14]. As far as the "module" concept is con-

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cerned there is a huge variety of definitions in Russian and foreign pedagogical literature. G. Owens and G. Russell have given the similar definitions. According to their opinion, the major feature of a module as a comprehensive, flexible separate unit is a tight educational complex consisting of a learner, a teacher, study material and teaching technologies; a training package that focuses on the educational material and actions conceptual unit for students, "organizational-methodical structural unit within the academic discipline framework" [5, 12, 16].

South Ural State University (National Research University) is one of Russia's core educational institutions. The main determination of the SUSU development program is to transform the university into a SMART university. After the integration of in-depth language training into the educational process, it was decided to use modular approach in the ESP semester, which eventually contributed to more effective mastery of a professional foreign language.

The modular organization principle of study material includes the training organization in the professionally-oriented modules form. In our opinion a module is a high-level integrity system with the purpose functional cornerstone containing the educational and technological content. Moreover, the module functions as a means of self-education, as it has got a bank of information, a target action plan, a methodological guide for achieving study goals. Furthermore, it is a training program tailored in methods, content, level of independence, student's pace of educational and cognitive activity [4, 18].

Our modular course focuses on:

• determining students' preferred learning styles and help them develop strategies to become more effective language learners, both in and outside the classroom;

• raising students' awareness of how they learn and developing their abilities to become more autonomous and effective language learners;

• looking at different types of motivation and explore ways to increase students' motivation to learn English;

• promoting communicative language learning;

• developing students' language fluency and confidence when performing tasks in English;

• making lessons more student-centered, in order to promote learner autonomy and encour-

age learners to take more responsibility for their learning;

• sharing and extending ideas for teaching grammar in a fun, communicative and meaningful way, to help develop learners' language skills; activities which can be used as warmers, fillers and coolers during lessons, to vary the pace of lessons and maintain students' interest and motivation; ways to develop students' reading, writing, listening and speaking skills, to evaluate the effectiveness of different tasks and extend teachers' resource bank of teaching ideas and materials;

• providing a model procedure which teachers can apply [7].

To form the Higher School of Electronic Engineering and Computer Science students' foreign-language professional competence, we have developed a special set of educational exercises, which is represented by the following professionally-oriented modules:

• Computers: past, present, future
• Computer architecture
• Operating systems
• Computer languages
• Jobs in ICT
• Artificial intelligence
• Internet
• IT Security
• Internet of Things

In the research we elucidate the following selecting study material criteria in a professionally-oriented module: orientation on profession (real problem presence of the significant aim for students within the professional orientation or experience), richness of cross-cultural information, students' psychological and age features compliance. The criteria touch upon the novelty information presence and the accessibility in the problem under consideration presentation, new aspects of the study material, the lack of information completeness solving the situational problem [8].

ESP modules emphasize more on contextual language than on teaching grammar rules and general vocabulary clichés. The topics are varying from from career in IT sphere to Internet of Things. The cornerstone of the system is that the language is taught jointly with the real students' needs, it is integrated into the specific professional area [9, 11].

Exercises system has the purpose of profes-

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sional vocabulary mastering, professionally-oriented grammar practicing, terminological use of styles, analyzing and understanding texts on the basis of texts from real sources. Search for the Internet, radio and TV, newspapers and magazines information is a key characteristic of this complex. That highly develops the ability to analyze, to generalize, to allocate the major tendencies, to present the material in English, to emphasize creativeness and independence development.

All modules include problem-solving tasks, professionally-oriented role-plays, project works, simulative exercises for conversation and discussion participation. They also contain video banks with professional situations in various forms, for instance, interview with IT glitterati, TED talks of outstanding programmers and soft developers, BBC news. The video is provided with pre-listening and after-listening activities. As a conclusion to each module the Glossary is presented. The function of this lexical material is to control the lexical absorption.

The module is unique in a variety of task types:

• professional networking (subsequent information searching);

• problem situations (problem-solving activity, case-study);

• professional discussion (debates, job fairs, round-table discussions);

• professionally descriptive exercises (description based on visibility – presentation);

• initiative tasks (projects, role-playing games);

• professional gaming (quizzes, games, tests of a psychological personal and professional nature – "Jeopardy", "Where is the logic?", "Job start-ups").

The sample module can be represented by the following scheme:

Module 1 – Name of the module;

Lesson (A-C) – The name of the section: in each module from 3 sections, depending on the volume of the topic;

Lead-in – Introduction: in each section, before starting work with the material, questions, quotes from famous people or quizzes are offered in order to increase students' interest in this issue and preliminary reflection on the topic;

Texts (1–2) – Texts: each section contains 1–2 texts on the topic;

Exercises – Exercises: at the beginning, exercises related to text and working with words are offered, then working with the Internet, presentations and projects:

1. Scanning;

Skimming;

Matching;

Collocation making, combining;

Sentence completing;

Derivatives composing.

2. Play and trick;

Work-out in the net;

Case-study, problem-solving activity;

Round-table debates (using REDS formula);

Group (video, role-play) project;

Psychological tests;

IELTS projects in writing.

3. Professional analyzing grammar activity: professionally oriented grammar is presented in both theoretical and practical game format.

4. Listening (video) activity (pre- and after-listening tasks): professionally oriented listening with a series of tasks.

5. Glossary: dictionary of necessary terms, words and expressions on the topic.

Concluding all that has been said, we are able to assume that ESP gives a solid grounding for English language teaching within the professional context. It gives a high motivation to the students because they could learn English to their major – IT sphere. They learn grammar and vocabulary in meaningful for them context that motivates them greatly.

Materials and Methods

Theoretical (the analysis of pedagogical literature) and empirical (questionnaire, methods of mathematical processing of the obtained data) methods are applied in the study.

In our survey, we studied the Higher School of Electronic Engineering and Computer Science students' satisfaction of the modular learning. To achieve this goal, we used a method of analysis of performance data and a method of questionnaires.

The survey was conducted using the service Google forms. Students of the Higher School of Electronic Engineering and Computer Science of the South Ural State University were the respondents of the proposed questionnaire (Table 1).

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Table 1

The questionnaire on the degree of students' satisfaction

Question	Possible answers
1) Do you find it useful to study English for specific purposes in the field of information technology?	✓ yes ✓ no ✓ hard to answer
2) Why is it important for an IT specialist to know English?	✓ career ✓ business trips ✓ Internet language ✓ memory training ✓ media language ✓ tourism ✓ more
3) Does the content of the material correspond to your professional interests?	✓ yes ✓ no ✓ hard to answer
4) Which module of the tutorial did you like the most?	✓ Computers: past, present, future ✓ Computer architecture ✓ Operating systems ✓ Computer languages ✓ Jobs in ICT ✓ Artificial intelligence ✓ Internet ✓ IT Security ✓ Internet of Things
5) The development of what skills did you notice to a greater extent?	✓ listening ✓ speaking ✓ reading ✓ writing
6) Is there enough practice to effectively master a foreign language for specific purposes?	✓ yes ✓ no ✓ hard to answer
7) What was of particular interest to you while studying?	✓ reading authentic texts ✓ viewing video materials ✓ work on the project ✓ discussions ✓ dialogues ✓ writing tasks
8) Would you change anything in the course of teaching English for ESP?	✓ yes ✓ no ✓ more
9) How has your level of foreign language proficiency changed compared to the beginning of the course?	✓ has increased ✓ has decreased ✓ has not changed
10) What in the course turned out to be the most interesting and useful for you?	

Results and discussion

The survey was conducted (June, 2021) remotely with the help of the Docs.Google.com and was offered to students of the 2nd course of the Higher School of Electronic Engineering and Computer Science of the South Ural State University. These students (94 people) went through ESP modular course "English for IT Specialists", individually tailored for the students of SUSU.

We used the questionnaire method to find out the modular approach efficiency in teaching and learning for students' performance and achievement evaluation.

It turned out to be the most acceptable and effective for assessing student satisfaction, since it helped to reach a wide audience to obtain objective and reliable results because it was conducted anonymously. A survey of students is one of the effective tools for self-assessment, since

they are not only the main "consumers" of educational activities of the university, but also active participants in this process.

94 bachelor students of the 2nd course majoring in Computer Science were interviewed in order to identify their level of satisfaction with the quality of education and investigate the effectiveness of a modular approach in learning. The results of the survey were analyzed in details and presented in percentage terms, and the most common responses were also taken into consideration. The proposed questionnaire included open- and closed-ended questions, because we needed to know how students evaluated the learning material and to assess the degree of achievement of the planned results.

More than 89% of students found it useful to study English for specific IT purposes. IT is a rapidly developing industry where new devices, programs and applications are constantly being created and released. And all programming languages are based on the English vocabulary. You need to keep up with the times and the language to discuss the latest news in both business and personal life. A good reason not to be left behind is to learn the language.

According to the responses, most of the students (61people, 65%) noted career as the main reason for learning a foreign language. Language proficiency increases the getting a good job chances of in an international company in our country or abroad. An increasing number of multinational technology companies are choosing English as a common corporate language. Also,

according to the students, the future IT specialist should know the modern language of the Internet. Many useful and fascinating websites are written in English. Knowing the language, you will be able to understand them and take part in discussions and reviews. In addition, the most advanced literature, forums, are also written in English. The following diagram (Fig. 1) shows the students' answers.

As noted earlier, a foreign language for specific purposes is a functional variety of language and its purpose is to ensure adequate and effective communication by specialists in a given subject area, taking into account the specific situation of communication. This learning format of professionally-oriented modules was positively evaluated by 78% (73 people). They felt that the content of the material was fully relevant to their professional interests. 14% (13 people) responded negatively, and 9% (8 people) found it difficult to answer.

We also asked the students which module t of the tutorial they liked most of all. Having analyzed the data, we present a diagram (Fig. 2) showing the students' evaluation of the different professionally-oriented modules.

The students noted the development of their communication skills. This indicates that they value not only academic knowledge but also soft skills that are responsible for successful participation in the work process. The students consider speaking English language skill is the important language skill to be developed as a means of effective communication.
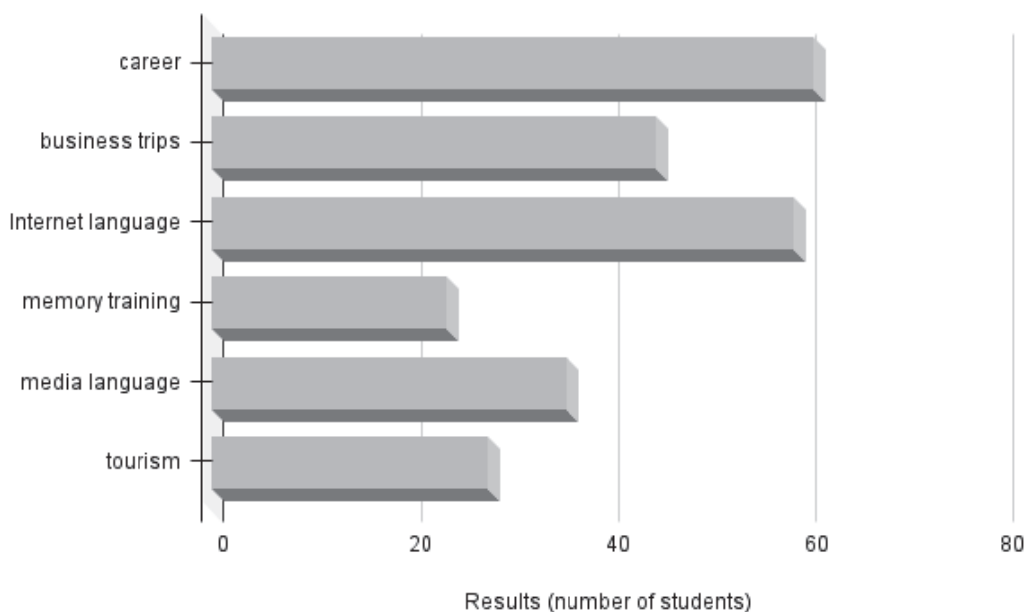

Fig. 1. Reasons for learning English for Specific Purposes

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The total workload of the subject is 180 hours (1 semester). The program of the subject provides practical classes 5 hours a week. 62% (58 students) consider this number of classes sufficient, 23% (22 students) consider it insufficient, and 15% (14 students) found it hard to answer. With this format of study, an increase in the level of foreign language proficiency is observed compared to the beginning of the study. The students are interested in the classes, they participate in the educational process with pleasure. In the following diagram (Fig. 3) we present the data showing students' evaluation of different types of tasks.

The results revealed that the use of project work is effective in teaching English for ESP classes. Project activities are a common form of implementing the art of planning, anticipating, executing and designing. The students wrote they had learned how to plan and follow the stages of a project work and how to cooperate with other partners while working on the project. The ability to communicate effectively is considered valuable not only for the language class but for other subjects as well. It can benefit you in many aspects of your life as it develops language and group work skills.

In the answer to the question "Would you change anything in the course of teaching English for ESP?" 66% of the students said they were satisfied with the modular approach in teaching and
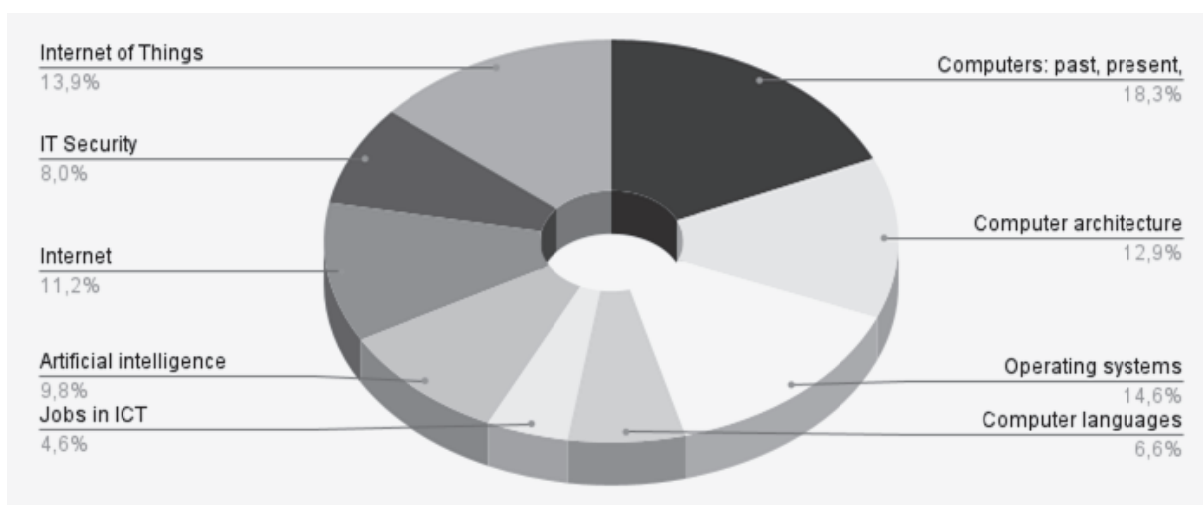

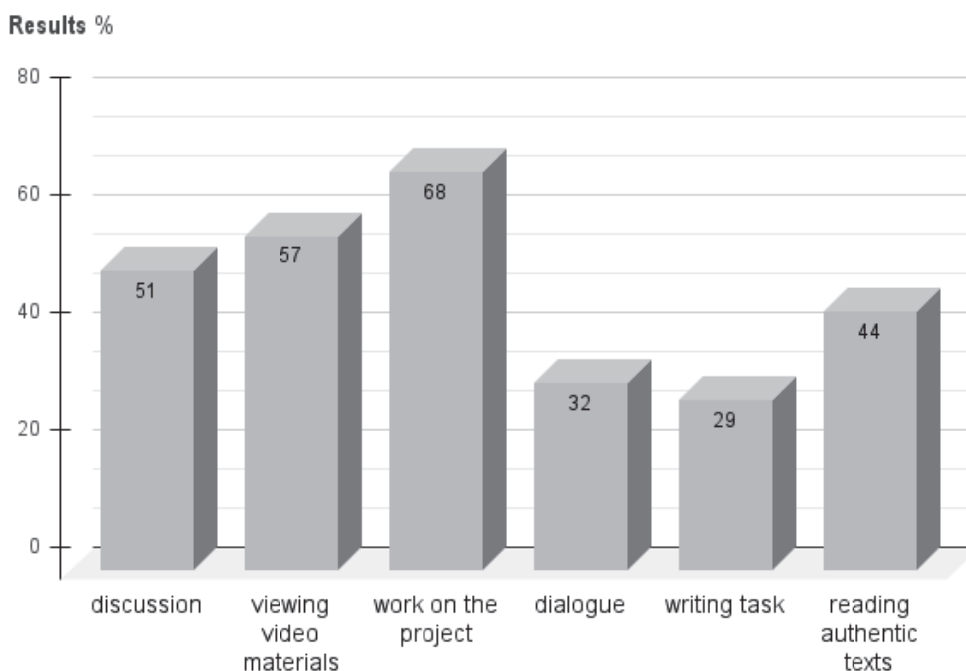**Fig. 2. Students' evaluation of professionally-oriented modules**

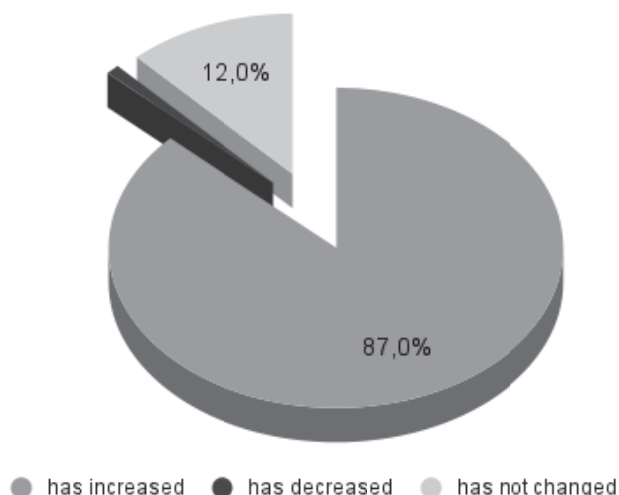**Fig. 3. Students' evaluation of different types of tasks**

Fig. 4. Level of foreign language proficiency

would not change anything. 7% would pay even more attention to monologues and 4% to dialogues, 15% suggested having more communication with native speakers and 8% with foreign students.

82 students (87%) believe that their level of foreign language proficiency has improved compared to the beginning of their studies. 11 students (12 %) think it has not changed and 1 % has decreased. All students' answers are presented in Fig. 4.

Thus, we can conclude that modular approach in teaching a foreign language for specific purposes is effectively implemented, as it contributes to positive changes in the educational process.

It turned out that the most interesting for students in the course was the final control activity "Jeopardy". All the questions were professionally oriented and students had the chance to test and demonstrate their accumulated knowledge in this intellectual game in English. All the students find

it challenging when you present the material in a creative way. All the activities will create a strong motivation and become a basis for achieving learning goals.

The study indicates that the module approach in teaching is efficient for improving students' knowledge, teaching and intensifying students' understanding and critical thinking.

Conclusion

Summing up, it is necessary to admit that students learn English when there are opportunities to understand and work with the contextual comprehensive base of a language. ESP is a powerful significant tool for such opportunities. Students acquire a foreign language as they work with professional sources.

Modular approach would strengthen students' motivation and involvement. It will be a profound alternative to traditional teaching considering active students' participation and better learning.

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