

**IMPROVING STUDENTS' INDEPENDENT LEARNING ACTIVITY WHEN  
TEACHING THEORETICAL ELECTRONICAL SCIENCE**

*Zokirova Dilnoza Nematillaevna*

*senior lecturer of the Namangan Engineering - Construction Institute*

*Juraev Nuriddin Ibrokhim ogli*

*Namangan Engineering - Construction Institute*

*Master's student of the Department of Electrical Power Engineering*

**Abstract:** The article contains many methods for organizing the student's work on himself (without the teacher's control), modern educational materials distributed by teachers for the student's independent study, and the main lesson for improving students' knowledge on their own. educational literature and resources of the Internet information system, methods of working effectively with them.

**Key words:** independent knowledge, independent learning, education, didactic process, assimilation, didactic tools, independent thinking, quality, efficiency.

The future of every people and nation is inextricably linked with the fate of the generation growing up today [1]. From this point of view in our country past period during education Attention is paid to the development of the education system at the level of state policy, so that our boys and girls receive an education in conditions that meet international standards, grow up to be physically and spiritually mature people, and reveal their abilities, talents and intellectual potential. Extensive work has been carried out. Training highly qualified specialists is one of the pressing tasks of our time. Classroom learning cannot fully provide students with high-level knowledge. Independence in this study activity filler acts as a developer.

Educational process in higher educational institutions, general secondary education The system is significantly different from the educational process. Studying in higher education institutions this process differs from the process in the general secondary education system, where it is given every day There are no repetitions of tasks or material. Secondly, in

classroomslecture And education How high level organize Not daily knowledgecontrol chance  
Very less Students knowledge quality, their independent workdirectly depends on. Students  
independent Job professor-teacher To definedAnd belongs instructions the independent work  
execution control by doing I'll go

Independent education – study process in training from students private This is important  
for the formation and development of skills special vigorous skills separately separate will not  
because they contain personal skills. In the formation of skills independent work with students  
serves programming. Theoretical electrical engineering the science in education knowledge  
recipients three basic skill harvest important to do. Consider at least one of these skills in  
continuing education. if we don't get it or don't value it enough, shaping the rest is of great  
importance weakened Below casting basic three skills Theoretical electrical engineering  
teaching science For us the basis existence service should do:

- experimental skill;
- intellectual And general education skill;
- special (private) skill;

All of these skills can be taught in a separate group with students or develop private  
skills without the supervision of a professor aimed at doing. It should be noted that intellectual  
skills are different problems and issues.in the decision mental actions effective fulfill ability  
They say. All in all in general, as intellectual skills, general and specific skills are formed the  
only one vigorous material based made increased. In that narrow skills, wide skills And  
difficult skills study material essence service opening does.

Psychologists study and investigate human activity in their scientific research. do his  
essence open give Problems With was studying. Man The essence of activity is motive, goal,  
conditions, action, process. can be understood by studying the elements that make up its  
structure. That's all emphasizing transition must subject orally actions – this study skill organize  
doer are actions. Actually, study activity, from students studyfocused on acquiring knowledge  
in the process of independently completing tasks. It's their business this allows us to  
understand the conditions for the formation of this knowledge. Psychologists action made  
increase method How "process" concept has entered.If processes are performed consciously,  
then it is a “skill.” And this practitioner bachelor degree And master stages received  
knowledge, qualification And skills independent respectively an approach chance creates This  
O constantly education system indispensable Part calculated – higher in education independent

education the role of training sessions is, of course, incomparable. Separate topics in self-study experience based that is laboratory works And experiments independent respectively planning, creative approach to their implementation theoretically and practically implemented with difficulties regarding approach. Qualified teacher such difficulties are observed in practice Theoretical electrical engineering science experimental training, skills and qualifications of teachers shows that this is not enough. To solve such problems and for the development of independent learning of students systematically an approach, education honesty has provided without look important important have

Analysis of the conducted pedagogical research shows that by specializations skilled bachelor degree stage specialists in preparation basic attention experimental in the educational process of students during independent educational activities qualification And skills form, rationalization capabilities in development systematic an approach to himself special promising results cause emits And future quality specialists in preparation important factor service like does.

On the last day of each week, the student reports what he has done for the week. he must take stock and check the implementation of the plan he has drawn up independently. Such out of control after, student, myself did this work truthful approach allowed flaws eliminate do a lot of easy will pass. Student independent Job performed his own only by force believe Necessarily SHE, upcoming a lot of difficulties he must prepare to overcome them, not forgetting what awaits him. Different direction be an expert professional Preparation be placed requirements, their "Expertise description". shown will Their following requirements There is:

- knowledge regularly growing up And developing go
- scientific and technical Is this information? looking for And in the application effective methods use;
- speciality direction suitable experiment broadcast know

These requirements represent "Generalized methods" of students' cognitive activity. requires the need to create. Generalized methods for studying any subject if formed And another Sciences in teaching practical seminar education performed for free if used "generalized methods", – called Otherwise in other words, it is a "generalized method" and is of a general nature. They say that methods.

For students generalized methods wide formation, Firstly, lesson in progress consumables time saved Secondly, knowledge high to the extent get up take will come the

tasks Faster execute those. mental leads to increased labor productivity. For example, students' knowledge Educational literature and the Internet information system play a key role in independent development. sources possession For, they are With effective At work following methods formation is suitable is:

- study materials has the meaning analysis by doing his basic basic separate receive;
- event And processes basic characteristics pointer electricity sizes mathematical derivation of formulas representing their relationships independent knowing;
  - read material text, the graphic arts And tables understanding;
  - read materials O 'z word With for free Speaking give
- in the textbook the subject material another from literature those who read perfect with without filling;
  - catalog With work And Bibliography compose knowing;
- summarizing what you read, writing a lecture thesis, and making a statement Make a plan know

Textbook And study manuals With Job culture some Social elements With students introduction important important have That's why For, students very necessary was this is the next recommendation we bring:

Everyone needs energy and time to work with literature correctly. you don't need to overpay. From time and task during work correct use is essential. Remembering what you read in the morning, that is, the human brain is efficient when it is not tired famous. If students study in the morning shift, after the end of the session 1.5 hour after educational literature With if they work will be fruitful.

productive mental work – a comfortable workplace. are favorable conditions. Students have books, writing paper, and drawings. and must keep their writing instruments clean and safe at all times. To the left of the workplace To enough level light down standing need Book study from start First you need to do the following: with a brief description of the book to know authors surname, Name, book Name, Print made knowing the printing house, city and year of publication, and how many times it was published receive to the goal Appropriate. This information importance big existence they are book O general concept I will give; How book, is this new? or Old she indicates that it is being read; this allows you to know who it is intended for. After that, from the first pages of the book we get acquainted with its plan and content. may

come out. Familiarization with the introduction of the book, its contents and his chapters, departments, paragraphs, to topics divided materials How allows you to get an idea of what is included in the system. This is for a student find out information, get a complete understanding of the book and read it makes learning easier. Having previously become acquainted with the book, that is, the picture, diagram and tables look useful to quit Counts

Books materials text With work creative an approach effective be For, to him mechanic way by reading Exit, to the goal in accordance with is not. Text Very attention With by reading Exit Student own word With material systematic, reliable by doing tell And explanation go pursuit, good Results.

Students independent their work organize achieve education modern stage majority current from problems It is one. This teachers personality to form cognitive independence necessary for professional development the basis was new knowledge regularly respectively receive With depends on. Some research analysis that's all shows that from students independent their work organize achieve Insufficient attention is paid to solving the problem. Its complexity and multitude factoriality that's all shows that this problem traditional education from forms Very difficult to solve with help. Thus, regardless of new knowledge respectively get update modern education in system don't look - resistance This is due to the presence, on the one hand, of acquiring knowledge at a fast pace. of necessity comprises existence study item To knowledge appropriation And limited opportunities to gain new knowledge using traditional teaching methods refers to

Increasing attention to the role of students' independent work during their studies, undoubtedly, radically reconsider the organization of the educational process at the university take will come his target student myself myself formation of the ability to develop, creatively apply knowledge and modern in the world adaptation another methods is an assignment. Increasing the level of self-education is associated with the level of knowledge of students. growing requirements, modern understanding of various spheres of human activity and introduction of innovative technologies With depends on.

Effective organization of independent work in the process of training future specialists. compliance with the professional and pedagogical direction of education, including ensuring a proportional combination of classroom and independent work for students methodologically correct organization of independent work in the classroom and beyond providing students with

the necessary methodological and educational materials and independent work go control do necessary.

Education information process fast development information technologies apply volume expand his content, methods And leads to changes in organizational forms. Modern information about the educational process technologies insert education quality increase For real conditions creates Directions for the use of modern information technologies in education The potential of curriculum as a teaching tool is recognized. is to increase. Modern computer from technology use based new education forms development another another electron textbooks, study manuals appear be take came they are lecture in the context both can also be used as materials for students' independent work. Studying in modern educational institutions support the process directed another another systems And information environment Job exit And used. The effectiveness of using such systems depends on two interrelated components. on the topic: real information system of education and activities of subjects of the educational process. organize achievements belongs methodology. From this except educational and methodological the structure and method of presenting materials in electronic form is not only possible, rather, they should be easily modified to suit the specific form of their use. A large number of training programs for the largest possible number of users. providing access to resources, as well as personalized attention and active learning methods support need

Self-paced learning is often tailored to the student's needs and projects. Certainly All basic Topics lid get give teachers responsibility Counts Independent education in fact basic two type separate according to the goal - independent work of the student under the guidance of a teacher (ENVIRONMENT) and student independent Job (TMI). Current in a day time AVERAGE according to standards (for example, for calculation and graphic work, course work, course project work skilled exercise, skilled diploma work, master's thesis And student Scientific research work student scientific and pedagogical activity And scientific practice (internship) leadership, doctoral student independent The candidate is given certain training loads, recommendations, etc. [2].

Independent work – taking into account the individual characteristics of students, in class both from the class outside too much another level by complexity study specially organized activities aimed at independently completing tasks. There are many of them for organizing the student's work on himself (without the supervision of a teacher). methods There is. For

example student independent study For teachers following him modern distributed learning materials present possible

- To science circle study literature electron the options are as follows the science scientific based reliable from sources electron way learn For necessary;
- The subject program is the credit, the period of study, the goals and objectives of the subject, course policy, subjects, types of training, types of independent work, teaching methods, grade criteria, books, final control questions And other With to know For necessary;
- To science circle glossary the science conditions And content fast development receive necessary for;
- Lectures text – the science Topics by reading education For necessary;
- Organize scientific forums on social networks and electronic platforms. discussion is an exchange of ideas between students on topics and tasks, science connected from the news informed be For necessary;
- videos, vodka, about science taken from the Internet video - the science Topics video recordings learning through necessary for;
- To science circle digests those. Internet links - from students Internet from links using item education For necessary;
- Multimedia sneakers, teacher tests, practical programs, virtual laboratory mobile stands construction through exercise by doing practical skillful have;
- To science circle MOOC With - this the science content student To Online learn;
- Examples of scientific cases are problem solving and they are With to know For;
- Scientific research Topics - independent respectively the science within scientific research take go scientific articles write For.

Independent education Good quality organize achieve the science teachers pedagogical is skill-based and requires transparent assessment. Thus, students reduction of subjective factors in assessment and evaluation automated, presentation, project, test forms current achieve must

#### **REFERENCES:**

1. O‘zbekiston Respublikasi Prezidentining “O‘zbekiston Respublikasi oliy ta’lim tizimini 2030-yilgacha rivojlantirish konsepsiyasi” to‘g‘risidagi PF-5847-son farmoni.

2. Sayfullayeva, D. A., Tosheva, N. M., Nematova, L. H., Zokirova, D. N., & Inoyatov, I. S. (2021). Methodology of using innovative technologies in technical institutions. *Annals of the Romanian Society for Cell Biology*, 7505-7522.
3. Zokirova, D. N. (2021). Goals And Objectives Of Organizing Independent Work Of Students. *The American Journal of Social Science and Education Innovations*, 3(01), 179-182.
4. Зокирова, Д. Н. (2021). Integration Of Professional And Educational Disciplines Into Training Of Self-Learning Motivated Students. *Современное образование (Узбекистан)*, (6), 24-28.
5. Nematillaevna, Z. D. (2021). Problems in providing independent learning education and ways to prevent them. *Academicia: An International Multidisciplinary Research Journal*, 11(1), 1431-1436.
6. Otamirzaev, O. U., & Zokirova, D. N. (2019). PROBLEMS ARISING WHEN APPLYING THE “BOOMERANG” METHOD IN THE COURSE OF TRAINING AND METHODS FOR THEIR ELIMINATION. *Scientific and Technical Journal of Namangan Institute of Engineering and Technology*, 1(11), 270-274.
7. Usubovich, O. O., & Ne'matillaevna, Z. D. (2022, April). INTERFAOL USULLARDAN FOYDALANIB TALABALARNING MUSTAQIL FIKRLASHLARINI SHAKLLANTIRISH. In *E Conference Zone* (pp. 101-105).
8. Usubovich, O. O., & Ne'matillaevna, Z. D. (2022). Methodology of using connecting elements of science in the organization of independent work of the science of hydroelectric power stations.
9. Отамирзаев, О. У., & Зокирова, Д. Н. (2018). Тажриба машгулотларини мустақил ўрганишга ундовчи таълим бериш орқали олиб бориш. *Современное образование (Узбекистан)*, (3), 45-49.
10. Usubovich, O. O., & Nematillaevna, Z. D. (2022). Problems Arising From the Use of the Case-Study Method and Methods of Their Prevention. *CENTRAL ASIAN JOURNAL OF SOCIAL SCIENCES AND HISTORY*, 3(6), 5-10.
11. Зокирова, Д. Н. (2021). Талабаларга Мустақил Ўрганишга Ундовчи Таълим Беришда Касбий Ва Умумтаълим Фанларининг Интеграцияси. *Современное образование (Узбекистан)*, (6 (103)), 24-28.
12. Химматалиев, Д. О., & Зокирова, Д. Н. (2022). НАЗАРИЙ ЭЛЕКТРОТЕХНИКА ФАНИНИ ТАЪЛИМ ТЕХНОЛОГИЯЛАРИ ТАРКИБИ АСОСИДА РЕЖАЛАШТИРИШ



ВА УЛАРДАН ФОЙДАЛАНИШ. *Евразийский журнал академических исследований*, 2(3), 630-638.

13. Отамирзаев, О. У., & Зокирова, Д. Н. (2014). Мустақил фикрлашларни шакллантиришга йўналтирилган дарс ишланмаси.

14. Зокирова, Д. Н. (2018). Мустақил ўрганишга ундаш орқали таълим беришда гуруҳ бўлиб ишлашни кўллаб-қувватлаш. *Научное знание современности*, (4), 15-21.

15. Otamirzaev, O. U., & Zokirova, D. N. M. (2017). Mustaqil o'rganishga undovchi ta'lim berish usullari va ularning samaradorligi. *Міжнародний науковий журнал Інтернаука*, (1 (1)), 50-52.

16. Zokirova, D. N. M., Qurbonova, F. Q., & Nishonov, M. M. O. G. L. (2022). NAZARIY ELEKTROTEXNIKA FANI DARS MASHG 'ULOTLARIDA INNOVATSION TARBIYA BERISHNING INTERFAOL USULLARIDAN FOYDALANISH. *Oriental renaissance: Innovative, educational, natural and social sciences*, 2(3), 371-377.

17. Отамирзаев, О. У., & Зокирова, Д. Н. (2019). «Электр ёритиш» фанини ўқитишда «Бумеранг» методидан фойдаланиш. *Современное образование (Узбекистан)*, (3 (76)), 37-41.

18. Зокирова, Д. Н. (2018). " ЭЛЕКТРОМЕХАНИКА" ФАНИ МИСОЛИДА АУДИТОРИЯДАН ТАШҚАРИДА МУСТАҚИЛ ТАЪЛИМ ОЛИШ ШАКЛЛАРИ. *Научное знание современности*, (5), 78-83.

19. Отамирзаев, О. У., Зокирова, Д. Н., & Вахобова, С. К. (2016). Талабалар мустақил ишини тўғри ташкил этиш ва баҳолаш орқали таълим самарадорлигини ошириш. *Міжнародний науковий журнал*, (5 (1)), 74-76.

20. Зокирова, Д. Н. (2018). " Электромеханика" фани мисолида аудиторияда ташкил этиладиган мустақил таълим шакллари. *Научное знание современности*, (4), 22-27.

21. Бекваевич, У. Қ., Отамирзаев, О. У., & Зокирова, Д. Н. (2022). The use of Interactive Methods in the Formation of Independent Thinking of Students and Their Analysis. *Telematique*, 7026-7032.

22. Ne'matillaevna, Z. D. (2022). NAZARIY ELEKTROTEXNIKA FANINI O'QITISHDA O'QITISHNING ZAMONAVIY SHAKL VA METODLARIDAN FOYDALANIB TA'LIM SAMARADORLIGIGA ERISHISH. *BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI*, 2(11), 33-36.

23. Усубович, О. О., & Зокирова, Д. Н. Mustaqil o'rganishga undovchi ta'lim berish usullari va ularning samaradorligi. *Міжнародний науковий журнал «Інтернаука»*, (1), 23.

24. Зокирова Д.Н. МУХАНДИСЛАРНИ КАСБИЙ ИННОВАЦИОН ФАОЛИЯТГА ТАЙЁРЛАШДА МУСТАҚИЛ ТАЪЛИМНИНГ ЎРНИ // Экономика и социум. 2023. №3-2 (106). URL: <https://cyberleninka.ru/article/n/mu-andislarni-kasbiy-innovatsion-faoliyatga-tayyorlashda-musta-il-talimning-rni> (дата обращения: 08.11.2023).

25. Ne'matillaevna, Z. D., Sobitjon o'g'li, I. B., & Samandar G'olibjon o'g, A. (2022). TEXNIKA OLİY O'QUV YURTLARIDA “NAZARIY ELEKTROTEXNIKA” FANINI IZCHILLIK TAMOYILI ASOSIDA O'QITISH. *PEDAGOGS jurnali*, 6(1), 34-42.

26. ЗОКИРОВА Д. Н., ХУСАИНОВ Ж. И. Ў., ЖУМАБОВЕВ Н. Ж. Ў. НАЗАРИЙ ЭЛЕКТРОТЕХНИКА ФАНИНИ ЎҚИТИШДА ЎҚИТИШНИНГ ЗАМОНАВИЙ ШАКЛ ВА МЕТОДЛАРИДАН ФОЙДАЛАНИБ ТАЪЛИМ САМАРАДОРЛИГИГА ЭРИШИШ //НАУЧНОЕ ЗНАНИЕ СОВРЕМЕННОСТИ Учредители: Индивидуальный предприниматель Кузьмин Сергей Владимирович. – №. 9. – С. 8-12.

27. Zokirova, D. N. (2023). OLİY TA'LIM MUASSASALARINING TALABALARNI KASBIY-INNOVATSION FAOLIYATGA TAYYORLASH BO 'YICHA PEDAGOGIK VOSITALARI TIZIMI VA TASHKILIY SHAKLLARI: OLİY TA'LIM MUASSASALARINING TALABALARNI KASBIY-INNOVATSION FAOLIYATGA TAYYORLASH BO 'YICHA PEDAGOGIK VOSITALARI TIZIMI VA TASHKILIY SHAKLLARI.