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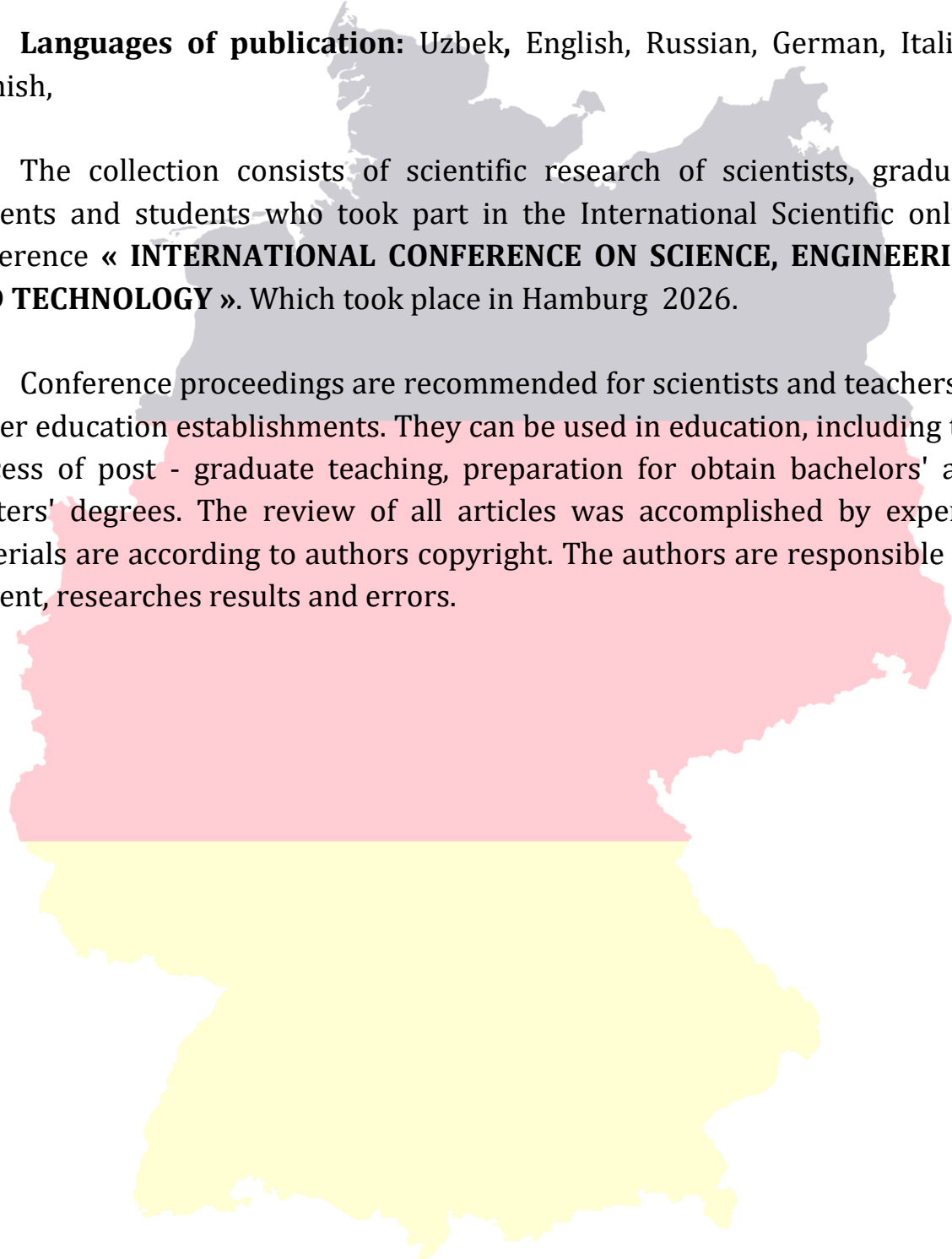


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## ROLE OF PRACTICAL ACTIVITIES IN INCREASING STUDENTS' INTEREST IN CHEMISTRY

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**Abstract:** This article analyzes the importance of practical exercises in increasing students' interest in chemistry, their role in the educational process, and their effectiveness. Practical exercises allow students to transform their theoretical knowledge into practical skills, increase their interest in science, and encourage independent activity based on science. The article also shows the impact of practical work on the development of students' creative and critical thinking skills, and also discusses ways to effectively integrate them into the educational process using modern methods.

**Keywords:** Practical exercises, interest in chemistry, student activity, theoretical and practical knowledge, educational effectiveness, creative thinking, critical thinking, pedagogical methods.

### ENTRANCE

One of the main tasks of education today is to arouse and strengthen students' interest in science, especially chemistry. Chemistry is complicated is a scientific discipline, in which many abstract concepts, formulas and theoretical concepts. Therefore, traditional to memorize based teaching methods students between interest reduce and science concepts enough deep to be unlearned take arrival possible. Uzbekistan Republic education in the system last in years education quality increase, students to knowledge was passion reinforcement for the purpose practical to training separately attention. For example, the Republic education center by prepared new textbook and methodical in the manuals practical affairs students' knowledge of science connection level increase and knowledge in strengthening important tool as recommendation is done [1].

Practical training to students chemical processes themselves experience through observation opportunity gives, this and theoretical knowledge into reality adapt provides. With this together, practical affairs in students independent thinking, creative approach and critical thinking develops them, as well as scientific to research interested in Tashkent state pedagogy university of scientists research this shows that practical training students interdisciplinary connection in understanding and scientific to problems complex in approach effective help gives [2].

From this besides, pedagogical in practice students activate them lesson to the process attraction to do for the purpose project and experience based on

teaching methods wide These methods are being used . in students mastered knowledge in practice application skill shapes and science interest increases [3]. Thus practical of training education in the process place and importance increasing is going on , this and education of quality new to the stage to rise service is doing .

Article purpose — practical of training in students to chemistry interest in progress role , effective methodical approaches and practical integration their ways scientific basically analysis is to do . Practical training in students chemistry to science relatively interest of awakening effective tool is considered . Theoretical knowledge in practice application students with science directly introduces , they experience transfer in the process own knowledge strengthens . Research this shows that students independent accordingly experience transfer opportunity when they are chemical to processes relatively further active and positive attitude they say [ 1].

Uzbekistan education also practical in the system to training attention For example , Uzbekistan Republic People education of the ministry new textbooks and methodical in the instructions chemistry science practical directions with enrichment important task as defined [ 2]. Practical training further effective to do for project based on teaching , problematic education and interactive methods applied . Project based on teaching real -life experiences for students problems scientific basically solution to do opportunity gives . Through this students interdisciplinary connection deeper understand , own knowledge expands [ 3].

Problematic in education to students unexpected questions and tasks given , they mutual communication and analysis based on solution to find This is encouraged . critical thinking and creative approach develops [ 4]. Practical training in students creativity and critical thinking skills in formation big importance Chemistry laboratory in their work students their own theoretical knowledge new in situations apply , new experiments transfer to the possibility has This process will in students independent thinking and problems solution to do skills develops [ 5].

Chemistry in science practical training students knowledge deeper to master and to classes interest to increase help This gives education of quality to improve take is coming . From Uzbekistan of scientists research this shows that the laboratory to their work wider time separation and modern methods application students ' subject their successes noticeable at the level increases [ 6]. Practical of training in education place about scientific research many in countries take International in the literature , in particular , Freeman et al. others (2014) research this shows that the laboratory and practical training students to sciences was interest increasing , resulting in their knowledge level noticeable improves [ 1]. They traditional to classes relatively active education methods , including practical training efficiency emphasizes .

Uzbekistan under the circumstances and Abdullayeva and Rakhimov (2020) chemistry science in teaching practical of training in students science interest in

increasing importance They showed . Their research as a result students practical affairs through theoretical knowledge more precisely understand started and with science further interest [ 2 ] . except , People education ministry by working issued new training programs and methodical in the manuals practical to training more place to be given education quality to increase service to do [ 3] Also , international and national in research practical of training creative thinking and problematic situations solution to do skills in formation place big that For example , Bybee ( 2013) has activity students independent to their research motivation to be emphasizes [ 4].

Analyses this shows that practical training not only knowledge reinforcement , maybe in students to sciences interest increase , their scientific worldview also effective in expanding is a tool . Therefore , practical training education to the process right and effective integration to do training process quality in increasing important factor is considered .

### CONCLUSION

In students to chemistry interest in increasing practical of training role is incomparable . Theoretical knowledge practical activity through reinforcement students' knowledge of science was attitude positive towards changes and them to study further active attraction does . Practical training students critical thinking , creativity and independent activity skills in development important tool is considered .

Also , modern pedagogical methods , including project based on education , problematic education and interactive methods practical training further effective does , students interdisciplinary connection to understand and real life problems solution to do abilities to increase help Therefore , education in the process practical to training separately attention to look at them in classes right organization to grow and develop students to chemistry interest increase and education quality in improvement important factor become remains .

### FOYDALANILGAN ADABIYOTLAR

1. Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences*, 111(23), 8410–8415.
2. Abdullayeva , N., & Rahimov , O. (2020). Chemistry science in teaching practical of training in students interest in progress Role . *Education and development Journal* , 3(2), 45–51.
3. Uzbekistan Republic People education Ministry of . (2021). New training programs and methodical instructions . Tashkent.
4. Bybee , RW (2013). *The Case for STEM Education: Challenges and Opportunities* . NSTA Press.