

TEACHERS' PERSPECTIVES ON TECHNOLOGY USE AT THE CIU ENGLISH PREPARATORY SCHOOL: A QUALITATIVE STUDY

Bahaa Alarameen
Cyprus International University
bahaaar221114@gmail.com

ABSTRACT

This study aims to examine the perspectives of teachers on the use of technology at the English Preparatory School at Cyprus International University (CIU). Six teachers from CIU's English Preparatory School were interviewed. The data were obtained through qualitative research, and thematic analysis method was used to analyze the teachers' perspectives. The findings revealed that the participants generally hold a positive perspective towards integrating technology tools in their classrooms. The teachers mentioned some challenges and technical issues they face, such as the slowness of some tech devices and problems with the speed of the internet. They also mentioned things that could be improved. Regarding AI tools, the teachers said that it is possible to integrate AI tools into the teaching and learning process, with some limitations that do not give direct answers to the students. Additionally, this study discussed the role of robots in education, and the findings showed that the majority of the English Preparatory School teachers believe that robots will not take over their jobs in the future.

Keywords: Technology Integration, Teacher Perspectives, AI Tools in Education, Robotics in Education, Future of Education.

INTRODUCTION

Technology is becoming a critical element of teaching and learning in today's quickly changing educational environment. In spite of the fact that there is a general agreement about the advantages of technology in education, more research is still needed to explore how teachers perceive it and employ it in the classroom. This qualitative study explores the perspectives of teachers at the English Preparatory School at Cyprus International University (CIU) regarding their experiences with integrating technology in their classrooms.

When it comes to technology integration in the classroom, there are advantages and disadvantages that need to be carefully examined. Technology can improve student engagement and learning outcomes, but it's also important to take into account the risks of screen time, distraction, and the possible effects of integrating technology on students' attitudes and motivation for learning (Azad, 2023). Thus, varied learning styles exist among students, making it important to recognize that what works well for one student may not be suitable for another. While highly technological methods may prove advantageous for certain students, they may not be as effective for others (Khodabandelou et al., 2016).

Technology encourages students to participate more effectively and reduces student shyness. In this light, when compared to printed text, digital technologies have the ability to decrease differences in student participation both at home and in the classroom (Rizk & Davies, 2021). However, the excessive use of technology tools in the classroom may lead to prolonged sitting and a lack of physical activity. Moreover, prolonged exposure to screens can lead to health issues such as eye strain, difficulty in sleep, and headaches, which can impact students' mental and physical health (Raave et al., 2022). Thus, it is important to have a balance between education and technology so that they do not harm each other (Contreras et al., 2022).

In general, it can be said that the benefits of technology appear to exceed the drawbacks. The COVID-19 pandemic forced a change in the style of teaching from face-to-face to online. The development of modern technology clearly affects education and teaching methods. Today, in the era of robots and artificial intelligence technologies such as the Generative Pre-trained Transformer (GPT) and the vast services they provide, it has become necessary for teachers to integrate these modern technology tools into their teaching methods for students. As a result of the wide range of applications that large language models such as the Generative Pre-trained Transformer (GPT) offer, their implementation in education has been suggested as an area of potential interest. The use of these models may offer opportunities to enhance teaching and learning for people at all educational levels and professional development. These models offer a unique opportunity to provide successful and customized learning experiences because each individual has unique requirements, abilities, and preferences for learning. (Kasneci et al., 2023).

In today's classrooms, teachers use various new tools of technology to make English learning more effective and exciting. One of the most used tools are the smart boards. These smart boards allow teachers to use electronic books, project slides, play videos and audio records, browse webpages, and many more things. Other tools, such as computers, tablets, and Video calls, which enable to see and communicate with teachers and students. Today, the use of robots and Artificial Intelligence (AI) tools has become popular. Robots and AI tools integration have

revolutionized the education process. Moreover, some believe that in the near future, there will be no need for teachers at all, as robots and AI tools may replace the role of teachers.

CIU ENGLISH PREPARATORY SCHOOL BACKGROUND

The English Preparatory School has existed since the founding of Cyprus International University (CIU) in 1997. The English Preparatory School is part of The School of Foreign Languages (SFL) at CIU. This school has students from different regions and nationalities, such as Turkey, Iran, Tajikistan, Afghanistan, Pakistan, Arab countries, some African countries, and other regions around the world. Approximately 500 students enroll in The English Preparatory School each year, suggesting a multicultural and international environment within CIU. The English Preparatory School has over 40 teachers, both males and females, holding diverse qualifications ranging from Bachelor's (BA), Master's (MA), and Doctorate (PhD) degrees. The English Preparatory School building has more than 20 classrooms, each with a smart board connected to the internet. The teachers use these boards to teach from the virtual textbooks, browse the internet, play records and videos, and create presentations.

The main goal of the English Preparatory School is to prepare students for the various English departments at CIU. At the beginning of each semester, students take the proficiency exam and are placed in the appropriate level based on their scores. The English Preparatory School has a range of different levels, from beginners to advanced. These courses are designed to help students improve the skills and knowledge necessary to use the English language effectively in academic and other environments. At the English Preparatory School, target language instruction is carefully planned, and the course levels are aligned with the Common European Framework of Reference (CEFR). The English Preparatory School has been accredited by Pearson Assured since January 2015.

RESEARCH QUESTIONS

This study aims to provide an answer to the question “What are the perspectives of English teachers at Cyprus International University's English preparatory school regarding the use of technology in the classroom?” In order to answer the research's main question, the following questions were developed:

- To what extent do CIU English preparatory school teachers embrace using technology tools in classroom?
- What challenges do the teachers at CIU English preparatory school face when using technology tools in the teaching process?
- What are the opinions of CIU English preparatory school teachers regarding the potential role of robots and artificial intelligence (AI) in the teaching process?

METHODOLOGY

This research uses qualitative analysis methodology to examine the perspectives of CIU English preparatory School teachers regarding the use of technology in the classroom, the challenges they face, and their views regarding the use of AI tools and robots in education. The study involved in-depth interviews with six teachers at CIU English preparatory school. The sample includes male and female teachers. The teachers' qualifications range from bachelors, masters, and PhDs. The study focused on the available technology resources that teachers use in the classroom.

DATA COLLECTION

The data were collected by answering the research questions. The interviews were semi-structured, and the participants were able to openly discuss their opinions and experiences. The interviews with CIU English preparatory school teachers were conducted at CIU English preparatory school during the working hours. Each teacher was interviewed individually, and the interviews lasted approximately 40 minutes. The researcher asked the teachers specific questions and wrote their down responds immediately.

DATA ANALYSIS

Qualitative data analysis was used in this study. According to Kaiser and Presmeg (2019), the qualitative data analysis can include written records, Twitter (X) tweets, YouTube comments, videos of teacher-student interactions in the classroom, transcripts of focus groups, or face-to-face interviews. In this study, the data were specifically derived from face-to-face interviews, and were then analyzed using the thematic analysis technique. Braun and Clarke (2006) point out that thematic analysis is a method of qualitative study for analyzing data that involves looking across a data collection to analyze, identify and report frequent patterns. The thematic analysis identified recurring themes and subthemes pertaining to the views of teachers on the use of technology. Each teacher was given a distinctive identifier to use in presenting the participant perspectives; the names were kept hidden to maintain their anonymity.

VALIDITY AND RELIABILITY

For the internal validity of the questions used in this paper, the opinions of two academicians at Cyprus International University (CIU) were sought. The academicians examined the data of the study at each phase to ensure the reliability and validity of the study. To increase the quality of the research and the trustworthiness of the research findings, the given answers were not only reviewed by the researcher but also discussed with the two experts.

FINDINGS

Based on the study questions listed in the introduction of the research, research findings were given. The opinions of the teachers of the English preparatory school at Cyprus International University were individually presented. Based on the data collected from the interview questions, three themes emerged from the participants' views. These themes are discussed in this section.

Theme One: A positive perspective for the use of technology and many advantages

The views of all the teachers show a general positive perspective on the use of technology. All the teachers agree on the important role of technology in teaching in their classrooms at CIU. Moreover, the views emphasize that technology tools are something that cannot be irreplaceable. Two subthemes were emerged from this theme: “a general positive view for the use of technology” and “many outcomes of using technology.”. Two teachers said,

I am so used to it that I cannot imagine going into a class without the use of a smart board or a projector. (T-1)

I do not know how we used to teach without the use of technology tools. I used to carry hard books and write hundreds of words on the regular boards, and wait for the students to write. But now, thanks to smart boards, I do not have to worry about all of this (T-6).

Under the second sub-theme, 'many positive outcomes of using technology', teachers highlighted various benefits of incorporating technology into the teaching process. Here are some of their views:

I do not carry books or materials around when I go to my classes. Some of the tasks that took me hours to complete can now be done in less than 10 minutes. I also feel more relaxed because using technology can help me go back to my previous courses and use the activities that I used in my previous classes for other students in other schools, too! (T-1).

The students pay more attention when there is a smart board because they clearly see what I am talking about. For example, when we have matching or T/F activities everyone participates and wants to give the answer. With the smart board, my students feel like they are working as a class (T-3).

Technology tools are so great in the teaching process. I use the smart board in my class, and when the students do not understand something, it is easy for me to use the internet to help them or show them some pictures. For example, when I used the word "bear," some students did not know the meaning of it, so with one click, I showed them the picture of a "bear" on Google (T-4).

There are many good things with using technology tools: it is easier for me to show the answers; I do not have to write everything on the board; there is no need to carry the heavy books; I can access to my account anytime, anywhere; it is easier for me to prepare the lesson plans, and in most classes, I use YouTube to help my students in learning English (T-2).

Theme Two: Some challenges and things to be improved

Based on the findings, it can be observed that all the teachers faced some challenges with the smart board's performance. The teachers agree that the smart boards are a little slow, especially when they turn them on. Two teachers mentioned,

In the morning, when I start the smart board, we have to wait for ages. It takes at least 15 minutes to boot up. One class we had a listening activity, but the board was dead! It is really frustrating (T-2).

The smart board gets slow sometimes, and its sound is not balanced and comfortable for all the students (T-4).

In discussing internet speed, the teachers observed that the internet speed is slow. Two teachers mentioned,

In my opinion, there is a need to improve the speed of the internet; everything else is good. (T-3).

The speed of the internet must be improved, and I wish our institute could limit the access to Wi-Fi just to the educational platforms we use in the classroom because students want to use their phones to browse

social media platforms (T-2).

Regarding the system being outdated, one teacher mentioned,

At CIU, it is usually the wear and tear since most of the equipment is either old, outdated, or in need of repairs (T-1).

The system used in all the smart boards is Windows 7! We are in 2024, and we still use this old operating system! The operating system has to be updated urgently (T-6).

One teacher mentioned other challenges. The teacher said,

Using technology can be challenging at times. Some of the main inconveniences that usually happen include the inability to access the internet in the classroom, the smart board freezing, lights going out, and the challenge of assigning homework using technology, which can be confusing and less engaging for students unfamiliar with the platform we use (T-5).

Theme Three: The Future of Artificial Intelligence (AI) and Robotics in Education

Based on the findings, two sub-themes emerged: the role of artificial intelligence (AI) platforms in the teaching process and the question of whether robots will replace teachers. Regarding the first sub-theme, all teachers agree that artificial intelligence (AI) platforms play an important role in teaching and learning and that there is a need to integrate AI tools into their classes. Teachers said,

These AI tools are helpful and we cannot avoid these advances in teaching. I think we can integrate AI tools into our classes by using specific methods that help students solve tasks but do not give them direct answers (T-4).

The alarm has probably already gone off, so I guess instead of take-home or assignment-based learning, we should shift to more cognitively demanding group activities where students must complete more oral or speaking-related tasks. (T-1).

With AI tools, students will be their own teachers. AI will take over the course books and other platforms we use nowadays, since it brings everything together in one place. AI will also be beneficial to students with specific needs. They will feel more included, and teachers will be able to meet their needs as well (T-5).

I see students these days depend on AI tools for their projects and assignments, and we cannot do anything about it. I think in the next five years, it will be the same but with more advanced improvements (T-2).

When discussing the role of robots in the teaching process and whether the robots will replace the teachers in the future or not, the majority of the teachers said that robots will not replace the teachers in the future. Teachers said,

Not at all, because robots cannot be teachers; they don't have feelings. It is easy for me to know when my students do not understand something; I can see this on their faces. Robots never understand this (T-3).

No, I will not be replaced by robots. Robots are too limited to teach languages or to provide a perfect teaching experience. Face-to-face teaching is more efficient. Besides, robots do not have feelings or emotions (T-4).

I do not think that robots will ever be able to replace teachers or any other human being. Robots are the result of human creation and can never be more powerful than their creator. Teachers are not only language or knowledge providers but they are also problem solvers, creators, therapists, organizers, mediators, and sometimes even parents. A robot could never be all these things at the same time (T-5).

Two teachers, who answered this question, said that the robots will replace the teachers. Teachers said,

Yes, but robots still need people to function and those who do not update themselves on these tools are most likely become redundant! (T-1)

Of course, I think so, since everything is working with technology. In the future, we will not have any teachers, or there will be a need to hire teachers. They have robots, so they do not have to pay for people. With robots, we do not have to pay salaries and insurance (T-2).

DISCUSSION

Based on the responses of six participants currently teaching English at CIU in Northern Cyprus, three themes have been identified to offer effective perspectives on integrating technology tools into the teaching process. This study has revealed that the overall perspectives of CIU teachers on using technology at CIU are positive. The reason for this conclusion could be due to the many benefits and opportunities that technology tools provide in the teaching process. Taking everything into account, the research presents strong evidence that using technology in the classroom can be beneficial. Similarly, to the findings of Mong and Ruggiero (2015), technology can save teachers time, engage students, and differentiate education to meet the needs of all learners when used correctly. Teachers

value the use of technology in their classrooms and how technology tools enhance education and make it more authentic for students. As it has been emphasized in a study by Costley (2014), technology enhances learning outcomes, student engagement, and motivation. Also, teachers who integrate technology into their classrooms are generally more positive towards using it.

Moreover, Andoh (2012) found that when teachers have a positive perspective regarding the use of educational technology, they are more likely to embrace it and employ it in the teaching and learning process. Looking at the benefits that technology tools provide in the teaching process, it is evident that these tools facilitate the teaching process and make it easier for teachers at CIU to do their jobs effectively. This is consistent with the findings of Rahmati et al. (2021), which propose that using technology for English language teaching is more effective than using conventional teaching methods without technology.

These findings are supported by research by Nurmala et al. (2023), which highlights the integration of modern technology, which has been shown to improve learners' language skills and provide new opportunities for language learning. Moreover, technology tools and mobile learning are valuable resources that facilitate English language learning and provide easy learning environments.

While discussing the challenges of using technology and some of the improvements that should be made, the teachers mentioned many challenges and obstacles with technology tools. In this study, all the participants talked about the slowness of the smart boards they use in their classrooms and the slowness of the speed of the internet inside the Preparatory School. Other teachers talked about the technical issues they face while teaching. Recent studies have mentioned some similar challenges and obstacles relating to technology integration in the teaching process. For instance, Akram et al. (2022) as well as Alswilem (2019) and Singh (2019) found that limited resources and inadequate infrastructure are reported to be challenges that hinder teachers from effective technology integration in the teaching process. Similarly, in a study about teachers' perceptions of barriers to technology integration in education, Emre (2019) mentioned four external and internal barriers to integrating technology in education: lack of equipment, lack of funding, lack of ability, and time. This can be explained because there are indeed problems with smart boards at the English Preparatory School at CIU, as many of these devices are old and slow. In addition to the fact that the internet speed is slow and does not cover all the classrooms in the building. Thus, upgrading smart boards, enhancing internet infrastructure, and addressing technical issues are necessary steps to create a more supportive learning environment for both teachers and students.

Lastly, this study discussed the future of artificial intelligence (AI) and robotics in education. The researcher queried teachers on two key aspects: the role of artificial intelligence (AI) platforms in the teaching process and whether robots will replace teachers. Regarding the first point, the majority of CIU teachers believe that AI tools play a crucial role in education, and there is a need to integrate AI tools into their classes. This aligns with the views of Baidoo-Anu & Ansah (2023), who said that there is no doubt that AI tools have pushed the boundaries of learning and created a significant paradigm shift in the way we learn today.

According to the teachers, it is possible to integrate AI tools into the teaching and learning process by using specific methods that do not provide direct answers. Also, some teachers emphasized the necessity of giving students more oral or speaking tasks because of the influence of AI tools. This is in line with Zhai (2022), who states that artificial intelligence is unable to substitute the need for new tests and forms of assessment that encourage critical thinking and creativity. Furthermore, teachers mentioned that AI tools help students learn on their own, and they put all learning materials together, which helps teachers support students with different needs. This is consistent with Clare's (2023) view that students, after graduating, will probably find themselves in a world that is increasingly reliant on AI tools. The reason for this could be that the vast services provided by AI tools are easy to use, and most importantly, they are free. It is 2024, so we cannot deny the important role of AI tools in the teaching and learning process.

However, despite the fantastic benefits that AI tools provide, there is a need to control them. At the end of the day, students must learn by themselves, and we cannot let these tools do everything for them. As Qadir (2022) mentioned, it is important for learners to understand the effects of AI technology to ensure that the future generation of learners takes use of the benefits afforded by AI tools and minimizing any undesirable outcomes.

Also, the researcher discussed whether robots will replace teachers. The results showed that the majority of the teachers at CIU English Preparatory School believe that robots will not replace them. They emphasized that robots do not have feelings or emotions and are incapable of doing things that humans do. The findings of this study overlap with those of Orhani (2023), who suggests that robots can be useful teaching tools in the classroom, and there are certain types of assistance that are best served by robots, yet it is doubtful that they will ever fully replace teachers. This can be attributed to the fundamental difference between robots and humans: robots will not understand how students feel or the difficulties they face, simply because robots lack feelings and emotions. As one of the teachers said, "I can see the problems on the faces of my students; a robot cannot see this." Standing in front of a robot to

teach you is not the same as with a human teacher; of course, with humans, the teaching process is more comfortable. However, maybe in the future, things will change. As Orhani (2023) also mentioned, human teachers are still essential for improving student development. No appor robot can replace the teacher's understanding and emotional connection with students. Even with advanced technology, robots cannot reason, learn, and teach like humans. In this context, Edwards and Cheok (2018) mentioned some limitations and challenges of using robots as teachers, including the difficulty of designing robotic personalities that are flexible and empathetic, as well as the difficulty of robots understanding the individual needs of students and addressing their social and emotional needs. On the other hand, some teachers say that robots will replace them. They argue that robots will be more available in the future, and with robots we will not have to pay salaries and insurance. This notion does make sense, as robots do not require payments or medical insurance. However, there is still a need to utilize, check, and maintain these robots fromtime to time, which, of course, will cost money. Thus, to fully realize the potential of automation, collaboration between people and technology is necessary. This is particularly relevant, according to the McKinsey Global Institute (2017), about 50% of the jobs in the United Kingdom and the United States might be automated in the near future.

CONCLUSION

This qualitative study explored the perspectives of teachers on technology use at the English Preparatory School at CIU. The findings revealed that the teachers at the English Preparatory School show a generally positive perspective towards integrating technology tools in their classrooms. Nevertheless, the teachers mentioned some challenges and technical issues they face, such as the slowness of some tech devices and problems with the speed of the internet. They also mentioned things that could be improved. Regarding AI tools, the teachers said that it is probable to integrate AI tools into the teaching and learning process, with some limitations that do not give direct answers to the students. Additionally, this study discussed the role of robots in education, and the findings showed that the majority of the English Preparatory School teachers believe that robots will not take over their jobs in the future. Ultimately, these findings present a foundation for future discussions on improving technology integration into the teaching and learning process. It is important to address the mentioned challenges and take advantage of opportunities in order to enhance the educational environment at the English Preparatory School at CIU.

REFERENCES

- Akram, H., Abdelrady, A. H., Al-Adwan, A. S., & Ramzan, M. (2022). Teachers' perceptions of technology integration in teaching-learning practices: A systematic review. *Frontiers in psychology, 13*, 920317.
- Alswilem, D. A. A. M. (2019). Saudi English Teachers' Use of Technology in Secondary Classrooms: Perceptions, Barriers, and Suggestions for Improvement. *Advances in Language and Literary Studies, 10*(6), 168-178.
- Azad, T. (2023). Exploring the Use of Technology in the Classroom: A Qualitative Study of Students' and Teachers' Experience. *Qualitative Research in Educational Psychology, 1*(01), 23-32.
- Baidoo-Anu, D., & Ansah, L. O. (2023). Education in the era of generative artificial intelligence (AI): Understanding the potential benefits of ChatGPT in promoting teaching and learning. *Journal of AI, 7*(1), 52-62.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101.
- Buabeng-Andoh, C. (2012). Factors influencing teachers' adoption and integration of information and communication technology into teaching: A review of the literature. *International Journal of Education and Development using ICT, 8*(1).
- Contreras, G. S., González, A. H., Fernández, I. S., Cepa, C. B. M., & Escobar, J. C. Z. (2022). The Challenge of Technology in the Classroom, An Uncertain but Necessary Paradigm in a Digital Reality. *Contemporary Engineering Sciences, 15*(1), 41-50.
- Costley, K. C. (2014). The positive effects of technology on teaching and student learning. *Online submission*.
- Edwards, B. I., & Cheok, A. D. (2018). Why not robot teachers: artificial intelligence for addressing teacher shortage. *Applied Artificial Intelligence, 32*(4), 345-360.
- Emre, D. (2019). Prospective teachers' perceptions of barriers to technology integration in education. *Contemporary Educational Technology, 10*(4), 381-398.

- Kaiser, G., & Presmeg, N. (2019). *Compendium for early career researchers in mathematics education* (p. 532). Springer Nature.
- Kasneci, E., Seßler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., ... & Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and individual differences, 103*, 102274.
- Khodabandelou, R., That, J. E. M., Ken, T. Y., Kewen, Z., Yan, Z., & Ning, T. Y. (2016). Exploring the Main Barriers of Technology Integration in the English Language Teaching Classroom: A Qualitative Study. *International Journal of Education and Literacy Studies, 4*(1), 53-58.
- McKinsey Global Institute. (2017). *A future that works: Automation, employment, and productivity*. Retrieved from <http://www.mckinsey.com/global-themes/digital-disruption/harnessing-automation-for-a-future-that-works>
- Nurmala, I., Irianto, S., Franchisca, S., Amsa, H., & Susanti, R. (2023). Technology- Enhanced Language Learning: A Meta-Analysis Study On English Language Teaching Tools. *Journal on Education, 6*(1), 2188-2195.
- Orhani, S. (2023). Robots Assist or Replace Teachers in the Classroom. *Journal of Elementary and Secondary School, 1*(1).
- Qadir, J. (2023). Engineering education in the era of ChatGPT: Promise and pitfalls of generative AI for education. In *2023 IEEE Global Engineering Education Conference (EDUCON)* (pp. 1-9). IEEE.
- Raave, D. K., Roa, E. R., Pedaste, M., & Saks, K. (2022). Classroom Digital Technology Integration – A Double-Edged Sword? Engaging and Practical yet Harmful. *Innovative Technologies and Learning. ICITL 2022. Lecture Notes in Computer Science, vol 13449*. Springer, Cham. https://doi.org/10.1007/978-3-031-15273-3_27
- Rahmati, J., Izadpanah, S., & Shahnavaz, A. (2021). A meta-analysis on educational technology in English language teaching. *Language Testing in Asia, 11*(1), 7.
- Rizk, J., & Davies, S. (2021). Can digital technology bridge the classroom engagement gap? Findings from a qualitative study of k-8 classrooms in 10 ontario school boards. *Social Sciences, 10*(1), 12.
- Ruggiero, D., & Mong, C. J. (2015). The teacher technology integration experience: Practice and reflection in the classroom. *Journal of Information Technology Education: Research, 14*, 161-178. Retrieved from <http://www.jite.org/documents/Vol14/JITEv14ResearchP161-178Ruggiero0958.pdf>
- Singh, R. (2019). Barriers of technology integration in teaching English. *International Journal of Academic Research, 1*(2), 24-37.
- Williams, C. (2023). Hype, or the future of teaching and learning? 3 Limits to AI's ability to write student essays. *LSE Impact Blog*. Retrieved from <https://blogs.lse.ac.uk/impactofsocialsciences/2023/01/12/hype-or-the-future-of-teaching-and-learning-3-limits-to-ais-ability-to-write-students-essays/>
- Zhai, X. (2022). ChatGPT user experience: Implications for education. Available at SSRN 4312418. Retrieved from <https://ssrn.com/abstract=4312418>