ROLE OF INSTRUCTIONAL COACHING TECHNIQUE IN DEVELOPING CRITICAL THINKING SKILLS OF STUDENTS

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Abstract

Education enables one to be self-aware, dispelling the darkness and breaking the illusion. A skillful person can dispel and break the illusion. The purpose of 21st century learning skills put emphasize to produce the skillful persons. Critical thinking skills received vital place among 21st century learning skills. The main intention of this experimental study was to explore the role of instructional coaching technique in developing of critical thinking skills among students at secondary school level in the subject Islamiyat. The Equivalent material design with single group was selected to conduct the experiment. Students were taught through instructional coaching technique. A content-based test was used as a data collection tool prior and post to intervention. The finding reveals that there is no significant role of instructional coaching technique exists in developing critical thinking skills of the students in the subject Islamiyat. Data analysis showed that that instructional coaching as a teaching technique can slightly enhance the critical thinking skills of the students.

Key Words. *Islamiyat, Instructional Coaching, Critical thinking skills.*

1.Introduction

Competence in cognitive skills is important because of education. One of the skills that must be mastered is the ability to think. Thinking ability can improve students' content knowledge and problem-solving skills. Indeed, the era of globalization has marginalized philanthropical and religious values in the lives and culture of Muslims. After the independence of Pakistan in 1947 as an Islamic republic it was a challenge for newly established government to reform the education system according to Islamic system. The notion of Islamic education system was the provision of critical thinkers as an aftermath of education. The first educational policy was introduced in 1970 in Pakistan. This educational policy 1970 introduced Islamiyat as a core subject for secondary school level. It emphasized that through the teaching of Islamiyat teachers should develop critical thinking skills. The education system was reformed at all levels in the light of first educational policy to prepare the future generations of the new Islamic Republic according to teachings of Islam. These reforms focused on adjusting education system of Pakistan according to contemporary international standards and teaching of Islam side by side. The first step in the formation of reforms was the establishment of the Department of Education and Science 2011. It was renamed to the Education Ministry in 2013 and as Ministry of Federal Education and Professional Training in 2014. It facilitated fundamental Islamic reforms of the education system with the impartiality. The Education Ministry in 2012 has approved the fundamental curriculum framework for the secondary level education systems (ME, 2012). Since then, there were several challenge for the education ministry in Pakistan had to face such as adapting to new standards of education, teachers, training, dealing with large class sizes, and

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implementing continuous improvement in physical facilities of schools. Before being aligned with contemporary global standards through reforms, teachers of Islamiyat in Pakistan used direct instruction using textbooks as the primary source of course content. Periodic educational reforms were also aimed at adapting teaching and learning processes for contemporary developments and aims to integrate technology and modern teaching methods to enhance the quality of education in the subject of Islamiyat. It is the era of technological advancements. (Marzuki et al., 2023). These advancements are a source to nourish the Information and Communication Technology (ICT). The amount of data being collected has grown explosively (Suhaid, 2005; Nakhai, 2001). The explosive information can be found through Artificial Intelligence (AI) tools in the subject Islamiyat like other subjects. Today, in various sectors of society, such information is used, and many types of intelligent activities are automated (George & Wooden, 2023; Song & Xiong, 2021; Zhai, et. al., 2024). To meet these changes, it is necessary to prepare such individuals who can critically analyze the available information and data about religion Islam Marzuki et al., 2023). This qualification is very relevant and necessary for trained talent in the current era when integration of technology is actively manifested in the field of education (Alkhatib, 2019). The increasing role of artificial intelligence in educational research is improving the importance of learning tools (Guo, et. al., 2024). Decision-making is becoming more difficult due to students' increasingly blind acceptance of AI-generated recommendations, even when ethical issues related to these technologies are not taken into account. Impairments in task performance occur in context (Dergaa et al., 2023). This normally happened when individual tries to ensure the reliability of AI tools and their suggestions (Ismail,et.al., 2023). However, there are apprehensions about possible negative effects of AI's and their extensive use is made of cognitive skills, especially Islamic studies, because research and teaching are primarily evidence-based, decision-making, critical thinking, and analytical thinking to fully analyze and evaluate the quality of information found in current literature studies. It is a time taking process. Students spend more time in sleeping and to entertain them in a working day (24-hour clock). According to Bureau of Labor Statistics American Time Use Survey (2013), based on an average weekday (24-hour clock), full-time secondary school level students spend only 14% of their time on academic activities (ie, classes, reading, homework, etc.). Thus, critical thinking skills development is currently only occurring in about 14% of a student's day. Apart from sleeping 36% of their time, the rest of their time is mostly spent on entertainment/sports - 16%, work and related activities - 11%, and travel - 6%, and eating and drinking - 4%, 10 % of their time is occupied with other activities. If all activities except sleeping include thinking, conclusion, decision making, discussion, argument', opinion, and discussion. These are opportunities for students to practice, develop and apply critical thinking skills, especially when interacting with other students (Diaz,2021). Critical thinking is not a new term in the field of education, it developed gradually with the thinking abilities of human beings, now it has a dominant place in Western and Islamic educational curriculum (Maria Salih, 2013). It is a kind of teaching method which support thinking and independent learning in all areas of curriculum. It is a teaching strategy and type of thinking that supports approaches to learning in all areas of the curriculum. Critical thinking is thinking about the world in pursuit of relevant and reliable knowledge. Another way to describe it is rational, reflective,

responsible, and skillful thinking focused on deciding what to believe or do (Haynes,et. al., 2023). The education of critical thinking is not only the practice of logic but the perception. Critical thinking is the mantra of 21st century skills that has mesmerized everyone. It has been called a silver bullet for many things that plague both educational settings(Nah et al., 2023; Shin et al., 2023). According to Pokkakillath and Suleri, 2023 the 21st century presents global trends and rapid development in human thought. It is a big challenge for Muslim countries to follow the trends of core globalization and have to follow the Islamic values as a faithful Muslim country. Related to this issue, according to Fathi Yakan there are several internal challenges and external challenges that Muslims are facing due to globalization. These challenges are ignorance as well as lack of knowledge, lack of effective measures to overcome all kinds of problems and misinformed Muslims which lead to misunderstanding in behavior and thinking. Be according to religion in fact, over 1400 years ago the contribution of Islamic civilization to human thinkings and verses of Quran invites people to think innovatively and critically (Junoh,et. al., 2021). Critical thinking is the alternate of correct thinking to obtain relevant and reliable information from available material. Critical thinking skills enables a person to raise relevant questions, gather authentic information, organize through that information effectively and innovatively, reason logically with that information, and understand the world (Altinyelken,2021). The importance of developing a cognitive skills mindset in Islamiyat and it's value cannot be exaggerated, especially for students who are tasked with synthesizing, evaluating, and formulating logics. (Keppel, 2021). The Islamic approach in thought processing is based on monotheism and paradigm of manners. This paradigm emphasizes the value of seeking truth guided by revelation (Berglund, 2019). Thus, the subjects of Islamic education were excluded from the field of education to develop students' critical thinking skills (Ahmad, et al., 2023). This means that teachers of Islamic education should acquire the skills of thinking, analyzing and synthesizing (Dahari et al., 2019). Effective teaching aspects of Islamic education should be full of genuine and wise mental activities (Hashim, 2024). Nordin, and Surajudeen, (2015) presented Islamic Theoretical Model for Critical Thinking skills during teaching of Islamiyat. They combined five elements i.e, Tadhakkur, Ta'qil, Tafakkur, Tafqih, Tadabbur.

1.1 Tadhakkur. Tadhakkur is a skills to ponder, and one needs to summarize something to help it be understood intelligently. So, a person can have an idea of something in a simple sketch or picture. "Look! In the creation of the heavens and the earth, and in the passing of night and day, there are indeed signs for those of understanding.

Allah says in Holy Quran

ٱلَّذِينَ يَذْكُرُونَ ٱللَّهَ قِيَٰمًا وَقُعُودًا وَعَلَىٰ جُنُوبِهِمْ وَيَتَفَكَّرُونَ فِى خَلْقِ ٱلسَّمَٰوَٰتِ وَٱلْأَرْضِ رَبَّنَا مَا خَلَقْتَ هَٰذَا بَٰطِلًا سُبْحَٰنَكَ فَقِنَا عَذَابَ ٱلنَّارِ

Those who praise God standing, sitting, and lying down, and the creation in the heavens and the earth." Consider the (wonders): And pray that our Lord! You didn't do all this without a purpose. So pure! Save us from the torment of the fire.

1.2 Ta'qil. It is the skills for person to distinguish between evil and virtue, good and bad, and so forth. Ta;qil is useful in all scientific domains. However, if one's intellect is free of erroneous ideas and presumptions, the rational and empirical sciences are merely a first step or a

means to the aim of contemplation, which is the knowledge of Allah Almighty. A person's knowledge should be founded on introspection and start with their conviction that Allah is the creator of the universe.

Allah says in Holy Quran

أَتَأْمُرُونَ ٱلنَّاسَ بِٱلْبِرِّ وَتَنسَوْنَ أَنفُسَكُمْ وَأَنتُمْ تَتْلُونَ ٱلْكِتَـٰبَ ۚ أَفَلَا تَعْقِلُونَ

Do you preach righteousness and fail to practice it yourself, even though you read the Scriptures? Don't you understand? (Surah al-Baqarah 2: 44).

1.3 Taffakur Taffakur is a skills to give a subject careful, methodical, and in-depth thought. To put it another way, thought is a mirror. To become conscious of what is going on around us and make inferences from it, reflection is a crucial first step. It is essential to man's ability to discriminate between good and evil, good and bad, etc. Reflection is useful in all scientific domains. However, if one's intellect is free of erroneous ideas and presumptions, the rational and empirical sciences are merely a first step or a means to the aim of contemplation, which is the knowledge of God. ought to be founded on introspection and start with the conviction that God is the creator of the universe.

Allah says in Holy Quran

وَهُوَ ٱلَّذِى مَدَّ ٱلْأَرْضَ وَجَعَلَ فِيهَا رَوَٰسِىَ وَأَنْهَـٰرًا ۖ وَمِن كُلِّ ٱلثَّمَرَٰتِ جَعَلَ فِيهَا زَوْجَيْنِ ٱثْنَيْنِ ۖ يُغْشِى ٱلَّيْلَ

ٱلنَّهَارَ ۚ إِنَّ فِى ذَٰلِكَ لَـَٔايَـٰتٍ لِّقَوْمٍ يَتَفَكَّرُونَ

"And He it is Who spread out the earth and made mountains on it and rivers flowed, and made pairs of every kind of fruit, two by two, He veils the night over the day. Behold, in these things are signs for those who reflect." (Surah ar-Ra'd 13: 3).

1.4 Tafqih. The skills to distinguish between right and evil, advantages and disadvantages, and positive and negative aspects that pertain to Tafqih

. Allah says in Holy Quran

وَلَقَدْ ذَرَأْنَا لِجَهَنَّمَ كَثِيرًا مِّنَ ٱلْجِنِّ وَٱلْإِنسِ ۖ لَهُمْ قُلُوبٌ لَّا يَفْقَهُونَ بِهَا وَلَهُمْ أَعْيُنٌ لَّا يُبْصِرُونَ بِهَا وَلَهُمْ ءَاذَانٌ لَّا يَسْمَعُونَ بِهَآ ۚ أُوْلَـٰئِكَ
كَٱلْأَنْعَـٰمِ بَلْ هُمْ أَضَلُّ ۚ أُوْلَـٰئِكَ هُمُ ٱلْغَـٰفِلُونَ

Indeed, we have destined many jinns and humans for hell. They have hearts with which they do not understand, eyes with which they do not see and ears with which they do not hear. They are like cattle. In fact, they are even less guided! Such people are completely oblivious (Surah al-A'raf 7: 179).

1.5 Tadabbur. At the highest level, man makes the final decision. Tadabbur entails considering what is known and the validity of that knowledge. They can defend their opinions since they are aware of them. Tadabbur is the term for fully learning and comprehending the Qur'an, which entails being aware of Islamic law and accepting its entirety. Allah stressed that because He inspired the Qur'an, it is a comprehensive book.

Allah says in Holy Quran

أَفَلَا يَتَدَبَّرُونَ ٱلْقُرْءَانَ ۚ وَلَوْ كَانَ مِنْ عِندِ غَيْرِ ٱللَّهِ لَوَجَدُواْ فِيهِ ٱخْتِلَـٰفًا كَثِيرًا

Don't these people meditate on the Qur'an? Had it been from anyone other than Allah, they would certainly have found many contradictions in it (Surah an-Nisa' 4: 82).

1.6 Instructional coaching Instructional coaching technique has gained a lot of popularity as an effective method for development of critical thinking skills and student achievement (Smith & Gillespie, 2023) (Reddy et al., 2021). As noted by (Davison & Gasiorowski, 2006), that in the 1970s, coaching emerged as a distinct field. A tool for enhancing performance in both personal and professional spheres, coaching aids in the development of attitudes and abilities. Unlocking people's potential and empowering them is a crucial coaching task. This is achieved by posing insightful, thought-provoking questions and giving the respondent time to formulate an answer. The coach can help if you're stuck, but only if you ask follow-up questions (scaffolding) along the way. Everyone agrees that deeper learning and more questions asked (and answered) are important. Students will start copying, which is more significant. Their teachers foster a deliberate process of thinking and intellectual growth by having students ask and respond to their own questions. By posing and responding to their own enquiries, their educators foster a deliberate process of thought and intellectual growth (Wiersema & Lucklider, 2009). Metacognition, or students' cognitive awareness of their own thinking, is the main focus of instructional coaching as opposed to course content knowledge. Learning is the result of thinking about your own thoughts. To succeed, students must extend their perspective by eliminating their own prejudices, preconceptions, and beliefs (differentiating and refining it) to arrive at a better and different viewpoint on the issue (Moustak, 1994). Reflection (Robinson & Gahagan, 2010) and self-discovery (Webberman, 2011) are two other dimensions of instructional coaching framework. Robinson & Gahagan (2010) developed Instructional Coaching Framework (ICF). The secret to success, according to them, is self-assessment (gathering baseline data), introspection (interests, goals, and motivations), and goal setting (strategies). Their approach is founded on the idea of self-authorship, which is founded on identity recognition and a strong set of beliefs (Baxter et., al.,2004) and self-discovery (Magolda, & King 2007). Given its complexity, instructional coaching is a development method that is both worthwhile and simple to learn. Teachers in Pakistan are working to help students learn how to think critically rather than merely about Islamiyat. These initiatives follow Suchman's Inquiry Model, Bloom's Taxonomy, and the Socratic Method. Regretfully, these initiatives are restricted to particular types of content. The discipline of Islamiyat is stagnant. The teachers don't use any creative teaching strategies, and the students are route learners.

1.7. Concept of instructional coaching in Islam. Islamic coaching is a valuable resource for dealing with life's daily obstacles and for personal growth. Muslims worldwide deal with serious problems and crises that might significantly affect their ability to think (Alawida et., al.,2023). These difficulties range from the effects of Islamophobia, especially in societies where Muslims are socially marginalized, to trauma in war-torn areas. Islamic coaching, also known as spiritual treatment or Islamic coaching. It is a contemporary strategy for advancing mental health that combines contemporary treatment methods with Islamic beliefs (Kalelioğlu, & Gülbahar, 2014). This kind of coaching is based on several fundamental beliefs that direct its methods and provide a thorough approach to addressing emotional and mental health issues. Islamic educational coaching places a strong emphasis on balancing psychology and religion to foster the development of critical thinking abilities in a comprehensive way. It is acknowledged as a

method for treating a person's emotional and spiritual well-being. In the Holy Quran, Allah Ta'ala placed a strong emphasis on mental health. In Surah Ash Shura (Ayat 5-6) Allah encourages that no doubt after the hardship it will be ease. It serves as a reminder that challenging times eventually pass without incident, giving people who are struggling mentally hope and consolation. A coaching cycle is a form of instructional coaching in which a teacher and an instructional coach have a reciprocal relationship, much like a mentor and mentee. The instructional coach leads the teacher through a series of steps with the goal of improving their teaching strategies and, to a lesser extent, student learning. Although there are many different formats, each coaching cycle has three phases (1) joint planning between instructional coach and teacher to set a goal. (2) collaborative efforts between the instructional coach and teacher are used to identify coaching initiatives for plan implementation and monitoring. (This will vary based on the goal—and can include everything from official test scores to student engagement.). (3) reflection that allows the instructional coach and teacher to evaluate the impact of the process on student achievement. In other words: this is where you ask "Did the teaching methods used help us reach our goal? An instructional coaching cycle typically follows a systematic process that helps guide teachers through their teaching journey. Although there are variations in how the instructional coaching cycle can be structured, most models consist of the following steps:

Goal Setting: In this initial step, teachers work with their instructional coach to identify specific areas for growth and set measurable goals that align with student learning outcomes.

Data Collection: After goals are established, teachers collect data from classroom observations, student work, and other relevant sources to help inform their practice.

Practice and Reflection: Teachers then have the opportunity to practice new strategies and teaching techniques in the classroom, reflecting on their progress and receiving feedback from their teaching coach.

Reviewing Goals and Next Steps: Finally, teachers and instructional coaches review progress toward goals, celebrate successes, and plan next steps for continued growth and development.

2.Literature Review

Ramdial-Budhai, (2018) cite the results of this study show that a coach supporting teachers with the implementation of small groups or rotations is not strongly related to the coach's effectiveness during the learning process. Coaching was not validated for small groups or rotations as all participants felt it helped improve their instruction. The support of a literacy coach can positively impact instruction during the skills-learning process in other areas. School-based professional development has a positive impact on instruction. Findings suggest that a coach can improve instruction by helping to track student progress. Instructional coaching is presented as an opportunity to provide professional development that is in-service, ongoing, directly related to the challenges teachers face in the classroom every day, and familiar with the context of teachers' work. (Deussen, et.,al 2007). When literacy coaches administer and discuss student assessments with teachers, observe teachers' instruction, and provide supportive feedback, confer with teachers about their instruction and students. are, and model instruction in

classrooms, students' reading achievement increases significantly (L'Allier, Elish-Piper, & Bain, 2010). The ambiguity of job descriptions for instructional coaches and their heavy workloads can limit their impact on both teacher practice and student performance (Stefaniak, 2017). Teachers' resistance to instructional coaches can be attributed to problems associated with the implementation of coaching. Due to the increased curriculum requirements associated with high-stakes testing, many administrators mandate professional development initiatives where presenters and developers are placed in expert roles.to address teacher shortages (Matsumura & Wang, 2014).Instructional coaching provide opportunities for professional development because an "outside" expert is not familiar with teachers' pre-existing knowledge, skills, or even individual needs often fail to meet the cognitive principle that mature learners are currently learning. thrive when they are self-directed (Knowles, et., al. 2011). Teachers express frustration and dislike toward professional developers who ignore their expertise and provide one-size-fits-all solutions (; Lane & Hayes, 2015). Matsumura and Wang and Millward, (2014) revealed findings that support one-to-one classroom coaching as a priority of duties associated with instructional coaches, even when they perform site-specific activities at the supervision of their principals. doing coaching though recognized as a key component in curriculum reform initiatives at the state and federal levels, there is relatively little research to support coaching as an effective strategy for improving teaching and learning critical thinking skills(Howley,et., al. 2014; Teemant, et., al. 2014).Mudzimiri et al., (2014) discussed the findings of their study that experimental research planned to better understand and make clear the roles and responsibilities of coaches is limited. Zuñiga et al., (2020) cite the findings that although existing researchers have explored the work of instructional coaches at the elementary and secondary school levels, there is little research on the roles and perspectives of coaches. The lack of an evidence base for instructional coaching may be a contributing factor to some of the problems coaches face in terms of role confusion, teacher resistance, and limited administrative support. Barlow et al. (2014) found that the concept of coaching is still so new that teachers do not easily embrace the role of instructional coach. There is little research that explores instructional coaching and its barriers from teachers' perspectives (Lowenhaupt, et. al., 2014). It is important that curriculum staff within a unified school district gain insight into the perceptions of administrators, teachers, and instructional coaches about instructional coaching, the impact coaches have on instructional practices, and the barriers coaches face. Insights will allow for the planning and implementation of initiatives that can help teachers and administrators better understand the role of the instructional coach and the interactions associated with instructional coaching to positively impact classroom instruction and students' successes can be increased.

3.Statement of the Problem

Pakistan is an Islamic democratic country but difficulty in students' conceptual understanding of Islamiyat is common. Islam and its teaching are in favour of critical thinking. The education ministry of Pakistan recommended that teachers of Islamiyat should utilize innovative teaching techniques for developing critical thinking skills among students through the teaching of Islamiyat. In the field of education, especially in the subject of Islamiyat, the effectiveness of teaching methods for developing critical thinking skills in students is a major concern. Among

various teaching techniques, instructional coaching technique has gained attention for its ability to enhance students' critical thinking skills. However, there is a gap in understanding the specific role of instructional coaching technique in developing critical thinking skills in the context of Islamiyat.

4. Objective of the study

To explore the role of instructional coaching technique in developing critical thinking skills of the students in the subject Islamiyat at secondary school level.

5. Hypotheses of the study

Hypotheses of the study are as follow

H_{01}. There is no significant role of instructional coaching technique exists in developing critical thinking skills of the students in the subject Islamiyat at secondary school level.

H_{02}. There is no significant role of instructional coaching technique in developing critical thinking skills (components wise) of the students in the subject Islamiyat at secondary school level.

6. Methodology

The prime objective of present study was to explore the role of instructional coaching technique in developing critical thinking skills of the students in the subject Islamiyat at secondary school level. By nature, it was an experimental study. To explore the role of instructional coaching technique The Equivalent Material Design with single group was applied. The selected material for this study was ten Ayat 11 to 20 of Surah e Al Anfal. Content based test was administered as a data collection tool before and after the intervention which was developed by the researcher from the selected Ayat. To select the sample of the study Researcher applied random sampling technique. These students were enrolled in the in the 9th grade in conveniently selected Government Girls Higher Secondary School Topi, Distt. Swabi (KPK- Pakistan). Lesson plan was consisted of 5 levels of instructional coaching technique which was developed by the researcher. Collected data were analyzed through SPSS version 26. Paired Sample T test was applied to analyze the collected data.

7. Results

To explore the role of instructional coaching technique to develop the critical thinking skills of the students in the subject Islamiyat at secondary school level Paired sample T test was applied by the researchers.

Table 1
Role of Instructional Coaching Technique in Development of Critical Thinking Skills

Pair 1	N	Mean	SD	*df*	t-Value	Sig (*p*)	r

O1	50	62.16	5.18	49	-2.118	0.03	0.342
O2		63.92	5.06			

N=50 *p<0.05* O1(Observation1), O2 (Observation2)

Table 1 exposed that mean score of critical thinking skills differ before treated through instructional coaching technique in O1 (M=62.16, SD=5.23) and after the application of the treatment in observation 2 (M=63.92, SD=5.06) at the 0.05 level of significance, t (49) =-2.118, n=50, p<0.05, 95% CI for mean difference -3.430 to -0.90 , r= 0.342. On average, the critical thinking skills was about -1.760 points greater than before the treatment. Hence, instructional coaching technique as a teaching method plays a significant role in the development critical thinking skills in the subject Islamiyat of students enrolled in public sector secondary school.

Table 2

Role of Instructional Coaching Technique in Development of Critical Thinking Skills (Component Wise)

Components of CT	Mean		Mean Dif.	SD.		P-Value	Effect Size *d*	r	t value
	O1	O2		O1	O2				
Tadhakkur	10.86	11.32	-0.46	1.96	1.99	0.24	-	0.781**	-2.478
Ta'qil	11.50	11.58	0.08	1.99	1.92	0.83	-	0.502**	-0.289
Tafakkur	15.78	12.70	3.080	1.11	2.21	0.000**	1.6	0.137	9.318
Tafqih	12.32	15.08	-2.760	2.01	1.51	0.000**	1.3	0.240	-8.835
Tadabur	11.70	13.24	-1.540	2.08	1.93	0.000**	0.7	0.490**	-5.358

Table 2 described the role of instructional coaching technique in developing critical thinking skills. According to the values instructional coaching technique developed the Tafakkur skills of students as the effect size *d* (1.6) is large as it is greater than 0.8. Effect sizes for components Tadabur (0.7) and Tafqih (1.3) are also large but less as compared to the magnitude of component Tafakkur (1.6). Whereas effect sizes of components Tadhakkur and Ta'qil were not calculated because these two components are not statically and significantly different in O1 and O2 as defined by Cohen. Therefore, it was explored that the instructional coaching technique enhanced the three components (Tafakkur, Tafqih, Tadabur) of critical thinking skills of students enrolled in public sector secondary school.

8.Conclusion

Based on analysis and description of the collected data following conclusions have been drawn.

1. Instructional coaching technique as a teaching method plays a significant role in the development of critical thinking skills in the subject Islamiyat of students enrolled in public sector secondary school.

2. Instructional coaching technique enhanced the three components Tafakkur, Tafqih, Tadabur of critical thinking skills of students enrolled in public sector secondary school.

9.Discussion

The prime aim of the present study was to explore the role of instructional coaching technique in the development of critical thinking skills in the subject Islamiyat. The results indicated that in Pakistan the students at secondary school level are eager to develop critical thinking skills under the guidance of a coach. Artificial Intelligence which is working as a tool for Human Computer Interaction (HCI) coaching is playing vital role in developing critical thinking skills among students. Application of instructional coaching technique developed the critical thinking skills of the students in the subject Islamiyat. Additionally, the components Tafakkur, Tafqih and Tadabur were influenced by the instructional coaching technique. These results are compatible with results of the study conducted by the Chaplin, (2007). He concluded that modeling and coaching improves critical thinking skills. Modeling and coaching "active study" behavior is essential to ensure students develop confidence in their ability to study science and stay in the science pipeline. The results of a study conducted by Broadbear (2003) are less in line with the results of the present study. He concluded that coaching could foster critical thinking skills, but the student's self-confidence cannot improve. Osborne (2000) reported that students who are treated through instructional coaching technique cannot improve their critical thinking skills. The results of the study conducted by Osborne (2000) are not in line with the study at hand.

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