Paradigm Shift in the Iraqi Teachers Education: Constructivism in Practice

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Abstract

In the constructivist perspective, learning is a process of the construction of knowledge. Learners actively construct their own knowledge by connecting new ideas to existing ideas on the basis of materials/ activities presented to them (experience). Now, when knowledge is viewed as produced rather than acquired, teacher educators anticipate that students will learn how to elicit ideas from their student-teachers and then utilize those ideas to help them develop new, more accurate, more disciplined, or more reasoned understandings. Teacher educators no longer educate teachers where they are only dispenser of knowledge ,and make them learn how to actively engage students in their classes. Teachers are expected to create an environment in the classroom that not only encourages, but also values student participation in classrooms. Teacher educators have to prepare teachers who can guide, shape and expand students' thinking. It becomes all more important to practice constructivism in the programs held for student-teachers opting for teacher education courses through their university education. This gains importance from the perspective of lesser time being structured to set these student-teachers to interact with teacher educators. This paper attempts to find out whether constructivist learning environment is being created in various interactional discourses such as; classrooms, counseling sessions, workshops, practicing teaching for student-teachers doing B.Ed. at the Colleges of Basic Education .It also tries to find the set of constructivist activities to be used by student-teachers in their classes, as practiced in their academic programs. The paper will also examine the shortcomings with regard to the resources and the environment for using the constructivist approach in teacher education program.

Keywords: Constructivism, Teacher education, Constructivist Approach, Constructivist activities

التحول النوعي في تعليم المعلمين العراقيين: البنائية تطبيقاً

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المستخلص

في المنظور البنائي، التعلم هو عملية بناء المعرفة. يقوم المتعلمون ببناء معارفهم الخاصة بشكل فعال من خلال ربط الأفكار الجديدة بالأفكار الموجودة على أساس المواد / الأنشطة المقدمة لهم (الخبرة). في الوقت الحالي، عندما يتم النظر إلى المعرفة على أنها تم إنشاؤها بدلاً من تلقيها، يتوقع الاساتيذ الاكاديميون من الطلاب–المعلمين أن يتعلموا كيفية استنباط أفكار الطلاب الحالية ، ثم استخدامها كأساس لمساعدتهم على بناء فهم جديد أكثر منطقية وأكثر دقة أو أكثر انضباطًا. لم نعد نعلم المعلمين ان يكونوا مجرد موزعين للمعرفة. نحن نجعلهم يتعلمون كيفية إشراك الطلاب بنشاط في فصولهم الدراسية. يُتوقع من المعلمين تطوير ثقافة الفصل الدراسي التي لا تدعو فقط مشاركة الطلاب في الفصول الدراسية، بل تقدرها أيضًا. يجب على الاساتيذ الاكاديميون إعداد المعلمين الذين يمكنهم توجيه تفكير الطلاب وتشكيله وتوسيعه. أصبح من المهم جدًا ممارسة البنائية في البرامج التي تُعقد للطلاب المعلمين في دورات تعليم المعلمين من خلال تعليمهم الأكاديمي الجامعي. يكتسب هذا أهمية من منظور تنظيم وقت أقل لتعيين هذه المجموعة من الطلاب المعلمين للتفاعل مع الاساتيذ الاكاديميون . نحاول في هذه الدراسة معرفة ما إذا كان بالامكان خلق بيئة التعلم البنائية في مختلف الخطابات التفاعلية مثل؛ جلسات استشارية وورش عمل والتدريس وما إلى ذلك للطلاب المعلمين اثناء دراستهم الاكاديمية للحصول على بكلوريوس تربية في كليات التربية الأساسية. كما سنحاول إيجاد مجموعة الأنشطة البنائية التي يستخدمها الطلاب المعلمون في صفوفهم وكما يمارسونها في برامجهم الأكاديمية. كما ستتناول أوجه القصور فيما يتعلق بالموارد والبيئة لاستخدام المنهج البنائي في برنامج إعداد المعلمين.

الكلمات المفتاحية: البنائية،تعليم المعلمين،الطريقة البنائية، الانشطة البنائية

Introduction

Recent researchers in education have been influenced by the constructivist theory of learning. This perspective holds that genuine learning entails the active construction and adjustment of knowledge

structures rather than students passively absorbing information. (Carey, 1985)

Constructivism emphasizes the valuable role of an individual's knowledge, beliefs, and skills in the learning process. A learner is an active participant in learning in all of its varied manifestations, from the Piagetian concept of an individual's adaptation and assimilation of new knowledge to the emphasis on learning as the result of intricate socio-cultural processes, as proposed by Bruner, Lave, Rogoff, and Vygotsky. Accordingly, individuals participate in the meaning-interpreting process, experience reflection, and experience reconstruction in order to gain further knowledge. For educators, teaching has become more difficult due to the growing interest of constructivism. (Garbett,2011; Steffe and Gale,2012)

Knowledge is actively created by students using their cognitive abilities, according to the Constructive. Students do not just absorb the knowledge that is taught to them; rather, they integrate new material into what they already know, whether from conversations with peers or from their own experiences in the classroom. A number of these principles align with the needs of incorporating innovative teaching and learning practices. Constructive theory-based teaching and learning procedures adhere to specific principles (Hajimia et al., 2019, cited in Al-Khafajy and Al-Ma'moori, 2022)

Through the process of learning, a child creates his/her own knowledge. Rather than just memorizing answers and getting them right the first time, asking questions that require students to connect what they are learning in class to real-world situations and encouraging them to respond in their own words are small ,but crucial steps in helping children develop their understanding (UNESCO,2012).This suggests that students who are actively doing things in classrooms are learning while students who are passive in classrooms are not learning. The emphasis is on reflecting, building on ideas and inquiring,

Teachers' roles should shift from being the initiators to the helpers and facilitators for students in the process of building knowledge as

educators place more emphasis on the students as the subjects. Stated differently, educators have the responsibility of creating a conducive learning atmosphere, guiding students' learning, and serving as their academic advisor. The conventional teaching approach, which places teachers at the center and guides them, is abandoned. Teachers plan and direct the entire instructional process. (Jia, 2010; Gash,2014).

Constructivism in Teacher Education

The philosophy of constructivism has noteworthy consequences for teacher education as well. In a constructivist program, aspiring teachers receive training in creating and executing educational activities that foster critical and creative thinking, communication, and teamwork, as well as meeting the needs of a variety of learners (Bonstetter, 1998). The theory of professional development emphasizes the value of prior experiences and subject-matter expertise in the construction of teacher knowledge should form the foundation of a constructivist teacher education program designed for this aim (Dewey, 1938, as cited in Hassard, 1999).

The constructivist pedagogies are now becoming part of teacher education programs. Now, knowledge is viewed as produced rather than acquired, teacher educators anticipate that students will learn how to elicit ideas from their student-teachers and then utilize those ideas to help them develop new, more accurate, more disciplined, or more reasoned understandings. Teachers are no longer trained to be mere information providers. They have to learn how to actively indulge their students in their lessons and foster a learning environment where students' participation is valued and encouraged. Teacher educators must train teachers how can direct, shape, and broaden the horizons of their students' thinking.

As anticipated, teacher education has seen a movement from behaviorism to constructivism (Richardson,1997) as teachers try to encourage students to create their own knowledge rather than transferring it to them. But in the classroom, it's harder to notice the difference. (Miranada, 2009). Constructivist learning principles are used in the

development of teaching methodological approaches, according to Pankratius and Young (1995) as they argue that student-teachers values and views about teaching would not change significantly or at all if teacher education programs failed to recognize and acknowledge their prior knowledge. Before completely applying the constructivist approach, Sink (1997) emphasizes how important it is to train teachers. As a result, he insists on precise descriptions and in-depth research on the procedures, processes, and assumption that are crucial to the production of knowledge.

Traditional Classrooms	Constructivist Classrooms
Curriculum is presented part to whole with emphasis on basic skills.	Curriculum is presented whole to part with emphasis on big concepts.
Strict adherence to fixed curriculum is highly valued.	Pursuit of student questions is highly valued.
Curricular activities rely heavily on textbooks and workbooks.	Curricular activities rely heavily on primary sources of data and manipulative materials.
Students are viewed as "blank slates" on which information is etched by the teacher.	Students are viewed as thinkers with emerging theories about the world.
Teachers generally behave in a didactic manner, disseminating information to students.	Teachers generally behave in an interactive manner, mediating the environment for students.
Teachers seek the correct answer to validate student learning.	Teachers seek the students' points of view to understand students' present conceptions for use in subsequent lessons.
Assessment of student learning is viewed as separate from teaching and occurs almost entirely through testing.	Assessment of student learning is interwoven with teaching and occurs through teacher observations of students at work and through s exhibitions and portfolios.
Students primarily work alone.	Students primarily work in groups.

Regarding curriculum, learning activities, roles for teachers and students, and student's assessment of their learning, constructivist classrooms differ greatly from traditional classrooms. **Table 1** provides an overview of how the constructivist and traditional classrooms differ from one another.

Table 1: A Comparison between Constructivist Classrooms and Traditional Classrooms
(Brooks and Brooks, 1993)

Teachers must pay attention to their own conceptual change in the same way that they do their students' as they move to a constructivist teaching approach. As a result, the role of teacher educators must also

adapt. This is because it requires creating a balance between the need of modeling constructivist teaching strategies in teacher education courses and the recognition of the various discipline-specific requirements of teaching.

Instruction in Constructivist Classrooms Learning

The reason behind the increased interest in constructivist approaches to learning and teaching is the shift from an associational/behaviorist approach to one that emphasizes higher level knowledge production in order to keep up with the rapid development of information (Airasian and Walsh, 1997). Constructivism may, thus ,be evaluated more for what it is NOT than for what it is as a teaching methodology. The empiricist/reductionist method of teaching and learning is rejected by constructivism which the teacher fills with deposits of information that the teacher considers to be real knowledge and that the students retain until they require it. Because traditional instruction is mostly focused on instructor discussion and extensively relies on textbooks for course structure, it is thought to not be conductive to learning. Instead, students are encouraged to approach challenges in their own ways when receiving constructivist instruction. Instead than urging them to embrace another person's viewpoint, they are urged to improve personal. Tasks that encourage the development or use of more advanced techniques are provided by the teacher, but all approaches are respected and encouraged. According to Clements and Battista (1990), students' thought processes progressively become more powerful and abstract as a result of their interactions with the activities and other students.

John Dewey's ideas made a significant contribution to constructivist education. According to Dewey (1938, quoted in Rainier and Guyton, 1994), a skilled teacher should see teaching and learning as an ongoing process of reconstructing experience. **Table 2** illustrates how Dewey distinguished between constructivist and traditional education.

Table2: A Comparison between Traditional and Constructivist Education

(Dewey, 1938, cited in Rainier and Guyton, 1994)

Traditional Education	Constructivist Education
Imposition from above	Expression and cultivation of individuality
External discipline	Free activity
Learning from texts and teachers	Learning through experience
Acquisition of isolated skills and techniques by drill	Acquisition of skills as means of attaining ends which make direct vital appeal
Preparation for a more or less remote future	Making the most of opportunities of present life
Static aims and materials	Acquaintance with a changing world

Challenges of Constructivist Education

Constructivism poses a number of challenges for educators, chief among them the challenge of transforming a learning theory into a teaching theory, which begs the question of what competencies and knowledge are essential for teachers. In addition to other responsibilities, teacher educators must strike a balance between modeling constructivist teaching practices and methods in teacher education courses and the recognition of the various discipline-specific requirements of teaching (MacKinnon and Scarff, 1997, cited in Richardson, 1997). Although the constructivist method is currently preferred and regarded as a valid strategy for teaching and learning, Airasian and Walsh (1997) point out that its use in classrooms is neither widespread or systematic. The majority of applications are often pilot studies with a specific focus. Constructivist teaching methods are usually not well defined, and they are also often vague (Smerdon et al., 1999).

A shift in current practices is necessary for the adoption of the constructivist approach. According to Rainer and Guyton (1994), there is no evidence that teacher education is characterized by constant change. Teachers can also be seen as both significant change agents in the reform movements to transform classrooms and schools, as well as major barriers to change due to their adherence to antiquated teaching methods and their set, traditional views about learning, teaching, and curriculum (Prawat, 1996). Regarding constructivism as the only workable theoretical

framework for instruction and learning presents educators with additional difficulties. It is not the only way to think about the formation of knowledge and understanding, but it is one. There is also the argument that Constructivists argue that it is erroneous to dismiss instructional strategies like rote learning and memorization since certain subjects can—and perhaps even ought to—be taught exclusively mechanically (Airasian and Walsh, 1997).

The above implementation challenges with the constructivist method do not mean that instructors should forgo adopting these strategies in the classroom; rather, it makes them more aware of potential obstacles and how to successfully address them. To address these issues, workshops on the constructivist application of various teaching and assessment strategies should be held, and a core group of dedicated educators must thoroughly research constructivism to comprehend its tenets and limitations.

Need for the Study

General Directorate of Curricula, (GDC) in UNESCO (2012) highlights constructivism, suggests that curriculum should assist students in becoming knowledge constructors, and emphasizes the active role that teachers play in the process of knowledge creation, which is the basis for the development of primary school textbooks. Additionally, according to the GDC, there is a symbiotic relationship between teacher education and school education. Development is required to raise the standard of education across the entire system. According to Kaufman and Brooks (1996), it is impractical to expect teachers to introduce constructivist settings in classrooms when these practices were not imposed on them in their previous educational experiences, including teacher education programs. It is crucial to involve teacher candidates in interdisciplinary research, team projects, fieldwork opportunities, self-observation, evaluation, and reflection in order for constructivist techniques to become prevalent in classrooms. Programs for teacher education are anticipated to change throughout time as "teacher educators and teacher candidates engage in a learning cycle that brings together new initiatives in response

to emerging needs and leads to mutual growth and development" (Kaufiman and Brooks,1996).

So, if educators want to integrate constructivist practices in school education, they need to take a fresh look at teacher education. Furthermore, mastering vocabulary was insufficient to foster a thorough comprehension of the underlying principles of learning that underpinned the particular notions. Through their interpretation of their experiences, student-teachers build their own concept of teaching and learning. Thus, in order to build an understanding of how to establish a constructivist learning environment conductive to higher order thinking, student-teachers are essential as learners. It becomes all more important to practice constructivism in the programs held for student-teachers opting for teacher education courses through their university academic education at Colleges of Basic Education . This gains importance from the perspective of allocated the required time for these sets of student-teachers to interact with teacher educators. Constructivist process orientation to the teacher education is essential to encourage students to develop different thinking skills.

Significance of the Study

It has been stressed recently that aspiring teachers should receive training that will enable them to actively participate in the learning process, cultivate higher order thinking abilities, apply these abilities to reflect on their own learning and teaching processes, be ready to meet the diverse learning needs of their students, and take on the roles of facilitator and guide to aid in the learning process. Providing constructivist classrooms and challenging the preconceived notions of aspiring teachers regarding learning and teaching is crucial for training such educators. Few research studies have been conducted on constructivist educational practices at faculties of education, despite the fact that policymakers has recognized the need to train future teachers in light of global changes in education and has restructured the teacher education system to meet these demands.

Research Studies

Studies that are pertinent to this topic typically look into how constructivist programs and teaching methods affect the growth of cognitive and affective learning outcomes. A few studies compare the effectiveness of traditional and constructivist teaching methods. According to these research, students who were taught constructivist approaches outperform students who were taught traditional methods in terms of their cognitive and affective learning outcomes.

Turkish primary EFL instructors' perceptions of constructivism were examined by Bakla (2011). He noted the value and applicability of constructivism and the apparent general understanding of the theory among English teachers in Turkish elementary schools. Even yet, they nevertheless confront formidable practical challenges since the emphasis has switched from knowledge as a product to knowledge as a process. One important pedagogical consequence of this study is the need for in-service training to give teachers the abilities they need to use constructivist teaching strategies in the classroom.

In order to track the development of constructivism in the field of teaching and learning, Gunduz and Hursen (2014) undertook a study. Articles from Science Direct, Eric, and EBSCO that were published between 2002 and 2013 were examined for this reason. According to the study's findings, there were three constructivist approach publications in 2002 and 43 in 2012. This supports the claim that constructivism is an educational movement that is gaining traction.

Mensah (2015) conducted a study at the University of North Dakota in the United States to learn what faculty members and students thought of the constructivist learning environment. The results demonstrated that constructivism was well-received by both teachers and students. Students especially liked the two constructivist ideas of cooperation and negotiation experiences.

According to Ardiansyah and Ujihanti's (2018) observations, reading comprehension courses in Indonesia are still mostly taught using the teacher-centered approach. They observed that this approach had detrimental effects on classroom management and student engagement in

addition to having a poor impact on the students' reading abilities. This was because a small group of well-informed pupils controlled the classroom, ignoring the lower-achieving children. A post-test design experiment was carried out. Three high classes and three low classes comprised the 148 students in their sample, who were non-English majors in the colleges of Computer Engineering, Education, and Business Administration. The efficacy of constructivism in teaching reading comprehension was validated by the outcomes analysis. They saw that their students' reading comprehension and vocabulary scores had significantly improved.

Objectives of the Study

1. To study the status of constructivist classroom characteristics in teacher education as perceived by student-teachers.
2. To compare the perception of student-teachers towards constructivist classroom characteristics on the basis of their gender.
3. To study the shortcomings with regard to resources and the environment for using constructivist approach in teacher education programs.

Research Methodology

The sample for the present study is convenient and consists of 220, 2nd year student-teachers in the English Department at the College of Basic Education/ University of Babylon and University of Maysan during the academic year 2023-2024 . The researcher used a self-developed questionnaire which was adapted by consulting few standardized tools. The questionnaire consists of three parts. The first part is for background information; the second part is an adapted version of the questionnaire developed by Kesal, F. (2003) .A five-point Likert scale with four sub-dimensions (learning activities, evaluation, professional relevance, and reflective thinking) comprised the second part of the questionnaire. This part's scale ranges

from Always (5) to Never (1) and evaluated the degree to which a specific attribute or feature was present; and the third part consists of open-ended items to find out the constructivist practices being used by teacher educators which will be used by the future teachers in their respective classes and to find the shortcomings with regard to resources and the environment for using the constructivist approach in teacher education. The data have been quantitatively analyzed.

Analysis and Interpretation of Data

The analysis and interpretation of the data are given in the following paragraphs.

Table3: the Percentage Responses on 5 Point Likert scale for Constructivist Classroom Characteristics

5 point scale	% response
Always	38.46%
Often	15.34%
Sometimes	10.26%
Rarely	20.51%
Never	15.34%

The percentage of the responses on the Likert scale shows that the maximum number of responses (38.46%) is with **Always** which indicates that many practices used in teacher education are constructivist in nature .

Table4: Mean Scores of the Dimensions of Constructivist Classroom Characteristics

Dimensions	Mean
Learning Activities	3.88
Evaluation	3.0
Professional Relevance	3.34

Reflective Thinking	**3.67**

On the basis of mean score (3.88) obtained for the dimension 'Learning Activities', it is revealed that the teacher educators are using the constructivist learning activities in the classes. The mean score for the second dimension is 3.It indicates that student-teachers are not only evaluated on the basis of written exams ,but also on the basis of presentation and group work. The presentation is also planned and prepared by the student-teachers .Teacher educators, however, have been found facilitating them. The mean score for dimension 'Professional relevance' is 3,34 . It has been found that student-teachers perceive that the practices used by teacher educators will not only benefit them as students, but is also professionally relevant. The mean score of the dimension ' Reflective thinking' is 3.67, which clearly indicates that there are enough opportunities given by teacher educators to reflect.

Table 5: The Comparison of Constructivist Classroom Characteristics as Perceived by Student-teachers on the Basis of Gender

Gender	Mean	Standard Deviation	t	Level of significance
Male	**3.95**	**1.20**	**0.82**	**Not Significant**
Female	**3.40**	**0.95**		

When the two groups based on gender were compared, it was found that there is no significant difference in the perception of the learners towards constructivist classroom characteristics present in the teacher training courses. This means there are equal opportunities present for student teachers for all.

Findings

Teacher education courses are using constructivist pedagogies and offer chances to practice constructivist techniques and strategies. Constructivist practices are being used in the counseling sessions, classes and workshops in teacher education courses. There are enough opportunities to interact, to discuss and give their points of view. Different learning activities such as project work (individual as well as in groups), role play ,atc. are used in the classes. Teacher educators are emphasizing on higher order thinking, inquiry activities, discussion with peer and instructor, collecting and interpreting information from different sources. There are opportunities for self-reflection, feedback and asking questions.

The mean score in dimension 'Evaluation ' is the lowest among the four dimensions of Constructivist classroom characteristics. There is a need to develop strategies which will help teacher educators to evaluate students' progress by examining the thinking process of student- teachers. The study reveals that equal opportunities are

available for constructivist practices for student-teachers. This helps to infer that constructivist practices are not subject/stream specific in teacher education.

Although, constructivist practices are being used by teacher educators and student-teachers, but learners want more interaction and time to pause and think critically and analyze the situations before making their constructed ideas. This shows student-teachers want to follow constructivist approach in their teaching more realistically. The results are consistent with the co-relational investigation carried out by Plourde and Alawiye (2003), which aimed to investigate the influence of the constructivist leaning model on the beliefs of elementary pre-service teachers concerning their constructivist knowledge and its practical application. They discovered that student-teachers' belief in applying constructivist learning environments increased along with their understanding of the theory. The results showed that most student-teachers preferred constructivist methods and practices over traditional ones. Also, the present findings are compatible with a study by Mensah (2015), mentioned above where the results demonstrated that constructivism was well-received by both teachers and students. Students especially liked the two constructivist ideas of cooperation and negotiation experiences.

The shortcomings in usage of constructivist approach while undergoing teacher education programs , as highlighted by student-teachers mainly encompass the low usage of information and communication technologies and dearth of interaction time. Student-teachers also feel that writing reflecting journals is not always possible. The usage of ICT should be majorly enhanced as highlighted by student-teachers.

Conclusion

It is crucial to recognize the importance of constructivist learning environment in teacher education if we actually want to see constructivist learning environment in schools. Constructivist approach in teacher education courses provides a vision to student-teachers for it provides them opportunities to experience different ideas and strategies that are constructivist. It was found that the learning environment in teacher education encourages reflection, dialogues and critical thinking. Future teachers can adapt those ideas onto their teaching. These new teachers then gain the perspectives and abilities to move their own students to deeper understandings of content.

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