



ISSN Print: 2394-7500  
ISSN Online: 2394-5869  
Impact Factor: 5.2  
IJAR 2017; 3(5): 753-756  
www.allresearchjournal.com  
Received: 19-03-2017  
Accepted: 20-04-2017

**Shipra Srivastava**  
Research Scholar,  
Department of Education,  
University of Lucknow,  
Lucknow, Uttar Pradesh, India

**Dr. Kiran Lata Dangwal**  
Assistant Professor,  
Department of Education,  
University of Lucknow,  
Lucknow, Uttar Pradesh, India

## Constructivism: A paradigm to revitalize teacher education

**Shipra Srivastava and Dr. Kiran Lata Dangwal**

### Abstract

India has a long and rich system of education from ancient gurukul system to contemporary technology driven system of education. The paradigm shift in educational scenario from teacher centred to learner centred has offered teachers to be a facilitator and co-explorer; one who encourage learners to inquire, challenge, and construct their own knowledge, concepts, ideas, views, and conclusions. Even the National Curriculum Framework (2005), the document about school education in India, emphasizes on active learning, which means knowledge should be an outcome of child's own activity; learner should construct and create knowledge by himself. It further adds that pedagogy should also be learner centred, based on children psychological development and interest, their background and culture; it should be more and more related with their daily life. Constructivism is the need of the hour; it is an epistemology, a theory of learning which explains the nature of knowledge along with the process of learning. In a constructivist setting, learning is active, reflective, collaborative, evolving, constructed and based on enquiry and problem solving approach. Constructivism is a theory of learning, not a theory of teaching thus it presents a challenge to teachers and teacher educators of a formidable task to translate a learning theory into a theory of teaching this in turn raises questions about what teachers need to know and be able to do. This paper at length would elaborate on the concept, types and benefits of constructivism and the way it can be used in teacher education programme, translating theory to practice.

**Keywords:** Constructivism, teacher education, active learning, collaboration, reflection

### 1. Introduction

"People in this country have been slow to recognize that education is a profession for which intensive preparation is necessary as it is in any other profession". This concern expressed in the University Education Commission professed, "The destiny of India is now being shaped in her classrooms." So did the National Policy on Education 1986 emphasize: "The status of the teacher reflects the socio- cultural ethos of the society; it is said that no people can rise above the level of its teachers". These exhortations are certainly an expression of the important role played by the teachers as transmitters, inspires & promoters of man's eternal quest for knowledge. Competent teachers can only be possible when there is quality teacher education for equipping them with necessary knowledge, skills and attitude. This paradigm shift in educational scenario from teacher centered to learner centered and from conventional to contemporary education, look for reviewing the existing practice of teacher education and restructuring the curriculum in the light of quality education in India in order to enable the teachers to address the diverse needs of all the learners and accept the involved challenges thereof. This, in turn, can help realizing the aims of quality education and contribute positively for the development of our nation.

A careful exploration and critical analysis of present day educational system reveals that there is a struggle to impart maximum knowledge and to fill the mind of learners with variety of Informations whether they have understood what they have learned or not is not a matter of concern. Education is mostly focused on achievement of particular knowledge rather than the potentials that might be achieved. Whereas in its real sense the purpose of education is to prepare minds that are critical and can verify and critically analyze the information being provided not to just accept every bit of information being offered. National curriculum framework (2005), opens with a quote of "civilisation and Progress" an essay by great poet and Nobel laureate, Gurudev Rabindra Nath Tagore, where he very clearly reminds us about

**Correspondence**  
**Shipra Srivastava**  
Research Scholar,  
Department of Education,  
University of Lucknow,  
Lucknow, Uttar Pradesh, India

the key feature of childhood, “creative spirit” and “generous joy” but he further states that both of these could be distorted by an inconsiderate adult world. Today our education system is behaving in the same manner; it expects children to learn and reproduce the accepted knowledge “learn this because I tell you”. They are not being taught how to find out the right answer or how to create or construct knowledge by them self. Here constructivism comes as a noteworthy solution.

## 2. Constructivism

“As long as there were people asking each other questions,  
we have had constructivist classrooms.  
Constructivism, the study of learning, is about how we  
all make sense of our world,  
and that really hasn’t changed.”

Jacqueline Grennan Brooks

Constructivism is an epistemology, a theory based on observations and scientific studies that explains about how people learn. It maintains that individuals create or construct their own new knowledge and understandings through experiencing things and environment which they come across and reflecting on those experiences; by the interaction of their previous knowledge and beliefs with the ideas, events, and activities which they observe and experience and come in contact with (Cannella & Reiff, 1994; Richardson, 1997) [2, 12]. Instead of imitation or repetition, in constructivism knowledge is acquired through involvement and attachment with content (Kroll & LaBoskey, 1996) [7]. Individuals are architects and active creators of their own knowledge. For this, they need to ask questions, explore, and assess what they know and what they don’t. Instead of dismiss the active role of the teachers as criticized by some educationists constructivism modifies their role and make them a guide, facilitator and co-explorer who promote learners to create and construct knowledge. In constructivist settings, learners are encouraged to use active learning techniques experiments, real-world problem solving and collaboration with others thus it transforms the learners to an active participant in the learning process from just being a passive recipient of information. If we ask a constructivist about what happens when a learner gets a new piece of information? The most common response will be that the learner compares that new information to the knowledge, understanding and experience he already has. Further, any one of three things may occur-

1. The new information matches up with his previous knowledge quite well i.e. its consonant with the previous knowledge, so the student adds it to his understanding.
2. The information does not match previous knowledge i.e. it's dissonant. The student has to change her previous understanding to find a fit for the information. This can be harder work.
3. The information does not match previous knowledge, and it is ignored. The student may just not absorb rejected bits of information. Else, they may float around, waiting for the day when the student's understanding has developed and permits a fit.

Rather than just ingesting the knowledge mechanically from their teacher or the textbook learners actively construct their own knowledge; thus a well-planned constructivist

classroom, creates a learner who knows “*how to learn*” and become “*expert learner*”.

## 3. Constructivism: Historical Perspective

The notion of constructivism has its roots in classical antiquity, and traced back to The Socratic dialogue method in which he asked directed questions to his followers that led them to realize the weaknesses in their thinking by themselves. For constructivist teachers Socratic dialogue method is still works as a significant means by which they assess the learnings of their students and plan new learning experiences for them.

Later on Jean Piaget concept of childhood development and John Dewey perception of education, led the way for the evolution of constructivism. As per the views of Piaget, individuals learn through the construction of logical structure one after another. Further, he believed that the initially children’s logic and their way of thinking are completely different from that of adults. The implications of Piaget theory and the way he applied them have created the foundation for constructivist education. Dewey believed that education is grounded in real life experience. He wrote, “If you have doubts about how learning happens, engage in sustained inquiry: study, ponder, consider alternative possibilities and arrive at your belief grounded in evidence.” ‘Inquiry’ is a chief element of constructivism.

Furthermore, the social constructivism aspect of learning has been introduced by Vygotsky. He explained the “zone of proximal learning,” which says that learners solve problems ahead of their actual developmental level (but within the level of their potential development) under guidance of adults or in alliance with the peers who are more capable and efficient than them. Whereas Bruner instigated curriculum change on the basis of his view that learning is an active, social process in which learners construct new knowledge, formulates new ideas or concepts based on their existing knowledge. More recently, Seymour Papert’s revolutionary work to teach children by using computers has led to the extensive use of computer and information technology in constructivist settings.

Although there are some generally accepted traits of constructivism, it has some different interpretations too. From these different interpretations of constructivism three noteworthy strands have been identified by Vadeboncoeur (1997) [13] - Piagetian constructivism, Sociocultural constructivism, and Emancipatory constructivism. Among contemporary educators usually, two broad interpretations are prevalent-

- Psychological Constructivism which is remarkably articulated by Piaget, and
- Social Constructivism which is mainly associated with Vygotsky.

There are two most important issues that form these interpretations:

- (1) education for individual development versus education for social transformation, and
- (2) the degree of influence that social context has on individual cognitive development (Richardson, 1997; Vadeboncoeur,1997)[13].

## 4. Teaching for Construction of Knowledge

According to NCF 2005, “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 based on materials/activities presented to them (experience). The structuring and restructuring of ideas are essential features as the learners' progress in Learning. However, there is a social aspect in the construction process in the sense that knowledge needed for a complex task can reside in a group situation." It further extends it, "In this context, collaborative learning provides room for negotiation of meaning, sharing of multiple views and changing the internal representation of the external reality. Construction indicates that each learner individually and socially constructs meaning as he/she learns. Constructing meaning is learning. The constructivist perspective provides strategies for promoting learning by all."

A teacher, who believes in constructive theory, presents questions and problems to learners, then guide them to find and create their own answers. To achieve this they use various techniques in the process of teaching and learning. Such as-

- Inquiry- where students are prompt to formulate their own questions
- Multiple Intelligences- which allow learners to construct multiple interpretations and expressions of learning
- Collaborative Learning-where learners are encouraged for group work and the use of peers as resources

In a constructivist setting, learning is ...

**Constructed:** learners are not clean slates upon which information and knowledge is engraved. They already have formulated knowledge, ideas, conceptions, understandings, and this previous knowledge works as the raw material on which they construct new knowledge.

**Active:** learners construct their own knowledge while being engaged in the learning process. The teacher guides, moderates, suggests and at the same time allows learners to experiment, questioning, exploration, try things that even may not work but requires their full participation and engagement. An important part of the learning process is that students reflect on, and talk about, their activities.

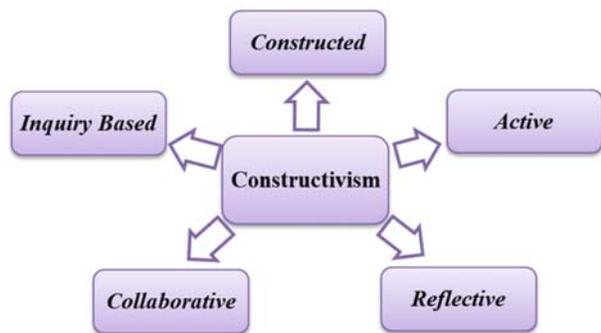


Fig 1: Learning in Constructivism

**Reflective:** The process of reflecting makes learners; experts of their own learning; they control their own learning process make their way by reflecting on their experiences. The teacher assists to create situations and activities that lead the learners to reflect on their knowledge and experiences. To provide a free atmosphere to talk about what was learned and how it was learned is quite important.

**Collaborative:** learners not only learn themselves, but also from their peers. When they review and reflect on their learning processes together, they easily pick up strategies and methods from one another. Thus, constructivist classroom relies greatly on collaboration.

**Inquiry based:** learners ask questions, to explore a concept or any new topic and use inquiry methods for the same. They also use various resources to discover solutions and answers of their questions. As students investigate and explore the topic, they draw conclusions, and, as exploration continues, they revisit those conclusions and reframe them according to their further investigation. Quite often the exploration of questions leads to more questions.

**5. Constructivist Frameworks in Teacher Education**

Constructivism is a theory of learning, not a theory of teaching and translating theory to practice is both difficult and imprecise (MacKinnon & Scarff-Seatter, 1997) [8]. However, education literature documents several large- and small-scale efforts to do so (DeJong & Grooms, 1996; Kaufman, 1996; Richardson, 1997) [3, 6, 12]. Constructivist teacher education generally reflects two major traditions- the developmental and social re-constructionist traditions (Canella & Reiff, 1994) [2]. Teacher education Programs influenced by the developmental tradition that attempts to teach pupil teachers the method to teach in a constructivist manner, more specifically the Piagetian manner. At present teacher education, programs are typically characterized by extensive direct instruction in both theory and practice, mostly without any complementary opportunity for inquiry, discovery or reflection.

Those teacher education programs that are influenced by social re-constructionist tradition attempts to help pupil teachers to deconstruct their existing knowledge and attitudes, to comprehend about the development of such understandings, to look for the effects these understandings have on their performance and behaviour, and to think about alternative ideas and principles that may prove to be more functional in teaching.

The overarching challenge constructivism presents to teachers and teacher educators is the formidable task of translating a learning theory into a theory of teaching (MacKinnon & Scarff-Seatter, 1997) [8], which in turn raises questions about what teachers need to know and be able to do. Inappropriately applied, constructivist approaches may lead to the "abandonment" style of teaching (MacKinnon & Scarff-Seatter, 1997) [8]. Several authors cite the importance of teacher educators' modelling constructivist approaches that engage students in interdisciplinary exploration, collaborative activity, and field-based opportunities for experiential learning, reflection, and self-examination (Kaufman, 1996; Kroll & LaBosky, 1996) [6, 7] so that future teachers become able to employ these strategies in schools.

**6. Constructivist Theory in Practice**

A teacher educator faces this challenge to apply his knowledge and understanding of constructivism in practice. Any constructivist teacher educator, do not want to dispense knowledge to the students, but rather to become a facilitator and a mediator to help and guide the learners to construct or create their own knowledge. The facilitation and intervention can be carried out in variety of different ways which includes activating learners' present schema,

encouraging the learners to scrutinize their concepts, and then facilitating them to construct of new understandings by incorporating new information and experiences with their existing knowledge. To generate an environment where learners are able to interact and learn from each other, books, technology, and personal practices is the role of a teacher educator. To create such an environment includes everything from the arrangement of infrastructure to the activities organized and to the forms of assessment. In an effort to translate constructivism to practice, a teacher educator applied certain strategies to teach pupil teachers. The attempt should be not only to teach the pupil teachers in constructivist manner but mainly to make them understand and learn how to use constructivism in their teaching, in future as teacher.

### 7. Conclusion

Students enjoy and learn more when they are actively involved in the process of learning. Constructivism concentrates on learning how to think and understand and learning gained through constructivism is transferable because students create and organize principles that they can take with them to other situations. The students are also more likely to retain and transfer the new knowledge to real life. Constructivism helps in fostering social and communication skills in learners by creating such an environment in the classroom which gives emphasis to mutual interaction, collaboration and exchange of ideas. It may assist learners to learn how to "negotiate" with others and to assess their contributions in a socially acceptable manner. Prospective teachers should be exposed to diverse perspectives and provided with the prospects to develop the discretion necessary for the most appropriate selection and the skills to implement their selected choices. This process of learning and constructing knowledge is an ongoing process throughout the career of a teacher and the aim is to become Lifelong Learner and "Learning how to learn"

### 8. References

1. Bakhtin MM. The dialogic imagination: Four essays by M.M. Bakhtin. (Ed. M. Holoquist). Austin: University Of Texas. 1981.
2. Cannella GS, Reiff JC. Individual constructivist teacher education: Teachers as empowered learners. *Teacher Education Quarterly*. 1994; 21(3):27-38.
3. DeJong L, Grooms F. A constructivist teacher education program that incorporates community service to prepare students to work with children living in poverty. *Action in Teacher Education*. 1996; 18(2):86-95.
4. Fischetti J, Dittmer A, Kyle DW. Shifting paradigms: Emerging issues for educational policy and practice. *Teacher Educator*. 1996; 31(3):189-201.
5. <http://www.thirteen.org/edonline/concept2class/constructivism/index.html> retrieved on March 9, 2016.
6. Kaufman D. Constructivist-based experiential learning in teacher education. *Action in Teacher Education*. 1996; 18(2):40-49.
7. Kroll LR, LaBosky VK. Practicing what we preach: Constructivism in a teacher education program. *Action in Teacher Education*. 1996; 18(2):63-72.
8. MacKinnon A, Scarff-Seatter C. Constructivism: Contradictions and confusion in teacher education. In V. Richardson (Ed.), *Constructivist Teacher Education: Building New Understandings*. Washington, DC: Falmer Press, 1997, 3-14.

*Building New Understandings*, Washington, DC: Falmer Press, 1997, 38-55.

9. Martin RJ. Multicultural social reconstructionist education: Design for diversity in teacher education. *Teacher Education Quarterly*. 1994; 21(3):77-89.
10. Myers CB. Beyond Pdss: Schools As Professional Learning Communities. A Proposal Based On An Analysis Of Pds Efforts Of The 1990's. Paper presented at the annual meeting of the American Educational Research Association, New York, 1996.
11. National Curriculum Framework. Ministry of Human Resource Development. New Delhi, 2005.
12. Richardson V. Constructivist teaching and teacher education: Theory and practice. In V. Richardson (Ed.), *Constructivist Teacher Education: Building New Understandings*. Washington, DC: Falmer Press, 1997, 3-14.
13. Vadeboncoeur J. Child development and the purpose of education: A historical context for constructivism in teacher education. In V. Richardson (Ed.), *Constructivist Teacher Education: Building New Understandings*. Washington, DC: Falmer Press, 1997, 15-37.