An Impact Of Dialaogic Teaching On Undergraduate Students' Critical Thinking Perception In The Subject Of Educational Planning And Financing

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Abstract

This study recognized the impact of dialogic teaching methods (group discussion and Socratic dialogue) on undergraduate students' critical thinking perception and social interaction. The purpose of the study based on qualitative research approach through the use of action research whereby the participants were taken into of two non-equivalent groups of undergraduate students in the field of education who were selected by purposeful sampling (N=60). Data was collected using researchers validated open-ended interview. It was seven systematic theme-based interviews, following ten questions from evaluation of the education, evaluation of the interactions and the combination of both a & b i.e. overall evaluation. After imposition of group discussion and Socratic dialogue), on the topics taken from the subject of Educational Planning and Financing, two of these methods were used in seventh semester of B.Ed. (Elementary) (4 years programme), from a public sector university. Participants were interviews of both groups which was conducted by the researcher at the end of semester to see the perceptions / reflections about the subject matter. In order to label the themes/constructs, rightly taken from the collected data from the interviewees, it was interpreted, then. The result highlighted the impact of dialogic teaching methods towards improving the critical thinking perceptions of participants i.e. analyzing / analyticity, cognitive maturity level, Self-confidence, self-Awareness / Self-evaluation, mindfulness/open-mindedness, seeking-truth, and likewise, social interaction was all about to know each other individually, closer friendship and intimacy, working tendency for dialogue, sheer responsibility, mechanized class format, social interaction with teacher, intimate-instruction centered.

Keywords: Dialogic Teaching, Group Discussions, Socratic Dialogue, Critical Thinking, Disposition, Social Interaction.

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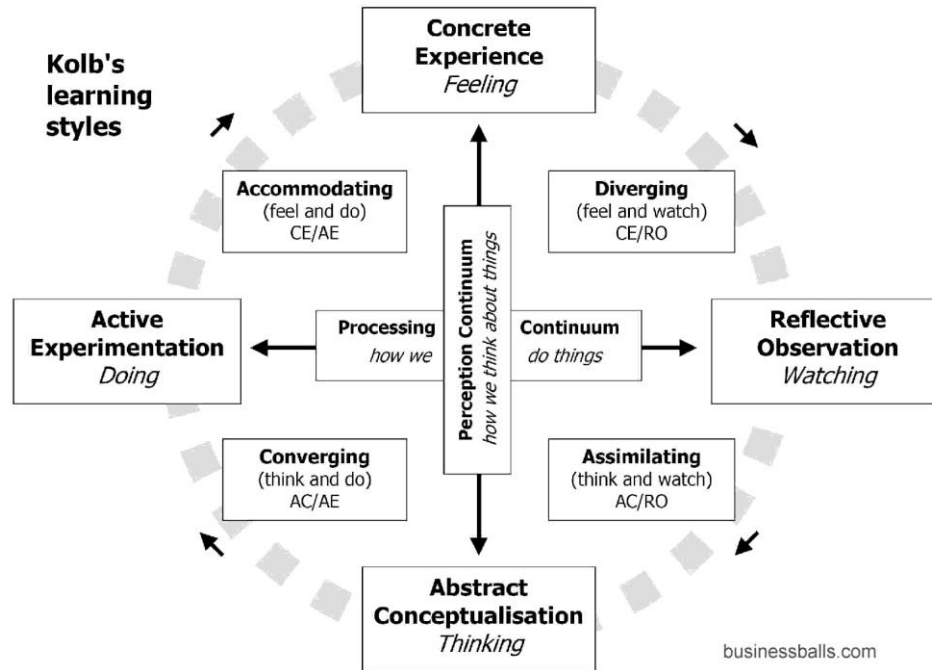
I. INTRODUCTION OF AN IMPACT OF DIALOGIC TEACHING AND CRITICAL THINKING PERCEPTION

Dialogic Teaching in the field of education is a new form of literature. It has attracted a large number of teachers and practitioners towards mental processes development and growth that not only enhanced the student's critical thinking skills, but their reasoning as well. Since, dialogic practices have recommended as a tool to surface the student's critical thinking and facilitate their participation during their learning period. (Moon, 2008; Paul & Elder, 2004)

According to Slavien, 2006, dialogic thinking has emerged as a catalyst while imparting knowledge to students' through democratic participation. This paper particularly defines that in what ways dialogic teaching might instill the participation of each student. It also introduces what dialogic teaching might contribute to developing a student's critical thinking perceptions.

Critical thinking (CT) is commonly defined as a metacognitive process, consisting of a number of cognitive skills (e.g., analysis, evaluation, and inference) and a variety of personal perceptions (e.g. open-mindedness, inquisitiveness and skepticism), that, when used appropriately, increases the chances of producing a logical solution to a problem or a valid conclusion to an argument which is best described by the following Kolb's Learning Styles diagram (Kolb, 2011).

Kolb's Learning Styles (Fig.1)

However, most definitions of critical thinking (CT), and most interventions designed to increase CT are grounded in academic or expert definitions of CT skills; and there have seen little emphasis on CT perception in the research conducted to date. As such, critical thinking perceptions have not yet cleared the concept in the research literature; and what little is agreed upon in regard to such perceptions is generally derived from the opinions of academics. (Dwyer, Hogan & Stewart, 2012; 2014).

Present research article introduced to maximize the quality and educational impact of classroom talk, building on prior work on dialogic teaching, to encourage a classroom culture that engages pupils in the task at hand and retains their attention and interest; to meet, but also go yond, the requirements for spoken language in the national curriculum, giving particular attention to those kinds of talk through which pupils learn to reason, explain, justify, argue, speculate, evaluate, and in other ways think for themselves; to advance this higher-order talk as well as their articulacy.

STATEMENT OF THE PROBLEM

The present study established the impact of dialogic teaching on undergraduate students' critical thinking perception in the subject of Educational Planning and Financing.

2. REVIEW OF THE RELATED LITERATURE

A LOOK AT CRITICAL THINKING:

Over the past years, critical thinking had been conceptualized as skills, effort, repeated exercise , expertise, and perception. Many researchers defined it in multiple ways cognitive skill, a general activity critical of generic concepts which involves immense action and reactions. Paul (1982), defined a critical thinking as gadget integrating macrological schema, whereas

McPeck (1985) categorized critical thinking, an ability to dissolve, resolve, desolate any judgment either its permanent or temporary, till it gets sufficient evidence to establish a rule of law, a valid proposition. Another researcher described it as critical thinking process is all about what a recipient perceives and reflected (Ennis, 1989)

He described that critical thinking started with a possible phenomenon, in the context of interaction among people. Soon, it reaches the reasoning process while informing already learnt conclusions and background knowledge.

On the basis of it, large inferences are dished out using induction, deduction, and value judging. Mostly, researchers did not involve emotion as a part of critical thinking, but many of them take it more than skills, more than inclusive mental activities, as a blueprint of already existing attitudes, and practice towards everyday life. (Mitchell & Myles, 2005). In a state of thinking critically, it necessitated sensing, viewing, observing, feeling, perceiving, and working in and out of the world is perception (Brown & Rutter, 2006).

Edward M. Glaser proposed that the ability to think critically involves three elements:

1. An attitude to consider in a thoughtful way the problems and subjects that come within the range of one's experience.
2. Knowledge of the methods of logical inquiry and reasoning
3. Some skills in applying those methods.

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide of life and its way is an action (Scriven, 1996).

Most formal definitions characterized that critical thinking is an intentional application of rational, higher order thinking skills, such as analysis, synthesis, problem recognition, and problem solving, inference, and evaluation" (Angelo, 1995, p. 6).

Critical thinking is the ability to think about one's thinking in such a way as 1. To recognize its strengths and weaknesses and, as a result, 2. To recast thinking in an improved form" (Center for Critical Thinking, 1996).

A LOOK AT PERCEPTION:

Facione & Giancarlo (2001, 2005) discriminated between mental skills (observation, analysis, inference, evaluation, deductive reasoning, and inductive reasoning) and emotion perception. According to Facione (2010), critical thinkers must both wise and able to a set of attributes as a whole, not a part.

1. **Analyticity/Analysis:** Alertness towards challenging and difficult problems, anticipating proximal results / consequences, stirring up reason while in evidence.

2. **Systematicity:** Planned, focused and organized approach of a person, whether it is accomplished or not, but preparation is mandatory.

3. **Curiosity/Inquisitiveness:** How and in what ways things work, do not ask for an immediate payoff.

4. **Mindfulness:** Tolerance towards divergent viewpoints, disruption in sensitive issues due to one's own beliefs or biasness. In fact, respecting the rights of others from different schools of thought.

5. **Self-confidence:** Able to arrive at good judgment, reasoning is effective while strengthening the level of trust.

6. **Seeking Truth**: Finding, grabbing and exploring truth, pursuing inquiry, even the data acquired doesn't support one's beliefs and interests.

7. **Maturity Level:** Unidentified problems, requiring more than one plausible option, multiple judgments, localized standards, trends, prefaces, and proofs.

UNPACKING DIALOGIC TEACHING

While unpacking dialogic teaching, it is an utterance which is given within an educational setting through a dialogue. This follows understanding and anticipating this term in a technical sense, which is validated by researchers for ages. Dialogic teaching draws a link between dialogic thinking and a critique of identity thinking. (Wertsch, 1991, p. 13).

Bakhtin, 2006 used the term interanimation or interillumination, to indicate the meaning of an utterance which may not reducible to the intentions of the speaker or to the response of the addressee but emerges between these two (Holquist, 1981, pp. 429–430).

The way in which each generation of scholars revisits and re-interprets textual fragments claim that there can no final or fixed interpretation of an utterance (Bakhtin, 1986, pp. 5, 170).The boundary tween subjects is not therefore a demarcation line, or an external link tween self and the other, or a tool of any kind, but an inclusive space of dialogue within which the self and other mutually construct and reconstruct each other.

Interanimation or interillumination Fig.2

Educational programs aimed at developing critical thinking in children and adult learners, individually or in group problem solving and decision-making contexts, continue to use this method. Through Dialogic Teaching, most talks, activities, engagements, learning, teaching and interaction take place which needs to be carried effectively. Ongoing talks, interactions, instructions, teachers' presentation, helps students to grasp new, unique, innovative and more scientific methods / ways to describe fundamental phenomenon.

PURPOSE OF THE PRESENT STUDY:

The present paper was seeking the impact of Dialogic Teaching on undergraduate students' critical thinking perception in the subject of Educational Planning and Financing. Particularly, this paper was identifying the role of both methods of teaching (group discussion and Socratic dialogue) on a student's critical thinking approach and social interaction in university. The present study was emphasizing dialogue through which pupils learn to reason, discuss, argue, and explain in order to develop their higher order thinking as well as their articulacy.

RESEARCH QUESTIONS OF THE STUDY:

1. How does dialogic teaching affect (group dialogue and Socratic dialogue) on the student's critical thinking approach in the subject of Educational Planning and Financing?

2. How does dialogic teaching affect (group dialogue and Socratic dialogue) the student's social interaction in the subject of Educational Planning and Financing?

METHODOLOGY OF THE RESEARCH STUDY:

This study (the impact of Dialogic Teaching on undergraduate students' critical thinking perception in the subject of Educational Planning and Financing) was performed in a qualitative approach using action research methodology.

SAMPLING OF THE RESEARCH STUDY:

Purposive sampling technique was adopted which is the most effective technique because researchers want to study a certain domain, i.e., Educational Planning and Financing with knowledgeable experts.

PARTICIPANTS:

This research was done with the subjects (participants) in natural groups (without the researcher's interference in grouping) in one educational semester. They were 02 groups (N=60) of undergraduate female students in the field of education, who have to pass the course of Educational Planning and Financing in their respective semester i.e. Semester-VII, of B.Ed. (Elementary), of a Public Sector University.

METHODS OF DIALOGIC TEACHING:

This study was conducted with two methods of dialogic teaching including **group dialogue and Socratic dialogue**. Both methods were practiced in one educational semester (16 weeks, 48 Credit Hours Course, having sessions per week at the appointed time and place.

A. GROUP DISCUSSION:

Instruction were disseminated in terms of split group discussions which contained three-part model of Sternburg and Swirling (2005), comprising lecturing, group discussion and evaluation (the first 7 weeks were lectures and the other 7 weeks were of group discussion, lastly evaluation). According to this model, the teacher (researchers), firstly, introduced new concepts and gave information by the lecturing method (session of 1:30 PST), then at the end of this session and foregoing to the next step, some questions were posed which were framed on the basis for creating two opposite groups of students, based on their information which was taken from in-group discussions, evaluated and critiqued with each other's viewpoints (group discussions). Meanwhile, the teacher was trying to guide students' attention to some delicate points by posing some questions and inquiries. In the third step, the teacher and the students were evaluating and making conclusions from discussions and different viewpoints.

The focus of the dialogues between teacher and students comprised Question level – Question length – Question ecology – Communication pattern – Classroom ecosystem-interaction (Smart and Marshall, 2013).

B. SOCRATIC DIALOGUE:

This method was applied in a combination of Nelson's (2003) Socratic dialogue and Freire's (1972) critical education followed by three steps: -
    1. Determining the problem,
    2. Discussion problem,
    3. Evaluation problem.
In the first step, in a short class session (1:30 PST), the teacher and students reviewed the previous discussions to figure out controversial points and also prepared the context for new problems and discussions.

In the second step (discussion 1:30 PST), the teacher took up the class discussion, in addition to abstract problems. Students shared their own definitions which were coupled with the critical questions directed towards this method's approach. Here, the components and elements were analyzed and students were engaged in discussion and critiqued each other's' viewpoints. In the third step, teachers and students were reviewed, evaluated, and concluded their understanding and feelings of the presented problem.

INSTRUMENTS OF THE RESEARCH STUDY:

For measuring critical thinking skills and social interaction, following instruments were used to elaborate the process of treatment (dialogic thinking).
1. Observation checklist.
2. Interview between a teacher and a researcher.
3. Rating scale
4. Cumulative records.
5. Anecdotal records
6. Sound recording of group discussion.
7. Video recordings form lessons.
8. Sound recording of reflective interviews.
9. Questionnaire for the students at the beginning and at the end of the programme.
10. Practical examination.
11. Viva voce (oral examination) •Likert attitude scale •Semantic differential scale
For measuring perception, a theme-based interview which was pilot tested (validated from the subject specialists) before and then participants were interviews by using open-ended interview which consisted of ten questions framed under following three main themes:-
1. Evaluation of Education (Know How with the subject i.e. Educational Planning and Financing),
2. Evaluation of the interactions (Intimacy and friendship, tendency to dialogue with the

subject matter i.e. Educational Planning and Financing),

3. Combination of above two (i.e. overall evaluation & systematic seven theme based patterned questions about the subject matter in respect of knowing each other, friendship and intimacy, tendency to dialogue, responsibility, class dynamism, interaction with the teacher, and intimate with the teacher.

Interviews to assess the reflections / perceptions of all participants about the subject of Educational Planning and Financing, from Semester-VII, of B.ED. (4 Years Programme), of a public sector university was conducted from both groups (Socratic dialogue and group discussion), by the researcher at the end of the semester and the time for each interview was almost 15-20 minutes. Open-ended interview corroborated three main themes which had these questions from the participants: -

1. What information supported their critical thinking?
2. What was the mode of obtaining information?
3. Who helped in obtaining information?
4. How come they know that information was valid?
5. Why this dialogic method, not any other way to learn this subject i.e. Educational Planning and Financing?
6. Why to choose this i.e. Educational Planning and Financing?
7. What made it worth?
8. How did they get that?
9. Did they seem any other possibility to learn any other way to learn this subject of Educational Planning and Financing?
10. How did they find new piece of information?

ANALYSIS:

Collected data was analyzed by "interpretational analysis". The purpose of this method was exploring the constructs by

classifying content and making concepts based on the researcher's interpretive understanding (Borg & Gall & Gall 2006). For this purpose, the first content was formulated in "segments", and so they were interpreted based on the internal components' critical thinking approach (characteristics of a critical thinker in the subject of Educational Planning and Financing.

Ferrari (2010) titled his findings as, transition from traditional role of participants and researcher for improvement of the educational processes. Critical education has mentioned that teachers showed more tendency towards closer relationship with the participants that was coming out of their traditional way of learning. Permanent and interwoven process of social interactions had longer transformation about information which incorporates clarification / direction of students' cognitive activities. It provided essential references, logical results of such dialogue in a linear relationship.

RESULTS

INTERPRETATION

1. According to Facione (2010) this concept was attributed to analyzing/ analyticity, the first question of the interview was about the impact of comprehension and learning of the concepts. Majority of the participants answered, I liked it, high order thinking, active learning skills that may be identified as better understanding and imposition of this dialogic method while posing critical queries.

2. Another question was related to the mode of acquiring knowledge, how it was obtained? What ways are involved? This helped and enforced students to seek truth and also guided them for better perception, reasons, truth and evidences.

3. A question was also about pertaining to maturity level (cognitive maturity level), gathered such responses e.g. attention to

authentication and validation towards reasoning, to recognize the fallacies and so, preventing the wrong reasoning.

4. Likewise, collaborating and participating on group discussions while listening to their diverse viewpoints of participants which helped them to get more power, accuracy, and comprehensive evaluation. It attracted the participants' attention to diverse aspects and influenced them to do more researches leading to self-confidence.

5. As, it was the guided interviewing in the real situation about the impact of open mindedness which stimulated the participants to evaluate their issues, skepticism, criticism in the higher level of cognitive activities i.e. analysis, synthesis, critiquing, application and evaluation.

6. Participants' responses of both groups expressed their feeling towards improvement of their critical capabilities of every individual. It afforded an opportunity for participation through social interaction, self-reflection which were effective to improve individual's identity i.e. curiosity/inquisitiveness.

7. While participating for interview , it was learnt that it was not sufficient, to had faith in one belief rather, it was justified with proper reasoning, distinctions, recognition and bringing examples into picture i.e. mindfulness.

8. Through these expressions, tendency of both groups towards dialogic method and dialogic thinking had extensive exchange of disagreements that followed a framework of testing the strength and weaknesses of diverse viewpoints which neutralized Systematicity.

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