Critical Self-reflective Engagement to Improve Professional Development for a Teacher Educator

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Abstract

The conventional banking model (Kalsoom, Kalsoom & Mallick, 2020) of rote-recall culture of pedagogical practices might promote subject-centric memorizing, rather than understanding and critical exploration of knowledge. Critical reflection might articulate the depth and breadth of experiences of learners and might build connections between the past, and present and construct a vision for the future. In pedagogy, different forms like poetry and autobiographical reflection capture learners' personal experiences and can be considered as one alternative model for a meaningful and critical understanding of the core complex phenomena of the diverse world. To this connection, the paper investigates critical self-reflection as one of the transformative tools utilizing Habermasian Knowledge Consecutive Interests (technical, practical, and emancipatory) as theoretical referent and metaphors as a tool for critical discourses of phenomena. This paper tries to explore, creating connections between the issues raised and the learner's experience, might articulate the depth and breadth of the learner's experiences through critical self-reflection. Among many ways to express critical reflection, the first entails having the capacity to uncover, scrutinize, and modify our deeply ingrained preconceptions in order to potentially bring about significant change (Mezirow, 1991) and placed a strong emphasis on critical action while reflecting on power relations (Brookfield, 1995) of the pedagogy practice.

Keywords: *critical reflection, metaphors, experience, pedagogy, knowledge consecutive interest.*

Introduction

To generate new knowledge critical reflection blends learning via experiences with theoretical and technical learning. Teachers unquestioningly believe that children can correctly understand their acts as they were meant without giving it any thought. So, the risk of making poor decisions and poor judgments is constant for teachers. The auto/ethnographic approach has been used to conduct a study on the critical self-reflection of the author who is school teacher currently working in the Kathmandu valley, Nepal. I came to realize that my earlier pedagogical journey from school to Bachelor level was frustrating since I practiced the *linear model* like 'banking model' (Freire, 1993), 'rote recall', and 'paper pencil test'. I came to realize that teacher centric *conventional* model might not address the issues of 21st-century education. I was not aware of the critical discourses and self-reflection about our pedagogical practices in our world. The reflection of experiences of a person in a different form is a critical reflection. Critical reflection involves critical inquiry, deep seated examination of personnel belief about human potential and learning, and conscious consideration of the ethical implications as well as the consciousness of teaching (Larrive, 2000). It is descriptive, analytical, and critical in nature and it can articulate an action in a number of ways i. e. orally, in written form, artistic form, gesticulation like presenting through art, poster, painting, cartoon, caricature, etc. These processes articulate the depth and breadth of experiences of learners and build connections between present content and the person's experience. On the other hand, critical reflection can be articulated in numerous

ways. The first includes the ability to unearth, examine and change our deeply fundamental assumptions (Mezirow, 1991) that might lead to fundamental change. On the other Brookfield (1995) emphasized reflection on critical action, which is the focus on power relations (p. 8).

In adult learning the commands/instructions such as: 'do this', 'do that', 'and do in this way 'and so on might not work as it works in child learning. For adult learning, deep seated values, hegemonic thinking/practice, beliefs and status quo need to be changed through their own critical self-reflection. Moreover, Cranton (1996) at this connection, argued that critical reflection is the means by which adults identify the suppositions which govern their actions and locate the assumptions historical and cultural origins that raise the question against hegemonic assumptions, practice and beliefs, status quo, and then ultimately develop alternative ways of acting upon them. In addition, Brookfield (1995; 2004) focused on the part of the critical reflective process, which is to challenge the prevailing social, political, cultural, or professional ways of acting and the raised questioning the '*hegemonic practices*' and '*status quo*' on the existing practices. Through the process of critical reflection, adults might come to interpret and create new knowledge and actions from their ordinary and sometimes extraordinary experiences.

Conceptualizing the Research Issue

I attempted to articulate my conflicting, critical, self-reflective narrative of my pedagogical journey in this article. I tried to discuss my previous core beliefs, the status quo, and the hegemonic practices that pervaded my pedagogical practices and made the realization that something needed to change. My various paradoxical, poetic narratives of critical self-reflection are self-contradictory. This study was guided by the research question, *how have the author and participant teachers taken a journey from frustrated learners to becoming visionary educators through critical self-reflection*? tried to explore my multiple layered experiences- classroom cultural activities, pedagogical practices, and core-beliefs. The reason for frustration for me, subject centric pedagogical practices were practiced by me that might consider the learner as '*knowledge receiver*' rather than as a '*knowledge generator*' assuming that learners are passive receivers having an *empty head*' (Lakoff & Johnson, 1980), instead '*brain is packed with interesting ideas*'. Such conventional pedagogical practices might devalue the educational values by rejecting such alternative approach and might give rise to a victim-blaming approach. On the other hand different forms of arts in pedagogy such as poetry, visual arts (i. e. paintings and cartoons) to capture learner's personnel experience might be fruitful to address the learners frustration of the pedagogy they are practiced.

Six people, myself included, were part of the study, which was conducted using a multi-paradigmatic research design that combined Interpretivism, Criticalism, and Postmodernism. I accepted them as participants since they were on a path of innovation and transformation and prepared for self-criticism in their pedagogical world. Since I was the only one who used poetry to express my critical, conflicting story, I brought up my own experience. So in this article only my conflicting critical reflective stories are discussed through the poetic inquiry. Here in this article I mentioned only my critical narrative story. Narrative inquiry as a form of inquiry is used to articulate my numerous paradoxical pedagogical practices through poetic narrative. Through the use of various classroom metaphors, the poetic inquiry has been used to confront authors' pedagogical practices and generate meaning. To articulate the social world for the multi-explorations of the realities of the researcher, Vygotsky's social constructivism (1962), the knowledge constitutive Interest

of Jurgen Habermas (1972), transformative learning theory of Jack Mezirow (1991, 1997), are used as theoretical referents in this article.

Likewise, this article focuses on *informing pedagogy, reforming and transforming pedagogies*. In informing pedagogy teacher provides learning capsules for the learners and are expected to receive the capsules without questioning and metaphors used to describe it as '*teacher as an aloof gardener*', and '*teacher as dictator*' to name a few. Further, in reforming pedagogy teacher creates learning environments that are interactive and deeply involving, and metaphors are used to describe it as '*teacher as a wise gardener*', and '*teacher as a catalyst*' **(**Badley & Hallabaugh, 2012) to name a few. Finally, in the *transforming pedagogies,* where teachers create learning environments art (s) into the pedagogy through vision making and that promotes the affective domain of higher-order skills (Budge, 2012). Such learning culture is metaphorically described to name a few as '*teachers as involved gardeners*', and '*teachers as artists*'. I used to be familiar with the teaching-learning metaphors from my early education as an essential mental tool that might harness an instrument of "*imaginative rationality*" (Lakoff & Johnson, 1980). I used different metaphors to describe the classroom situation, pedagogy applied by the teacher, and an assessment system to describe the problem faced by the learners within the classroom.

Problematizing the Research Issue

I suffered from the subject-centric pedagogical model that might suppose the learners as knowledge receivers rather than knowledge generators and promotes '*one size fits all*' (Luitel, 2009) nature of curriculum practice. It is unlikely to be meaningfully engaging and critically aware of existing pedagogical practice. Thinking thus, I took the first problem to conduct this research: What are the forces that make learning less meaningful, contextual, and *authentic*? I practiced a culturally detached curriculum. Cultural artifacts might be useful and powerful tools for the contextual knowledge construction for the meaningful, contextual and critical understanding and awareness of existing pedagogical practices. Neither cultural artefacts are included on the curriculum nor teachers practice to implement innovatively on the classroom practice. Being aware of it, I have revised my earlier problem: *In what ways do the extant pedagogies and curricula promote (and/or do not promote) inclusive and empowering learning processes*? Different forms of arts-based pedagogy like poetry, and visual arts to name a few might be more useful for meaningful understanding of the core and complex phenomena than the conventional pedagogical model. Knowing such countless benefits of arts in pedagogical practices, I advocate arts-based pedagogical model which fosters creativity and introduce educational innovation in the pedagogy. I have revised the problem further intending to improve my practice as a teacher educator: *How can I develop myself as a pedagogical activist to improve such a situation*? Metaphorically expressing might be an alternative model that captures the culture of pedagogical practice made contextual and interesting. The use of such metaphors to describe the classroom situation might provide the learners myriad of images that might help to know the concepts of an abstract idea if meaningfully connected. I have found a scarce number of research studies carried out in this field that represent the metaphorical journey from frustrating learners to becoming visionary educators. So this gap prompted me to inquire about this overarching research question: "*How have I and my participant teachers taken a journey from frustrated learners to visionary educators through the critical self-reflection*?"

Theoretical Perspectives

I investigated my experience cultural pursuits, social realities, beliefs, and pedagogical world using a multi-paradigmatic research design because of the numerous

opportunities and problems that are reflected in my social world. It is conceivable that it is not governed by a single theoretical perspective. As referents for the multi-faceted explorations of the realities, I used Mezirow's (1991, 1997) Transformative Learning, Habermas' Knowledge Constitutive Human Interest (1972), and Vygotskyan Constructivism (1962) to articulate my social reality. The social processes that form the basis and core of learning as well as the significance of recognizing and comprehending the many social forces, as well as the capacity for interaction for effective understanding, are highlighted by Vygotsky's social constructivism (1962) theory. I made an effort to think critically because social processes are the basis and core of learning, they also highlight the importance of recognizing and grasping the various social forces, and the potential of interaction for effective understanding. I have used Vygotsky's social constructivism (1962) to explore my narrative as it existed in my social setting. I made an effort to critically examine the ideas, values, and status quo that I take for granted and that have always hastened my efforts to be more inclusive and empowered in my practices. This could be connected to Jack Mezirow's transformative learning theory (1991, 1997). Another theoretical reference point in my research is Habermas's (1972) notion of Knowledge Constitutive Human Interest. It gave me an examination of human behavior, which is crucial for comprehending the cognitive fascination of the human species. 'Technical interest' assisted me in describing my factory model of pedagogical practice, 'practical interest' assisted me in understanding the world through dialogue based on a mutual understanding of meaning, and 'emancipatory interest' assisted me in challenging my dogmatic ideas.

I gathered and generated "field texts" (Connelly & Clandinin, 2006), which are connected to the long-term sequence of my cultural contexts, using narrative writing as a technique of inquiry. Any kind of situatedness falls under the category of culture, which is a subject of auto/ethnographic representation, in accordance with the idea of culture as a collection of situated actions conducted by myself and participants in the construction of meanings. For me, narratives serve to encapsulate the entirety of my instructional experiences and stories through poetic inquiry using metaphors as tools of meaningfully deeper understanding of my pedagogical practices that enabled me for reflection through a combination of imagination and reason.

Concept of Critical Reflection for a Teacher Educator

Reflection is a systematic, rigorous, and disciplined way of thinking (Rodgers, 2002) about one's own actions of thought, practices, beliefs, and values with its roots in scientific inquiry. It needs to happen in the communities that interact with themselves and with others. It is a process of self-examination and self-evaluation in which teacher educators regularly engage to improve their professional practices. The roots of reflection are the historical works of John Dewey (1933 and 1938), who maintained that reflection is an important aspect of learning from experience. Reflection itself, by definition, is not critical. It becomes critical when it provides two distinct features. The first is to apprehend how power considerations underpin, shape, and distort numerous educational interactions and processes. The second, people should then question assumptions and practices that appear to make our teaching lives easier but actually work against each other best long-term interests of hegemonic (Brookfield, 2004, p. 5) practice. Furthermore, in order to be considered critical, reflection must explicitly focus on the hidden and exciting of power dynamics that frame our decisions and actions (Brookfield, 2016). Indeed, the idea of critical reflection seems to be in practice due to the efforts of Stephen Brookfield in adult learning. Critical reflection is the reasoning process of making meaning from an experience. It becomes more

critical when the power relationships (Brookfield, 2009) that allow and may promote technically effective self-care practices are called into question.

On one hand, critical reflection combines experiential learning with theoretical and technical learning to generate new knowledge construction and new behaviors or insights. On the other hand, it facilitates introspective learning from values, beliefs, knowledge, and experiences that contribute to perspectives of one's self and then other people. It means critically reflected teachers must continually examine and evaluate taken for granted assumptions, status quo, deep-seated values, core beliefs, attitudes, hegemonic practices, and accomplishments rather than rely on the authority of others, their own impulse, or unexamined previous/existing practice. At this connection, Brookfield (2004) argued that without reflection, teachers are constantly at risk of making poor decisions and poor judgments. Without reflection, teachers believe that students can correctly interpret their actions as intended. Furthermore, teachers can continue to plan and teach using unexamined assumptions, hegemonic practices, status-quo, deep-seated values, and core beliefs. They then develop the habit of justifying their actions as 'common sense', "Yet unexamined common sense is a notoriously unreliable guide to action" (Brookfield, 2004, p. 4). As a result, students are neglected to come to school, abused, hungry, and ill-prepared to learn and work productively (Larrivee, 2000). Moreover, becoming a critical reflective teacher involves considerably more than accumulating skills and strategies (Larrivee, 2000) for the students. In other words, it is not enough to be able only to recognize what happens in the classroom. In addition, the teachers need to be fluid and able to move in many directions, rather than move in one direction as situations occur (Larrivee, 2000). Indeed, critical inquiry involves the moral and ethical consideration of classroom practice, while self-reflection allows teachers to look into their cultural context and personal values and beliefs. Both of these concepts have been merged together to coin critical reflection. When a teacher engages in active and deliberate reflection and analysis of those events, it may lead to the development of new strategies for changing behavior in the classroom (Reagan et al., 2000), he or she is using critical reflection for professional growth.

Theoretical Model of Critical Reflection

There are several models developed in this field. The most renowned model I articulate here in this article is; Gibbs (1988) model of critical reflection (fig. 1), Schön (1992) model of reflective writing (fig. 2), and Brookfield's (1995) model of self-critical reflection.

In the Gibbs model action plan is identified first then its detailed description of what happened (may include feelings, norms, values, etc.) this can be evaluated (critical analysis, what is good and what is bad) by self/others and evaluation what else can we make the situation and make a conclusion what else could we have done. The exploration of the critical reflection cycle starts from the identification of the problem where the learners have to write the reflective practice of self/others. Then action plan is to be set up, with the description of the feeling and evaluation of the situation and analysis of the situation and what has happened, and ended with the conclusion. Such learning cycle might give an incentive to pull together ideas of what the reflector did, what the reflector has now, and finally what the reflector will have in the future; when anyone is engaged in the immensely complex process of teaching/learning (Moon, 2004).

Moreover, critical reflective practice is an umbrella term which may have multi–meaning. The theory of critical reflective practice (i. e. critical reflective thinking) is based on the experiences of past, present, and future actions i. e. reflection on action (reflection on the past experiences), reflection in action (reflection in the present action) and finally reflection for action (reflection for the future action) (Schön, 1992) (fig. 2). Critical reflective practice is important for the professional development/evaluation of the pedagogical practice of the self/others since its epistemological questions about the dominance of the technical rationality. According to Schön (1992), critical reflective practice is applied in educational contexts and by professional bodies and regulatory colleges sometimes becomes a form of technical rationality in itself (Kinsella, 2006).

Fig. 1
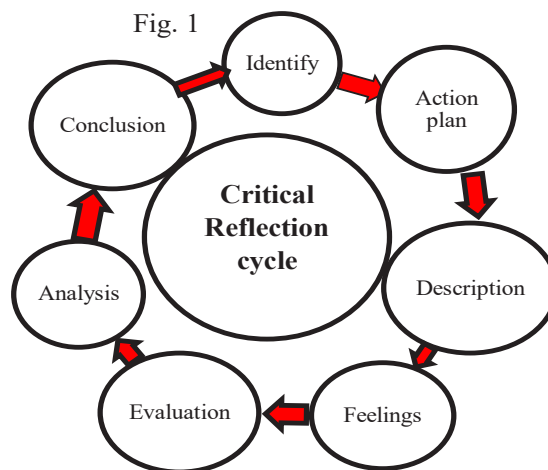
When teachers become critical reflective practitioners, they move beyond a knowledge base of discrete skills in which they integrate and modify skills to fit specific contexts as well as to a point where the skills are internalized enabling them to invent new strategies (Larrivee, 2000). Instead of this, they develop a sense of self-efficacy to create personal solutions to problems. It might refer to a person's ability to reflect critically on his/her experiences/pedagogical practices and then integrate the knowledge acquired from these experiences with the previous knowledge, and then be able to make an informed decision based on insights he/she gained from new and previous experiences. The process of critical reflection adds depth and breadth to an experience and creates connections between the experience and course material. It is descriptive, analytical, and critical in nature and can be expressed verbally, in writing, or via the use of different art like poetic form. Also, critical reflection can be integrated into any type of experiential learning activity - inside the classroom or outside the classroom by the teacher educator. The exploration of reflective learning gave me an incentive to pull together my ideas of what I did, what I have now, and finally what I will have in the future; when I engaged in the immensely complex process of teaching/learning (Moon, 2004) i. e. on my existing pedagogy.
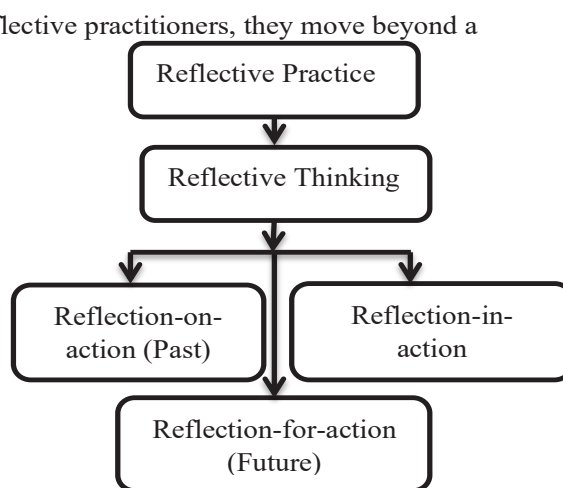

Fig. 2   Schön, D. (1992)

Inquiries like 'That was a good class!' or 'That was a horrible class!' or 'The kids were not very receptive today' may result from teachers wondering why they should ponder on their practice beyond the immediate after-class musing. For most teachers, these reflections may serve as a required beginning point, but they do not provide any concrete proof of whether the impressions they give rise to are accurate or not. As an illustration, some teachers are satisfied with the way their classes ended. In contrast, they can be dissatisfied after a class because they felt it went poorly and, worse still, they had spent a lot of time planning for it. Some instructors rely their initial impressions of their instruction on how students react in class—for example, by yawning—or fail to react. This type of evidence might not result in accurate interpretations of the teachers' impressions because yawning might have nothing to do with the lesson or the teacher and everything to do with a student's exhaustion instead of anything to do with either. Likewise, teachers should look at why students did to respond to their instruction and classes without getting overly defensive. Teachers must understand why some classes seem to go well while others don't, as well as how students perceive success. Evidence-based critical reflection is the name given to this inquiry. Teachers therefore need to get reliable information about what actually occurs in their classes as opposed to what they believe will occur. Critical reflective practice is crucial because it enables educators to base their decisions about how to instruct students on tangible data that has been methodically gathered over time. Here I would like to connect the idea developed by Brookfield. Critically reflective practice can be articulated from self (values, norms, status quo, etc.), from students (the pedagogy applied, assignment policy, curriculum practice, etc.), from peer's lenses (behavior, perspectives, etc.) and finally, that can observe the essential theoretical lenses (Brookfield, 1995) (fig. 3).

Fig. 3
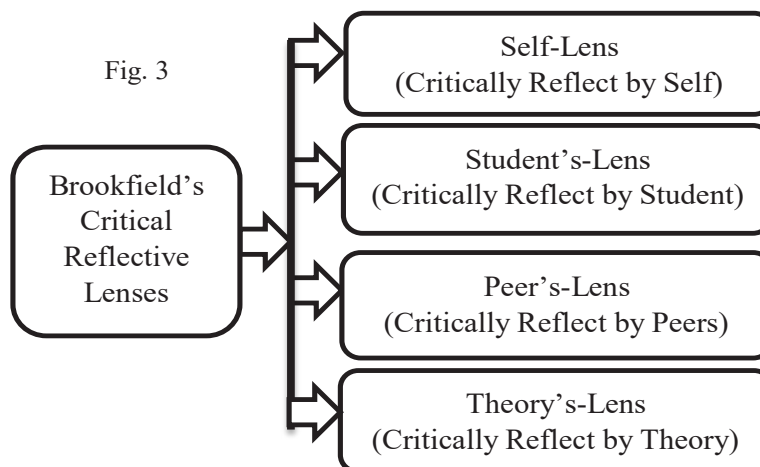
Brookfield, S. D. (1995).

Needs of Critical Reflection for Practitioner Researchers

Critical reflection has become a focus of interest and a powerful movement to research practitioners. It is a crucial tool in professional learning environments that place a focus on practice rather than formal instruction or information transfer, where people learn from their own professional experiences. Also, it is the most important source of personal professional development and improvement. It is crucial to connect theory and practice in this way because reflection enables one to identify different schools of thought and theoretical frameworks that are relevant to their line of work. Larrivee (2000) suggested that critical reflection entails examining one's own and one's employer's belief systems, as well as consciously taking into account the moral ramifications and effects of activities. Critical

reflection requires us to consider our practices, procedures, and identities as research practitioners. It also asks us to look outside of our immediate environment at the things, people, and policies that might have an impact on the decisions and actions we take. Moreover, critical reflection focuses on researchers acting with integrity, openness, and commitment rather than compromise, defensiveness, or fear (Larrivee, 2000). To assist explain, justify, or criticize what we have experienced in our own or other people's activity, critical reflection enables us to synthesize various views. Critical reflection involves a deep exploration process that exposes unexamined beliefs, assumptions, and expectations and makes visible our personal reflexive loops (Larrivee, 2000). Reflective practitioners challenge assumptions and question existing practices, thereby continuously accessing new lenses to view their practice and alter their perspectives. It's possible that theory or literature offers us a different viewpoint we should take into account, supports our beliefs or practices with proof, or outright refutes them. In order to govern our own development, critical reflection also enables us to examine what we have learnt and how we have learned it. Critical reflection is given a lot of weight in teacher professional development because it serves these two purposes.

Furthermore, Freire (1998), critical teachers must be open to change, recognize their own attitudes, and be self-aware of the process of change. Teachers must recognize the need for change and be willing to break with the past in order to change. Thus, a person who reflects throughout his or her practice is not simply looking back on past actions and events, but is also taking a conscious look at emotions, experiences, actions, and responses and employing that information to add to his or her existing knowledge base and reach a higher level of understanding. In this connection, Schön (2017) suggested that teaching by teachers with critical reflection is a continuous process and involves learners thoughtfully considering their own experience in applying knowledge to practice. It helps individuals to develop their own personalities.

Jasper (2003) argues about teaching through critical reflection as lifelong learning resulting in the development of autonomous, qualified, and self-directed professionals. Thus, engaging in critical reflection is associated with the improvement of the quality of care, stimulating personal and professional growth, and minimizing the gap between theory and practice. Likewise, Bartlett (1990) points out that becoming a critical reflective teacher entails moving beyond a primary concern with instructional techniques and 'how to' questions and asking 'what' and 'why' questions that regard instructions and managerial techniques as part of broader educational purposes rather than as ends in themselves. According to Han (1995), the process element of reflection emphasizes how teachers make decisions, the content element emphasizes the substance that drives the thinking, and reflective inquiry may lay the groundwork for learning how to be a good teacher. In view of Jacobs, Vakalisa, and Gawe (2011), reflective teaching allows teachers to renew their practice and understand the effects of their teaching. They also stated that reflective teaching provides information on how teachers meaningfully connect with learners, thereby promoting good teaching and learning practice. Similarly according to Akbari (2007), reflective teaching will cause teachers to question clichés they learned during their formative years and will also allow them to develop more informed practice. In addition, the effective critical reflection will apply to many important aspects of living, which may extend beyond the terrain of professional practice. In this sense, more fundamental and generalizable critical reflection should function to improve the way we live and relate as human beings, and in the process also improve our professional practice.

My Engagement as a Teacher Educator, and Researcher in the Journey of Critical Reflection

This is a story of my critical reflective pedagogical practice that might be based on the philosophy of 'visionary knowing' (Luitel & Taylor, 2019) crossing the border of 'practical' and 'emancipatory' interest of Habermas (1972). I am going to connect my pedagogical practice through the poetic inquiry entitled 'regret and realization' as my reflection of my past teaching approach when I used to be a 'teacher as dictator' standing on the floor of 'technical interest' and realization to be 'teacher as scaffold' standing on the surface of 'visionary knowing' (Luitel & Taylor, 2019). In the poetic inquiry, I try to articulate why and how I changed my pedagogical practices. The story might begin here.

It could be any day in July 2008, I was teaching mathematics in grade eight. This was the first period. After the assembly bell rang, I entered the classroom. Students stood up and greeted me. I thanked them and took their attendance. Altogether, there were thirty-eight students in my class. After taking attendance, I saw one student's name that was Brajesh. He was regularly absent for a half month. I was curious and asked the class why Brajesh was absent for a long time. I tried to inquire before it but the students said that he had gone to his village. But on that day, after my repeated inquiry, they said, "He left the school". Then I was more curious and asked them, 'Why did he leave the school?' The unexpected answer for me came from the class he left school because of me. On my further queries, the student explained the cause to me why he left the school. The reason was that he had failed to submit my written assignment because he neither understand the method of the way I had taught the class nor did he rote and memorize. Other students also had failed to understand my pedagogy and my assignment correction policy, etc. That was my turning point which changed my pedagogical practices from conventional to innovative ones. After that incident, I participated in different seminars, graduated M. Ed. in Education from Kathmandu University, and read about different pedagogies consulting different books, journals, etc. During my study in M Phil at Kathmandu University, I wrote a poem on 'regret and realization' where I have tried to reflect on my pedagogical practices from rote recall to innovation. In the poem, I have tried to explain metaphorically the pedagogical practice from 'teacher as dictator' to 'teacher as scaffold'.

Regret and Realization

The terrified students enter directly into the class from the gate
And pretend to study though unable to comprehend //1//
　　　Grade eight tender pupils do not have a learning passion
　　　Penalties and punishments do not give any solution //2//
I became startled seeking the cause
Came to know that 'I am the hurdle' //3//
　　　Compelled to recollect the reminiscences of child
　　　Memorized the plight and the stream became wild //4//
Tears in the eyes, love in the heart, awakened the pity
Began to blow, from the law, inner humanity //5//
　　　The panic, penalties and began to return the punishment
　　　Met in the school, the infant, the child and the nourishment //6//
Changed the time, changed the thought and the behavioral burden
Changed thought has changed the heart all of sudden //7//
　　　Began to learn child psychology and began to teach
　　　Take the trainings, with the changed thought started to preach //8//

Innocent my pupils, became friends that and this
Began to ask a curious question as it is //9//
Smooth became the life and the intimacy increased
Profession achieved equity and got revitalized //10//
Experienced and learned, began to demonstrate
Oh! Blessed I am to be fated a TEACHER on my probe //11//
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My poetic logic and genres might be useful for me as a researcher and practitioner to bring subtlety of power, privilege, and hegemonic (Faulkner, 2016) practices. Moreover, I used poetic logic and genres to represent my nonlinearity, ineffability, and subtlety (Luitel & Dahal, 2019) embedded praxis as a practitioner and researcher that might work as a change agent (Faulkner, 2016) by involvement in deep inquiry and critical awareness about my world. I emphasize critical self-reflection on my pedagogical practices to be a change agent. To be critical is to act with integrity, openness, and commitment rather than compromise, defensiveness, or fear (Larrivee, 2000). It might be continuously improving my performance to be a responsible teacher/educator and it generates a strong awareness of my strengths and weaknesses. The exploration of my critical reflection gave me an incentive to pull together my ideas of what I did, what I have now, and finally what I will have in the future that might lead me towards 'teacher as scaffold' after engaging in the immensely complex process (Moon, 2007) of my pedagogical practices. Through self-critical reflection, I came to know the improvement of my teaching pedagogy through reflection on the experiences of past, present, and future actions.

Reflection about Pedagogical Practices of School Education

I am going to connect another pedagogical practice through the narrative. Poetic inquiry entitled 'reflection through STEAM pedagogy' as my poetic reflection of my school's pedagogical practice when I used to be a student. In the poetic inquiry, I try to articulate how my pedagogical practice was and why to articulate it? The story might begin here.

I am unable to remember the exact date but it could be any day when I was in grade nine. Our Mathematics teacher was one of the strict teachers not only in our school but also in our local community. Since he taught different schools of our community, most of the students were scared of him in the class even to ask him a question and interact with him. Students did not have any interest to take his class simply because he always dominated his student in the class. In case, any student asked him a question on a topic or particular problem, he directly said, "You won't understand it, so it's better not to explain it to you. It is beyond your capacity and this problem is for the academically bright student, not for dull students like you". In this manner he always dominated his students and underestimated their learning capacity. He believed that teacher knows all and students know nothing. He never connected the lesson to the social surrounding of the learner's society. If students solved the problem using a different method than the way he did in the class, he would directly deny and order the students to follow the steps exactly the way he explained. He suggested following the steps strictly as described by him and if they didn't understand the suggested way, they had to copy and memorize it and repeat it in another paper without seeing until they were sure of it. He wouldn't allow anyone to ask the unnecessary question in the class. He did not prefer interactive activities in

the study time. I don't remember the exact date, but it might be any day in grade nine when he was teaching theorem related to circular geometry. My intimate friend, Mohan asked him a question. He was angry and sent him out of class and blamed him for disturbing the class when he was teaching and also asked him to remain quiet. His class was pin-drop silent since the bright students did not need to question him and for the academically poor students, he did not give a chance to ask him a question. So, his class was unproductive.

Reflection through STEAM Pedagogy for Visionary Classroom

By reflecting my childhood story I am going to critically reflect my classroom pedagogy through the poetic inquiry that might implement visionary (Taylor, 2015b) plans and might articulate transformative learning through the critically reflecting upon social surrounding of my learning world, and that enables the learners like me to develop potential to become fully human (Luitel et al., 2012) by expanding conscious on the pedagogy that practices.

Where is the chance in our pedagogy to prove oneself?
To show the pupil can do by themselves //1//
How can one express each other's comprehension?
Where to write the children's retention //2//
How can they express their latent flames?
Whom can they share their troubles, burden and blames //3//
How can they reflect themselves in the traditional class?
How do they discover their potential in a flash //4//?
How are they taught to the strength and how to know the Arts?
The classification of one by one in a table or chart //5//
What can students learn at school adhering to prescribed text?
Nor can they express their voice kindling the inner light //6//
Do they get the piercing words, rebuke and fear?
Are they to get the insight into leadership, courage and dare //7//?
Should they have to submit the reward of threats and punishment?
Or to be taught love, mercy and nourishment //8//
Should the pedagogy adopt compassion and care with others?
Or making the ones triumphant assessing one's fact that bothers //9//
Should they be compelled to write by beating, scolding and giving pressure?
Or to motivate and create favourable environment, the precious treasure //10//
Should they learn being suppressed and subordinated by teacher's unusual effort?
Or make them constructive, innovative applying new 'STEAM' approach //11//

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Such reflective visionary pedagogical model like the involvement of art (s) in pedagogy (here in this article poetic inquiry) develops cognitive growth by engaging the young brain of the children, thereby promotes creativity, advances social growth, introduces novelty, reduces stress, improves long- term memory, and makes teaching/learning more interesting. It even tries to provide holistic (Pask, 1976) education and connect inter-subject connectivity and search for common meaning by introducing such visionary approach in education to connect learners through hearts and souls pertaining to their learning. STEAM education is expected to be a better approach to address the current problems faced by education. STEAM education, after adding the arts education (the humanistic approach) on

STEM (Science, Technology, Engineering and Mathematics) subjects fosters innovation, critical, creativity and collaboration. Creativity is the most important ability in the 21st century (Liao, 2016) education which is the part of the affective domain. As an advocate of transformative researcher, I believe that critical reflective thinking fosters the creativity of the learners to maximize the use of higher-order affective domain thinking skills. These phenomenal changes are motivate the learners for lifelong education, not just for separated disciplines.

Nowadays, my graph of teaching/learning activities, valuing/behaving toward my peers, understanding the situation of the class, and behaving with my students might have changed day by day due to the pedagogical understanding that might tend to be guided by the 'practical interest' and 'emancipatory interest'. Now, I believe that the best way that I can facilitate my students' learning is by critical understanding and trying to become a 'teacher as scaffold'. How my students are going about learning and attempting to provide them with opportunities to participate in activities might help them to have a meaningful and deep engagement in their learning world. I'll assess whether the activities I've planned are actually facilitating their learning by asking students to describe their experiences with those activities being 'teacher as an involved gardener' rather than 'teacher as dictator' which I used to be. The continuum of this journey starts on the ground of the behaviorist approach and continues the practice on the way of transformative approach from 'teacher as dictator' to 'teacher as scaffold', 'teacher as an involved gardener', etc. I passed through many ups and downs in my pedagogical practices. I might have changed my pedagogy because of my attitude to grasp the new trend and research the new possibility in my teaching profession. Now I believe that the best way that I can facilitate my students' learning is to understand how my students are going through their learning. I would attempt by providing equal opportunities to participate in activities to cognitively engage at a level to produce the type of learning that I hope they will achieve being 'teacher as a scaffold', 'teacher as a doctor, and 'teacher as a nurturer', etc. I identified their problems and tried to solve them just as the doctor identifies the diseases of the patients and tries to cure them by suggesting appropriate treatments and medicine. I also believe that the theoretical literature and the lived experience (Pant, 2017) might have helped me to make sense of what I observed and reflected on my students, as well as to find alternative ways to restructure their learning experiences that guide me 'teacher as a dictator' to 'teacher as a scaffold', 'teacher as a doctor' and 'teacher as a nurturer'. These alternative ways include how I can teach my students because I always want to stand as a transformative teacher awarded by the metaphors like 'teacher as a doctor', 'teacher as a scaffold', 'teacher as a nurturer' etc. before them. Arriving here, I have become aware that my students enjoy my lessons and participate in group work in a different setting and innovative work, but then I must confess that some of them refuse to adhere to my teaching and learning strategies because they claim that sometimes, I still ignore their innovative ideas/thoughts.

I give importance to my teaching and learning performance because I have rich experiences to reflect on in my class. I may provide a much better diversity of teaching and learning activities for students hoping that at least some of them will strike a chord with each student I also believe that the theoretical literature and the community of practice can assist me in making sense of what I see and think about as well as to identify alternative ways of restructuring my students' learning experiences and critical awareness of the situation that they can think of the best among the sets of alternatives. These alternative ways include how I teach my students differently. My lesson plans emphasize student-centered learning with

few lectures. I intend to devote more time to activities and student feedback. I try to create an ideal speech situation for my students to create their space in the class. In this respect I want to add the views of Taylor and Campbell-Williams (1992) that an ideal speech situation can be created in the situation being 'teacher as a scaffold': (i) have no constraints upon discussion; where members have the autonomy to question the truth of another's argument in arriving at a consensus; (ii) members have equal opportunity to open up their truths, intentions and motives and (iii) members are free of coercion, accepting their responsibilities as a member. In my opinion, every individual has the autonomy to collaborate in their respective group; raise critical questions for the understanding of the phenomena, and have equal opportunities to present ideas and critique self as well as others.

I thought that my critical self-reflection (Brookfield, 2017) might help explore my core beliefs and practices that lead to reform the pedagogical practices of my future action. A key resource and inspiration for this possible future has been, and is likely to continue to be, the strands of knowledge production that comprise the rich and contested traditions of critical thinking as applied to, and developed within the teaching and learning process. Such critical thinking has taken my journey of teaching and learning mathematics in a direction that is more informed about the differences and limitations of varied forms of self-awareness. In the continuum of this journey from the conventional behaviorist approach to the transformative approach, I am changing my pedagogy of teaching because of my attitude to grasp the new trend and to research the new possibility in the arena of the teaching profession. Critical reflexivity is at the core of my hopes for the shift of my pedagogical practices. A key resource and inspiration for this possible future has been, and is likely to continue to be, the strands of knowledge production that comprise the rich and contested traditions of critical thinking as applied to, and developed within the teaching and learning process. Such critical thinking has taken the journey of my pedagogical practices in a direction that is more informed about the differences and limitations of varied forms of self-awareness that might lead to possible transformation and ultimately on the way of envisioning.

I fully agree with the fact that visionary thinking might be beyond critical thinking (Luitel & Taylor, 2019). Implementing visionary (Taylor, 2015b) plans might articulate transformative learning that enables the learners to develop their potential to become fully human (Luitel et al., 2012) by expanding conscious awareness and deep and critical involvement in such plans to understand deeply the social surrounding of the learning world and the practice of deep democracy who we are and why we might yet become as an individual and social being (Luitel & Taylor, 2019).

Future Direction

As a teacher educator and researcher, it is important for me to consider and discuss things that reflective teachers do. As cited by Rushton and Suter (2012), Brookfield (1995) argues that for critical reflection, teacher educators are needed to be prepared to critical question their fundamental assumptions but also their status quo through a process of critical self-reflection. According to Brookfield, there are three sets of such assumptions: *paradigmatic assumptions, prescriptive assumptions* and *causal assumptions*. My engagement in empowering critical self-reflection might be motivated by a process of 'hunting assumptions' mentioned by Brookfield as cited by Rushton and Suter (2012) such that I will be prepared to view my practice through four critical lenses: autobiographies as learners and teachers (by a process of critical self-reflection on my own learning and professional practice teachers become aware of the paradigmatic assumptions which

influence the way of teaching), looking at my practice through my learners' eyes (it allows a teacher to check whether the teaching is according to the interest of learners or not), colleagues' experiences (it means a teacher invites colleagues to observe their practice, and engage in 'critical conversations' with them such that he/she notices the aspects of professional practices hidden to them) and theoretical literature (it helps to 'inform' a teacher's practice by providing the teacher with 'multiple perspectives' on familiar situations). Moreover, supporting the line of Ryan and Cooper (2006) I also argue that a critical reflective teacher asks the questions: What am I doing and why am I doing it? How can I better meet the needs of my students? What options are there? How can I encourage students to become more involved and learn? Have I considered my own professional values and my level of comfort in acting on those values? What deliberate decision can I make to make a difference? My role in critical self-reflection might be to work through the guidelines of these questions for my learning and professional growth.

In addition, to become a critical reflective practitioner, my efforts might be to meet the fundamental actions and practices. For this I will put the three essential practices: making time for solitary reflection (it means making it an integral part of daily pedagogical practices), becoming a perpetual problem solver (it involves synthesizing experiences, integrating information and feedback, uncovering underlying reasons, and discovering new meaning) and questioning the status quo (when teachers make a practice of questioning the status quo and conventional wisdom, they seek their own truth and remain open to examining the assumptions that underlie classroom practices) described by Larrivee (2000) in priority. My efforts to manage today's diverse classroom will be through self-reflection as well as critical inquiry because, through self-reflection, teachers become increasingly aware of how they are interactive participants in classroom encounters rather than innocent bystanders, or victims. As Brookfield (2016) argued that it is always creatively interesting to move across institutional boundaries to work with the involvement of very different groups such that all of which are interested in critically reflective practice, my effort will be the same as it towards critical reflection.

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