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Original Article

Transformative Research Journey from Frustrated Learners to Critically Reflective Practitioners

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Abstract

The conventional linear model of pedagogical practices promotes subject-centric memorizing, considering learners as knowledge recipients rather than generators of knowledge. This pedagogical practice degrades educational values by ignoring alternative inquiry-based visionaries and meaning-making approaches. Different forms of art in pedagogy, such as poetry, autobiographical reflection, and visual arts (i.e., paintings and cartoons) that capture learners' personal experiences, on the other hand, might be considered as one of the alternative models for a meaningful and critical understanding of the core and complex phenomena of the diverse world. Thus, the paper investigates the traditional linear pedagogical model and the critical transformative model utilizing Habermasian Knowledge's consecutive interests (technical, practical, and emancipatory) as the theoretical referent and metaphors for critical discourses of such pedagogical practices.

Keywords: Informing. Reforming. Transforming. Pedagogy. Visionary education.

Introduction

This article is a part of the study of the author's MPhil dissertation in STEAM education. Auto/ethnographic approach has been used to conduct a study on the pedagogical practices of six secondary school teachers currently working in the Kathmandu Valley, Nepal. I, with my participants, came to realize that our earlier pedagogical journey from school to Bachelor level was frustrating since we all practiced the 'banking model', 'rote recall culture' and 'paper pencil test'. These were the *linear model* of pedagogical practices. We came to realize that teacher-centric *one-way traffic* model might not address the issues of the 21st-century educational context. We were not aware of the critical discourses about our pedagogical practices in our world. So, I took them as participants because they were on the journey of

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innovation and transformation in their pedagogical world. In this article, I reflect on the journey of our pedagogy through the different contradictory and critical reflective narratives. I have explored researcher and participants' multiple layered experiences—classroom cultural activities, pedagogical practices, and core-beliefs guided by the research question, *how have the author and participant teachers taken a journey from frustrated learners to becoming visionary educators*? The study was conducted withina multi-paradigmatic research design--Interpretivism, Criticalism, and postmodernism, which was scribed to a narrative inquiry as a research method. Different forms of representation poetry, visual arts, and metaphors to name few have been used for meaning making, and to address participant teachers' pedagogical practices through different classroom metaphors. To articulate the social world for the multi-explorations of the realities of the researcher and the participant teachers, Vygotsky's Social Constructivism (1962), Knowledge Constitutive Interest of Jurgen Habermas (1972), Transformative Learning Theory of Jack Mezirow (1991, 1997), and Research as/for Envisioning (Luitel& Taylor, 2019) are used as referents in this article.

Likewise, this article focused on *informing pedagogy* where teachers practice providing *learning capsules* for the learners and are expected to receive the capsules without questioning. Teachers used *banking pedagogy* (Freire, 1993). Further teachers believed in *depositing knowledge* from their head to their students' head. It was like clients of bank deposit their saving in the bank and have maximum transactions (Pant, 2019) whenever needed. Such learning culture is metaphorically described as '*teacher as aloof gardener','teacher as dictator*' to name few. Further, the pedagogical practice focused on *reforming pedagogies,* whether teachers create learning environments that are interactive and deeply involving. Such learning culture is metaphorically described to name few as *'teacher as doctor', 'teacher as wise gardener', 'teacher as catalyst', 'teacher as knowledge creator'*. Finally, the pedagogical practice focused on *transforming pedagogies,* where teachers create learning environments through visionary pedagogy, integrate art (s) into the pedagogy, and promotes the affective domain of higher-order skills (Budge, 2012). Such learning culture is metaphorically described to name few as *'teachers as involved gardeners','teachers as artists'*. In the transforming pedagogy, teachers as well as learners create their own vision of their pedagogical practices, think critically about their learning world, innovate on their pedagogical practices, and transform knowledge of learners in the context of an ongoing struggle for social justice (Peters, 2016). Such practices might make them aware and bring change to the learning world of the learners.

More so, while crafting this transforming journey, my school education was quite disengaging and was probably guided by *faculty psychology*. It is believed that brains of learners have been divided into various isolated compartments and there is no communication and interconnection between such subject-based compartments. These subject-based compartments are nurtured by *subject experts* through the *informing model* that emphasizes preparing a single subject or single discipline. It encouraged the learners to promote talented mathematician, brilliant scientist, veteran doctors and skilled engineers etc. but not a *holist learner*. In my school education, the knowledge and interest of the learners were ignored in the knowledge creation process and learning process which might disengage students in the classroom. Most of the classroom activities during my school days focused on *informing pedagogy* where teachers provided readymade learning capsule and children were expected to receive the capsule without questioning. Almost all the teachers thought that teaching is *depositing knowledge* from teacher's head to learner's head.

Metaphorically speaking, learners (like me) used to be treated as empty *headed*. For me, metaphors are one of the strongest cognitive structures that direct, restructure, and control my thoughts about the formation and process of the events or happenings inside me. 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 assessment system to describe the problem faced by the learners within classroom that created vision of knowledge.

The subject-centric pedagogical practices might suppose the learners as knowledge receivers rather than knowledge generators. It promotes '*one size fits all*' (Luitel, 2009) nature of curriculum practice rather to be meaningfully engaging and critically aware about existing pedagogical practice. I also suffered from these problems as a learner and teacher. Thinking that, I took the first problem to conduct this research: What are the forces that make learning less meaningful, contextual, and *authentic*? I practiced culturally detached curriculum. Cultural artefacts might be useful and powerful tools for the contextual knowledge construction for the meaningful, contextual, and critical understanding and awareness about existing pedagogical practices. Aware about it, revised my earlier problem: *In what ways do the extant pedagogies and curricula promote (and/or do not promote) inclusive and empowering learning processes*? I used to face disciplinary egocentrism and subject centric memorization not focusing alternative pedagogical model. Different forms of arts-based pedagogy like poetry, visual arts, cartoons, etc., might be useful for meaningful understanding of the core and complex phenomena. Knowing such countless benefits of arts in pedagogical practices, I advocate art based pedagogical model which fosters creativity and introduce the 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, making them contextual and interesting. The use of such metaphors to describe the classroom situation might provide the learners with a 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 with this overarching research question: "*How have I and my participant teachers taken a journey from frustrated learners to visionary educators*?" This article presents an introduction, conceptualizing the study, theoretical perspectives, research methodology, discussion/meaning-making, insights, and possible implications.

Conceptualizing My Study

I became familiar with different metaphors in my learning process. These could be seen as an integral component of thought and deep meaning of my world that might provide insight and direction to even the most technical and theoretical constructions of knowledge. 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). For me, metaphors work as strong cognitive structures that direct, restructure, and control my thoughts about the formation and process of the events or happenings inside (Badley & Hallabaugh, 2012). In this research, I used different metaphors to describe the vision of knowledge and patterns of understanding of my pedagogical world. The concept of learning might be explained using metaphors, as how I understood my personal experience (Lakoff & Johnson, 1980; Dickmeyer, 1989). Different metaphors that might capture the pedagogical practices of my social environment and the core concept of ideas might be suitably defined by the proper use of a rich and complex cluster of appropriate metaphors (Lakoff & Johnson, 1980).To describe the situation that might reflect my pedagogical practice where I failed to involve focused interaction, meaningful involvement, consensual understanding of the

phenomenon, collaborative teaching, emphasis on experience, connecting the present knowledge to the previous knowledge, critical understanding, critical awareness, empowering to engage, and engaging in autonomous actions.

I faced disciplinary egocentrism and subject-centric memorization from my early school education to Bachelor level. The focus was not on a different alternative teaching model that might be useful for the pedagogical practices of learners like me. A model that emphasizes preparing a single subject or discipline encourages the students to promote and practice a single subject that might help produce a talented mathematician, brilliant scientist, veteran doctors, and skilled engineers but not a holistic (Pask, 1976) learner. This system might devalue educating the children rather than encourage innovativeness, creativity, criticality, collaboration, and awareness. Learners might be unable to integrate without the development of higher-order thinking skills like critical creative thinking, the use of learner's intuitive abilities and spiritual dimensions of affective and psychomotor skills.

Different forms of "arts-based ways of knowing include poetry, narrative, music, dance, visual arts, and theatre" (Norris, 2000, pp. 40 – 55). These might be useful for meaningful understanding of the core and complex phenomena. Five different forms of arts, namely fine arts, performative arts, visual arts, language arts and liberal arts, might be alternatively used to integrate pedagogical process of science and mathematics and other subjects for a critical understanding. Such forms of inquiry might raise critical questions of why, how, and in what conditions learning occurs that might allow the learner to comprehend the world in diverse ways (Eisner, 1997). I believe that such an arts-based education might foster essential skills like critical thinking, communication skills, collaboration skill, creative skill, the skill of cultural awareness, digital literacy skill and autonomy skill (Ge et al., 2015) of the 21st century.

Critical thinking, critical questioning, and problem posing approach might facilitate learners more on self-reflection, insists on implementation of local curriculum, emphasizes collaboration and group work, and develops communication skill and holistic awareness about the subject of inquiry. It might lead the learners to maximum use of an affective domain (Taber, 2015). Critical self-reflection is generally associated with the awareness of the practice of the person's dogmatic beliefs, stereotypes, and deep-seated hegemonic assumptions which make inequitable society (Mezirow, 1990). Through critical self-reflection, a person becomes aware of the situation associated with his or her surroundings (Mezirow, 1990) and tries to make a society equitable and justifiable. Integrating such affective components onto pedagogical practices by engaging the young brain of the children by promoting creativity and introducing novelty might improve long-term memory. The process would make teaching/learning more interesting. It promotes holistic education (Pask, 1976) that might be an innovative alternative pedagogical model, which appears to be STEAM education.

Integrated STEAM education is interdisciplinary and focuses on transformative learning experiences (Liao, 2016). STEAM subjects are presented together to develop essential basic skills of the 21st century. STEAM subjects have core features: interdisciplinary, multidisciplinary, transdisciplinary, situational experience, cooperation, practice, and innovation (Weidong et al., 2019). It meaningfully engages students of the 21st century in their own culture. Thus, I also advocate such educational system that might foster transformative learning by involving cognitive, inner, societal, and ethereal tools to re-conceptualize and reshape this relationship (Luitel & Taylor, 2019) maintaining the key concept of STEAM education, culture of self-knowing, relational knowing, visionary and ethical knowing in action (Luitel& Taylor, 2019). Arriving at this moment of inquiry, I have used conceptual framing of such innovative pedagogies in this inquiry.

Theoretical Perspectives

To reduce the domination of precise theoretical interpretation and constructing meaning in this inquiry, I discuss its critical aspects and broader ideas as a referent to give meaning to this article. In a hermeneutic world, the theory might be needed to understand and interpret the social phenomena' experiences, social behavior, societies, texts, and discourses (Cohen et al., 2018) as they exist. In the critical world, the theory might interrogate unequal power relations that disfigure lives, critique inequalities, and emancipate and transform participants and societies of the learning world (Cohen et al., 2018). In this respect, my social world might not be guided by the single theoretical perspective since countless problems/opportunities are reflected in my social world. I used Vygotskyan Constructivism (1962), Knowledge Constitutive Human Interest (Habermas, 1972), Mezirow's (1991, 1997) Transformative Learning and Luitel and Taylor's (2019) Research as for Envisioning to articulate my social world for the multi - explorations of the realities, as referents in this inquiry. Using a multi-paradigmatic research design, I explored my and participants' multiple mixed experiences, cultural activities, social realities, beliefs, and pedagogical practices.

I believe that learning is constructed from the learner's society, culture and group (Prawat & Floden, 1994). I have used Vygotsky's social constructivism (1962) to explore my narrative as it existed in my social setting because social processes are foundation and central to learning. It also spotlights the importance of recognizing and understanding the various social forces, and the potential of interaction for effective understanding. My pedagogical practices might not be explored without being consciously critical of my continuum journey of my pedagogical practices. I tried to critically reflect upon my taken for granted assumptions, my status quo, deep-seated values, and core beliefs that always accelerated me to be more inclusive and empowering of my practices. This might be associated with the transformative learning theory of Jack Mezirow (1991, 1997). I presented my and participant-teachers, critical self-reflective diary, lived stories, dialogues and poetic inquiry that might create discourse of critical turning points. Dialogue, critical thinking, and arts-based education created space of innovation and that might lead to transformative education in my pedagogical practices.

The theory of knowledge constitutive human interest of Habermas (1972) is another theoretical referent in my inquiry. It provided me with an analysis of human action, which is important for understanding the cognitive interest of human species. '*Technical interest*' helped me describe my factory pedagogical practice model; practical interest helped me understand the environment through interaction based on the consensual interpretation of meaning; and *'emancipatory interest*' is used for critical discourses of my dogmatic beliefs. Finally research as/for envisioning (Luitel& Taylor, 2019) is used that not only transform my pedagogical world but works as awakenings to embrace 'praxis' for the inclusive and empowering practices in my professional worlds and make vision through envisioning futuristic model through 'manifesto of envisioning and empowering pedagogical model'.

Research Methodology

The multi-paradigmatic design space offered me to deal with the relativity of things and is concerned with the subjective analysis of the phenomena, believing in an individual's values, emotions and multiple facts and realities. For this, I used Interpretivism, Criticalism and postmodern paradigms in this inquiry. The Interpretivism paradigm facilitated me to understand my narratives in my social setting. The paradigm of Criticalism helped me to explore the critical discourses of my and participants deep-seated values that might guide to raise questions against dogmatic pedagogical practices, think consciously to choose better

options, and do socially justified actions. Moreover, I aspired going beyond interpretative understanding of our social world, by reflecting critically on the complexity of our normative social values and practices. It enabled me to empower my research participants regarding their pedagogical practices that might be useful for their future direction as well as to reform their professional life. The postmodernism paradigm helped me promote epistemic pluralism. I have challenged conventional writing through narrative texts, including my personal lived stories and used different literary genres like dialogical, poetic, dialectical, autobiographical, storying, and narrative.

I intended to carry out my inquiry that might address my agenda of subjective knowledge construction and reflect my values and feelings of my social world. I presented my personnel narratives, memories and my professional experiences as learners and teachers and my participant teachers' ample professional experiences and pedagogical practices through the different genres to explore ongoing social and cultural practices as mentioned by Reed – Danahay (1997). Self-critical awareness of the narratives and articulating to deconstruct my hegemonic practices to reconceptualize and transform my pedagogical practices might be the root foundation for auto/ethnography. I believe that my vivid unfolding experiences in this inquiry might fulfil the main purpose of auto/ethnography, agreeing with the view of Ellis and Adam (2014) that auto/ethnography as research products, writing process, storied texts, and methods connect the autobiographical and personal to the culture, social and political.

Taking narrative writing as a method of inquiry, I gathered and generated 'field texts' (Connelly & Clandinin, 2006) which are associated with the long-term sequence of mine and participants' actions and experiences of pedagogical activities that occurred in cultural contexts. Following the notion of culture as a set of situated activities, the situatedness of any kind bears the category of culture which is a matter of auto/ethnographic representation. In this inquiry, auto/ethnographic narratives represent multiple truths, me and my participant's realities. For me, narratives are used to represent the total set of our pedagogical stories and experiences. For this, I am motivated to be critically reflective in the process of writing narratives presenting my (participants) past and present experiences thereby trying to germinate my (participants) better future possibilities by developing a deeper understanding of our pedagogical worlds. I wrote lived stories of experiences to make myself and others (readers) aware of pedagogical practices embedded in our cultural contexts. So, the presentation of such narratives appears to create a phenomenon for a reader, to ask questions to self, and to generate meaning from it, connecting my (participants) cultural-pedagogical world into their world.

I have used metaphor as a tool for a deeper understanding of my and participants' pedagogical practices that enabled me for reflection through a combination of imagination and reason. It also enabled us on the journey of a transformative researcher to involve in multi-schema envisioning to capture the complexity of our research world and integrate the phenomenon as *firelight of creativity.* It might open the door of interpretation to the reader. I used poetic logics and genres to represent my nonlinearity, ineffability and subtlety embedded praxis as practitioner and that might work as a change agent by involving in deep inquiry and critical awareness about my world. It evokes emotional and aesthetic imagination of the knowledge claimed by me. I have used dialogical logics and genres to represent everyday contradiction and pedagogical practices that might be permissible to co-exist in our lived existence and helped us explore the different situations. Narrative logics (lived stories and experiences) and genres promoted me to think about the social realities of me and my participant teachers.

Discussions and Meaning Making

In the following sections, I divided the theme of data presentation and meaning making into three categories, namely (i) stories of frustrations (ii) stories of creating practical pedagogies and (iii) stories of visionary pedagogical practices.

Story of Frustration

During 1980, I was a student in a Nepali primary school, a remote village of Chitwan where kerosene lamp was only the light facility for my study. There was no electricity. In those days, telephones and televisions could only be imagined. Due to the limited number of publications, the sources of learning materials (textbooks, extra reading materials, guides book etc.) were limited. We would completely depend upon our teachers in terms of learning not only mathematics but all subjects. The teaching style of the teachers in those days was in a conventional setting. Now I am going to explain the different journey-metaphors. My life is all about the mixture of ups and downs, joys and sorrows, pleasure, and pain. My school education started at the age of six. I completed university education (up to Bachelor level). Having faced many difficulties, I believe in hard work that might enable me to embrace innovative alternatives. After graduating from the Bachelor level, I tried to jump into the ocean of teaching field without knowing its essential pedagogical knowledge to name few groups learning, collaborative teaching learning, constructivist learning and applied procedural and axiomatic approach (Pant, 2017) on my pedagogical practices. I enjoyed and practiced my conventional pedagogical approach a lot before joining and being aware of emerging alternative collaborative and innovative STEAM approach. I used to feel proud of myself as a genius teacher having a *basket of tricks and techniques* to solve different mathematical problems.

Now, I have come to realize that my past conventional approach was like *one way traffic* that is linear in nature. I have created different metaphors from my narratives to represent my pedagogical practices and taken them as an essential mental tool that might harness an instrument of a descriptor of the problem and sometimes solving device as well. To understand the patterns of understanding and creating vision of knowledge of pedagogical world, I used different metaphors that I experienced and practiced in this inquiry and described my pedagogical journey through the lenses of 'technical interest' of Habermas. I inspect materials as cultural artefacts for their context and content in a mythopoetic mode (Hilton, 2018) and fully engage through the poetry as a way of deliberate as Wear (2000) suggested, "it expands and exposes the least accessible areas of experience and does better than narrative in capturing the breadth" (pp. 257-266) of my early school pedagogical practices and early teaching experiences. My poetic genre helped to represent and evoke emotional and aesthetic imagination of experiences of my pedagogical world. It was useful to generate meaningful, interactive, and imaginative (Taylor et al., 2012) pedagogical engagement that helped me to cultivate my classroom culture I experienced as a learner and a novice teacher. Agreeing with Van Manen (2016) and Haggerson (2000), the practical experience of the lived story is to be examined for its multi-faced content. My pedagogical practice, whether it would be teaching or learning is rich in subjective experiences of emotions and imaginations that might be described by appropriate metaphors to make humorous, interesting, and effective use of meanings. Agreeing with Lakoff and Johnson (1980) that humans live by metaphors grounded in the subjective nature of experiences, emotions, and imaginations and "provide ways of comprehending experiences; they give order to our lives…[and] are necessary for making sense of what goes on around us" (pp. 185 – 186).

I am going to describe my conventional educational journey conceiving *learners as empty pot* adhering to the conventional educational environment where teachers' practice used to be *banking pedagogy*, *rote- recall* and *didactic* method of teaching and marks obtained on the *paper-pencil* test and following *one size fits all* curriculum practice as the absolute judging tool of the student's knowledge and understanding. Through the poetic inquiry entitled 'New Horizon through STEAM Approach', I described the situation.

New Horizon through STEAM Approach

A dear son of a Hindu priest, I am Rameshower,
Temple was the world to whom and the workplace was an altar.
When I saw the structure of "HomaKunda" in my surrounding,
Wish to know them led me to book but zero was the finding. //1//
Then I thought a teacher only could quench my curiosity,
But mocked I was and said it showed all my stupidity.
Painful it already was for me to be poor of the answer,
Deeper pain only I had then with acidic words of a mentor. //2//
Back home, I found my father only as my listener,
All then I narrated to him and asked him what to do further.
Culture, tradition and our religion are based on calculation,
Puja, Prasad if read he said has mathematical formulation. //3//
Contemplating then I remained with few striking questions,
Why don't artefacts in the curriculum have such information?
If only it was possible all myths of difficulty would be over,
All would be interested in learning and would stop being rover. //4//
Curriculum also should include indigenous artefacts,
Learning has to be eased and put in the system
Mathematics of our wisdom, so should be redefined,
The STEAM system brings learning at an effortless line. //5//

I honestly crafted my lived experiences of my story through the poem, "New Horizon through the STEAM approach". I fully agree with Hilton (2008) "the experiences were fundamental to my intellectual life" (p. 111). I fully engaged with the narrative through the poem to visualize the classroom situation in Nepali school. Materials as cultural are taken to visualize the context and content in a mythopoetic mode (Hilton, 2008). I presented poetry as a way of knowing. "It expands and exposes the least accessible areas of experience and does better than narrative in capturing the breadth of my early schools and early teaching pedagogical practices" (Hilton, 2008, p. 111). This leads to the present comprehension of fuller interpretations of previous understanding of my world through the poetic genres. My limited reflection on the narrative does not reach into thick and rich description of my past world and does not reach the bounds of possibilities in my own world. It might be the beginning of my past practice that can be perpetually re-examined in the light of my new consciousness (Hilton, 2008).

I might be guided by the conventional teaching method that might seem to be described by the *technical interest* of Habermas. My experience being a novice teacher in my class might be a repetition of the pedagogical practice that I experienced in my early school education. Arriving at this stage of inquiry, I reflect on what I learnt in my school education, and I come to realize that there were no innovative pedagogical practices like constructive classroom participation, deep and meaningful engagement with my students, contextual discussion connecting to the topic, etc. I tried to pour the knowledge to my students' head from my head. It was just the repeated pedagogical practices that I learned from my

schoolteacher at school. The class activity and student's voice were dominated. They silently copied from the board akin to Freire's *banking pedagogy* and *rote-recall method* and my pedagogical practice seemed to be *didactic teaching*. No questions were raised from the students' side, and they were neither eager nor encouraged to do so as the class exhibited *pin-drop silence*. This situation might be described best by the technical interest of Habermas. In this situation, metaphorically, I as 'teacher like dictator', 'teacher like an aloof gardener', 'teacher as mind-and-behaviour controller', 'classroom as knowledge transmission station', 'teachers as means and ends of knowledge creator'etc. might describe the situation of the class. Such metaphors might describe the classroom situation, where reproduced knowledge is transferred from the teacher's head to students' head rather than involving in meaningful engagement, critical awareness and think of alternative mode of inquiry that might better understand by the learner's society.

My pedagogical journey moved through the linear model before joining M Ed in Kathmandu University in 2008. My teacher's image was 'teacher like dictator' and 'teacher like aloof gardener'. There was no deep interaction between me and my students. I preferred to focus on rote memorization, even algorithms. During my teaching career, I was awarded many times with the best teacher award as I had 100% pass rate with full score in my subject in the SLC exams. However, arriving at this stage, I reflect that I might have dictated to my students by hook or by crook imposing my ideology that "you must achieve a distinction". For this achievement, I might have followed the 'technical interest' and seemed to be 'teacher as dictator'. My students only achieved the highest marks by applying the *rote recall* method and *banking pedagogy*. For me, *banking pedagogy* is like customers depositing their savings in the bank and withdrawing as per their need. Likewise, my students also stored their understanding in their minds and withdrew it whenever necessary. I always forced my students to store as much as they could and then they were comfortable to withdraw (Pant, 2017) when it was needed. I think there might not have been a space for 'practical' and 'emancipatory' interests in my class. Practical human interest starts from interaction and is based on the experiences of the learners and for emancipatory interest; critical understanding, critical awareness, empowering to engage, and engaging in autonomous action (Grundy, 1987), which was not even evident in a minuscule manner in my class. I might prefer to classify my students as distinction group, first division group, second division group and failed group and so forth rather than being a deep engager, critical questioner, and preferring to engage in autonomous action in their learning world. If I followed 'practical' and 'emancipatory' interests, then certainly I would be as, 'teacher as scaffold' rather than being 'teacher as an aloof gardener'. As time passed by, I started developing a silent teaching culture in my class. I believed that silence in my classroom meant the understanding of the student was permanent. After teaching for five years, I was promoted as a high school senior teacher, and I had also acquired B.Ed. by taking mathematics as the major subject. Till then, the practice of my teaching was a reflection of my learning in my early school days akin to 'teacher as dictator'. There was no deep interaction between me and my students. Participating in different seminars my interest aroused in the innovative alternative pedagogical model. This thrust led me to continue a higher degree in a university and join M Ed in Mathematics education, where I learnt countless innovative pedagogical models that foster innovation in teaching learning.

Arriving at this stage, I come to realize that most of my teaching-learning journey might have been shaped and directed by the 'technical interest' of Habermas that focused on 'rote recall'linear model, and 'banking pedagogy' model, believing in 'didactic teaching' and 'paper-pencil test'. Most of my practices were confined to the delivery of content, a teacher of one- way traffic and focused on student's learning achievement rather than their learning process. At that time, I might have not considered the fact that learners have unique

experiences (Bodner et al., 2001) who could learn differently and construct their knowledge differently from their learning society. So, my practices of past teaching might have not reflected the 'practical' and 'emancipatory' interest of Habermas, where learners are critically aware of their cultural norms (Rahmawati& Taylor, 2015) and create their own identity, social values, practices, and perspectives. I never thought that 'emancipatory interest' guides them in becoming critical to their past experiences and challenging their status quo for their better future (Qutoshi, 2019). In the next section, I have discussed why and how I applied practical pedagogical models with my participants.

Story of Creating Practical Pedagogies

This is a story of one of my participant teacher Krishna Kanta Mainali around 2015. It was a hot day in the month of June 2015. Krishna sir together with hosteller students were engaging applying participatory pedagogy in their class.

Now I am going to present how my participant teacher Krishna Kanta developed a vision of practical pedagogies. I have tried to explore the metaphors that describe participant teachers' journey of practical pedagogical practices. The narrative presented is the product of practice and praxis of several interviews. To articulate the narrative in a performative shape, I have tried to search for answers related to the practices of our worldthrough the narrative inquiry. For this, I have presented my participant teachers' narratives and used different metaphors lensing through *practical interest* and *emancipatory interest* to represent the practical pedagogical practices in the practical pedagogical journey.

One day, while teaching, a discussion took place between the hostellers and my participant teacher. The discussion was on the topic, 'Does set belong to mathematics?' There was a misconception among the students of the hostel. He tried to clarify them telling that 'set is also mathematics' invented for the learners of the society where we apply fundamental rules of mathematics like addition, subtraction, multiplication, division and simplification. The conversation between students and him might be like this;

Venue: An apartment in the hostel

Time: 6 – 7 p.m.
Teacher character: Krishna Kanta Mainali
Student character: Hostellers of class eight, nine and ten.
It could be a day in the month of June 2015. I, Krishna Kanta Mainali (Mathematics teacher of Shikhar Boarding School Kathmandu), together with my hosteller students of grade eight, nine and ten: Sujan, Gopal, Kulman, Binita to name a few were discussing the topic 'Set'. The topic of discussion was 'Is set mathematics?' Here in this dialogical narration, I have tried to make it clear to my hosteller students 'whether a set is a mathematics or not' which had arisen in the minds of the students. The conversation between me and the students went on smoothly as below after I entered the teaching hall of the hostel around 6 o'clock at evening.
Krishna Sir: Good evening class.
Students: Good evening sir. How are you, sir? (Students gently greeted the teacher)
Krishna Sir: I am fine and I hope all of you are fine, too.
Students: Yes Sir. (Students responded quickly)
Krishna Sir: What is the matter of discussion today? (I observed the assignment of Binita and asked her if she was doing the problem of the set. Meanwhile, Sujan interrupted him by asking a question.)
Sujan: "Sir, is set mathematics?" Why does it fall under mathematics? I think it is not mathematics. How can we say it is mathematics where there is no use of four fundamental rules (such and such dozen of questions he raised and I wondered

why he was asking such questions even though he was a good and talented student in the class?)

Krishna Sir: Yes. Why is it called mathematics? Shouldn't have; I said that? (Gopal speaks)

Gopal: Yes. Exactly! We were discussing that before your arrival sir. Oh! Sir also thinks the same but you couldn't say it. But we can, set is not mathematics, right sir?

Krishna Sir: Students, I've been teaching for many years but I haven't thought about this at all. I haven't realized that set is not mathematics. So, now you all have to give me a reason to prove the fact that set is not mathematics. (Then Kulman interrupts)

Kulman: Sir, mathematics is simply about numbers and their addition, subtraction, multiplication, division, and simplification. But in sets, we have union, intersection, difference and complement and so on, the different approaches than the application of four fundamental rules of mathematics. How can this be mathematics without using these four fundamental rules of mathematics? (Then teacher Krishna gently speaks)

Krishna Sir: Yes. I agree. We all have basic fundamental symbols or the operation, i. e. addition, subtraction, multiplication and division. So, we might have a confusion in direct applications of these operations are only mathematics and others are not. And that might have led you to think that set is not a part of mathematics. Then someone asks, "What is a union?" (Gopal stood up and shared the definition of the union as)

Gopal: Recalls definition….

Krishna Sir: Correct. Union means combining all the members (elements) of the set. Not addition of their individuals but the combination of them. Now, anyone can say what is the difference? (Similarly, Binita speaks)

Binita: Recalls definition……

Krishna Sir: Yes. In difference, we have a minus (–) sign. But that doesn't mean that we have to subtract the elements of the set separately. We just exclude the elements of one set which does not belong to the other set, don't we?? So, isn't this mathematics? In this way four fundamental rules of mathematics are applied in the set. So, it is mathematics. Did you understand how the set is mathematics?

Students: Yes sir. We were so dumb. Now, it's clearer after your explanation.

(In this way, students were confused about using the basic rules in the different concepts and make meaning and internalize it. We have to show a path to them as a result, they all self-realize, what a silly mistake they made.)

Metaphorically speaking, the teacher in the dialogical narration might be, 'teacher as a catalyst' (Badley & Hollabaugh, 2012). A catalyst teacher creates the classroom environment where students are meaningfully engaged in their learning world. A debate between students starts with some points of controversy (Efron et al., 2001), i.e., 'is set a mathematics?' In the narrative, by disturbing students in some other ways is a feature of a catalyst teacher. In my observation, a catalyst teacher starts to teach who habitually asks difficult and non-factual questions and tries to generate students' meaningful and critical engagement (Badley & Hollabaugh, 2012) about their queries. Also, 'catalyst teachers' must learn to listen carefully to students' answers for appropriate learning to occur. Such listening allows 'catalyst teachers' to engage students with the secondary important questions that check understanding and push for clarification of the initial queries. In the narration, many problems were raised in many places, where teacher created a confusion in his students and tried to engage and explore the

right answer from the students' side so that their learning and understanding about the subject would be clearer. Such listening also allowed to explore what students thought which might be some of the implications of their initial answers. Thus, appearing to be a 'catalyst teacher', the teacher tried to insert 'pedagogical grains of sand' and thereby aggravate students' thinking in the narration. By aggravating students might coat the pedagogical aggravation and ultimately produce 'educational pearls' so to speak from the students' sides. Teachers' role might be to consciously weave question-answers into the course materials and carefully prepare instructional plans. In this way, he used to connect mathematics to real-world problems. By this, the understanding of the students might be far much better and can connect the abstract mathematical concepts to the real-world problems.

The teacher created his 'classroom as a favorable place for learning' where he created a cooperative and a loving environment for his students. He might have created or converted the whole environment of the school for his students' deep engagement in learning. Metaphorically speaking, school and classroom of such a learning environment might be considered 'school as garden' and 'teachers as wise gardener' or 'teacher as catalyst'. In the garden, there are varieties of flowers and vegetables flourished because of proper caring of the wise gardener like the teacher, who take care of his students. A catalyst teacher creates confusion at first and then arouses interest in the learner's mind and then tries to solve the controversial problem from the students' side through deep involvement in their learning world. Learners in the narration are attached with their learning society and the society lies at the center of the learning process (Vygotsky, 1978) because social interaction plays a fundamental role to acquire new knowledge. Humans are the only species to have their own cultures, and each human child progresses in the setting of his own culture (Dougiamas, 1998). Therefore, culture can be taken as a major determinant of individual development (Dougiamas, 1998). Hence, human cognitive development is affected to a larger or lesser extent by the culture in which individuals are enmeshed, including family, peers, environments. In the narration, many cultural interactions are found between learners and the teacher such that transformational metaphors are used. These transforming metaphors might engage the learners and ultimately lead to transformation by creating an effective teaching-learning environment, developing critical awareness and meaningful engagement of the learners. Such transforming metaphors might describe the emancipatory interest of Habermas (1972) in which learners might be meaningfully engaged, critically aware and ultimately transform the learners and their learning society. Similarly, such classroom might be described with garden (Badley & Hollabaugh, 2012), where teacher plant the seed of knowledge expecting the benefits of discipline and students are different vegetables, plants, and various flowers in the garden. Students are treated as various plants; flowers are to be planted and treated believing that one day they will flourish vigorously in a favorable environment. Moreover, 'teacher like a wise gardener' goes around the garden, talks to the plants and asks how they have been doing, feeling, thinking, valuing and being in the garden. A teacher’s role might be seen as a wise gardener who tries to interact with the plants individually and in a group, as teacher treated his students realizing their difficulties and tried to connect their problem to their learning culture.

Thus, thinking differently, practical pedagogy is essential for innovation in education. It enforces the learners' independence, flexibility and integrity. It also helps to identify how their values and belief systems affect their pedagogical practices who possess a balance of thinking and process skills and the social-emotional dispositions to navigate the changes of 21st-century life.

Story of Visionary Pedagogical Practices

This is a story of one of my participant teacher Sundar KC around 2019. One day, he was teaching Biology and the topic was Darwin's evolution theory of grade ten. Students were disengaged in his class and could not understand what he explained. He returned home and had dinner. After having dinner, all of sudden an idea clicked on his mind, "Why do not I present the theory of Darwin in poetic form?". Then, he tried to compose a poem and it took two days to be in its complete format. He again taught the same grade by connecting the lesson using poems. That time, he found the responses of the students positive. They appreciated and seemed to have understood the essence of the main perspectives of Darwin's theory.

Initially, my participant teachers' pedagogical practice was disengaging and was guided by instructional pedagogical model, where teacher provided ample instruction and readymade learning materials. Students received it without questioning. The knowledge and interest of the learners were almost refused in the learning process which might enforce students to disengage in the classroom. However, in real-world, learners might do various fundamental works that facilitate the learning society in a trans-disciplinary manner. Learners' real-life activities are not confined within the fragmented subject-based disciplined manner. Learners' knowledge, skills, and emotions might not be compartmentalized in their daily life experiences. They all might come in wholesome. So, all these subject-based skills come in integrated form rather than in fragmented form in real-life activities. By realizing these facts and participating in different trainings, gaining different experiences, and graduating from Kathmandu University, I, with my participant teachers, started to connect inquiry to a real-world problem so that the understanding of the students might be better than the conventional class of *chalk and talk, rote-recall and banking model*. I would like to introduce one of the participants' science teacher's poetic inquiry that seems to be envisioning and empowering on the learner's mind, and teachers might be satisfied after completing such plans and foster transformation in their pedagogical practices. By implementing such visionary pedagogical practices, I, with my participant teachers, believe that our students tried to connect the abstract learning world to the real-world problem and searched for the meaning of this abstract part in their real-world context. I also believe that critical thinking might foster the learners' creativity, maximizing the use of higher-order affective thinking skills. These phenomenal changes motivate the learners for lifelong education, but not for separate disciplines. Visionary thinking might be beyond critical thinking. Implementing such visionary (Taylor, 2015a) plans might have articulated transformative learning (Ratner, 2007) that enables the learners to develop inborn potential and change into more fully human (Luitel et al., 2012) by intensifying sentient awareness of those who are meaningfully and deeply involved in such plans to understand and the practice deep democracy of who we are and why we might yet become as an individual and social being (Luitel & Taylor, 2019). Meaningfully implementing such pedagogical practices by developing learners' plans might inculcate new knowledge and skills (Luitel& Taylor, 2019); and it involves transforming the learner's ways of learning, acting and valuing (Fien, 2003) to develop a unique innovative model that might be connected to their learning world. The original version of the poem was in Nepali language. As researcher, I transcribed it in English language. An English translation of the poem 'Darwinism' as:

Darwinism

Limited are resources
But towering are expectations.
When sensuality flows with forces
It only pools the sea of population //1//
The forced existence is the destination
When love sees no trail to abstinence.
Only the struggle is the routine there,
Greed to be alive springs whence //2//
Winners rise up and high,
Losers fall deep there to die.
Able are only with the wings,
Win the sky and get to fly //3//
Who gets to live and who is to die
Certainty would though never be there,
Life and death at play and luck as the judge
Make the rest just to stare //4//
Wining and leading qualities
Get to exist on and on
Weak and losing qualities
Are forced to vanish in evolution //5//
Adversities are all they bare,
Those which cannot remain spare.
Endurance through generations
Make them better in evolution //6//
Good ever are pushed to be better
All continue this series till later.
Better further move on to refine,
Culminating the breed of divine //7//

The teacher tried to connect and explain seven principles of Darwin's theory of evolution through the poem. In his opinion, teaching Science in such a way is effective because the students are attentive and learn a new concept. If we analyze the poem, the '*shringar rash*'[1] is found in it and with different metaphors. So, it helps not only to understand the theory of Darwin, but also the students can debate beyond Darwinism, i.e., about the theory of certainty, theory of uncertainty, theory of quantum physics, theory of genetics, history of science, biography of Darwin, the social aspect of the evolution theory, moral value of the society and theory of spiritualism and many more. Moreover, students might debate connecting the Darwin's evolution theory to spiritualism.

In arts-based pedagogical methods, there are several ways of knowing and making meaning beyond the traditional method of pedagogy, i. e. based on word and number (Mc-Leod, 1987, as cited in Conrad, 2002). The methods are more powerful weapons of effective teaching/learning and critical understanding. The different forms of arts-based ways of knowing include poetry, narrative, drama (Conrad, 2002), music, dance, visual arts, and theatres (Norris, 1997) used for meaningful understanding. Arts-based inquiry raises a variety of questions such as why, how and in what situations to study, arouse the capacity to curiosity, and allow the learners to see or comprehend the world in diverse ways (Eisner,

[1]श्रृंगार रस (Shringar Rash): Sanskrit origin word, meaning: aesthetics, also spelled as esthetics, the philosophical study of the beauty and taste. It is closely related to the philosophy of art, which is connected with the nature of the art and the concepts in terms of which individual works of art are interpreted and evaluated.

1997). It includes the entire person through numerous ways of knowing containing word, number, sound, image, gesture, and drama (Norris, 2000) and inspires an understanding that is subjective, alive, and experiential **(**Keane & Keane, 2016). To understand the subjective interpretation, value theory provides an outline to show how value is credited and prejudiced by exterior forces and is based on beliefs, attitudes, and judgments (Budge, 2012). Furthermore, such a framework generates a way of comprehending the values in higher education and how diverse disciplines of arts are placed within it. Introducing arts as pedagogy on learning appears to cover almost all subjects and innovative skills in an interesting and living way (Vanada, 2013) that might keep the learners attentive and encouraged to love learning and make them think critically, creatively, and imaginatively (Frimberger, 2016) so that the learners are found deeply engaged (Brown, 2000) and critically aware of acquiring knowledge differently. Moreover, the involvement of arts as pedagogy in the learning process appears to be an effective process for uniquely understanding the subject of learning.

Metaphorically speaking, the teacher in the narrative might be honored with transforming metaphors like, 'teacher as an artist gardener'. Crowell (1989) uses the theme 'teacher as an artist' to explore the connection between teaching and art (Chen, 2003). At this connection, Chen (2003) states that 'teacher as an artist' thinks and designs his classroom differently than other teachers and becomes aware of the need for creative expression for teaching-learning. This notion of thinking might be compared with the narration mentioned above since so-called difficult lessons like Darwinism is taught through the poem created by the teacher. Darwin's principles are included in the poem in the local language. So, students could understand well and make meaning on their own. The teacher in the narration pours his art of creating a poem by connecting it to the lesson to be taught. So, he might be just as an artist pours life into creations and creates his identification as a teacher (Palmer, 2017). Palmer observes that "teaching, like truly human activity, emerged from one's inwardness, for better or worse." (p. 2). In this connection, Eisner (1983) states that teaching is based mostly on feelings and creativity and should be more concerned with satisfying the soul than notifying the head. The teacher in the narration tries to activate the students' affective domain than the cognitive domain. Activation of affective domain might be taken as empowering and envisioning act.

He might be described as 'teacher as doctor' who heals ailments. The relationship between doctor-patient might shed light on the teacher-student relationship. The sick people go to doctors to get better or get rid of their suffering. To get better, the doctor gives good remedies or healing, and the patient must follow the doctor's advice as students must follow teachers. In this way, teachers should know more about their students, not only about what to teach, but also how to teach, when to teach, why to teach and so on. The teacher must know how pupils learn, just as a doctor must know about the human body and the causes of health problem and diseases and how to cure them. Teachers' duty is to diagnose their pupils and prescribe necessary medicine. A teacher as a doctor needs to test their client's condition and prescribe medicine to cure the ailments. Some special patients might not be healed based on the physician's knowledge and skills and must be referred to a specialist. Similarly, some students need special attention to recover from their personal problems. Some illnesses of the students might take more time and longer intervention to get good results. The students must play some part in the healing process and their positive attitudes influence the ability of doctors and teachers to help. In this way, schools and teachers might help students depending on their condition. Similarly, teachers as scaffold support their students in the learning process. They demonstrate and support their students in every aspect of their learning through scaffolding, keeping students' learning at the center.

Similarly, the environment created by the teacher in the narration looks like 'school as hospitals'. Children might be taken as patients who come to cure their diseases. It seeks 'curriculum as prescription', where doctors write an appropriate prescription for the individual patients according to the condition of the patients. 'Teachers as doctors' treat their patients individually since each patient has different diseases and students as patients might need individual care to be cured. In a similar fashion, the teacher might be, 'a sculptor', 'wise gardener', 'a catalyst', 'nurturer', 'an artist' and 'knowledge creator'. The teacher in the narration might create a visionary model of science teaching through the poem. In this way, the science teacher in the narration can deconstructs the hegemony (Taylor & Medina, 2019) of conventional teaching practice to open a prison door and explore a landscape of undreamt possibilities (Taylor & Medina, 2019) to flourish in the freedom of creative, innovative, imaginative and envisioning pedagogical practices through the poetic inquiry implemented as an alternative tool in his classroom practices. In such a fashion, one of my participants, who is also the science teacher developed his visionary model in his science teaching career and employed an alternative tool in his science teaching.

Final Remarks

Me and my participant-teachers experienced different pedagogical models throughout this journey. We practiced the conventional pedagogical model. Different metaphors to name few were: ‘teacher as a knowledge transmitter’, ‘classroom as knowledge transmission station’, ‘school as a station of rote memorization’, ‘curriculum as racetrack’. The learning environment was frustrating for us in a way that it narrowly focused on the subject centric memorization. Conventional learning promoted and engaged students for subject centric memorization, ‘banking pedagogy’, and ‘rote recall’ culture of teaching-learning rather than being critically engaged in the classroom. In the second phase, I constructed different metaphors to describe the teaching-learning environment. To name a few were ‘teacher as a catalyst’, ‘teacher as a wise gardener, and ‘school as garden’. In these models, students were meaningfully engaged with their learning world. They observed the best features of teaching and became critically aware of the learning world. Finally, while we were engaged in envisioning and empowering the visionary teaching educational setting, I constructed metaphors like ‘teacher as a scaffold’, ‘teacher as an involved gardener’, ‘teacher as a doctor’, ‘teacher as an artist’ to describe the teaching-learning scenario of arts based visionary teaching classroom. In my and my participant teacher’s experience, involvement of different form of arts in the pedagogy and visionary teaching pedagogy could develop cognitive growth by engaging the young brains of children, thereby promoting creativity, advancing social growth, introducing novelty, reducing stress, and improving long-term memory (Sousa &Pilecki, 2018). Like Budge (2012), now we believe that applying such pedagogical practices in the classroom might make teaching/learning more interesting and might promote the affective domain of the higher-order skills.

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