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Reimagining Enterpreneurial Learning in the 21st century: A Conceptual Framework through STEAM Perspectives

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Abstract

Traditional learning approaches to entrepreneurial education have no longer adequate to meet the energetic needs of learners and societies in the speedily evolving landscape of 21st century education. This conceptual paper try to enquiry the need to reimagine entrepreneurial learning by integrating interdisciplinary knowledge system in the different disciplines, creativity, innovation in learning and socio-cultural awareness. Drawing on existing theoretical model of transformative learning, constructivism, and entrepreneurial mindset of development, the study proposes a holistic framework that opinions entrepreneurial learning as a lifelong, learner-centered, and context-responsive learning process. The purposed framework in this article emphasizes experiential learning, critical thinking, innovation, and ethical engagement to equip learners with the capacities to navigate uncertainty, co-create value, and address complex global challenges. By shifting from a narrow focus on scheme creation to a broader paradigm of entrepreneurial thinking, this research aims to inform curriculum re-design, policy re-development, and pedagogical practice in higher University education and beyond. The study contributes to a future-oriented vision of entrepreneurial learning as a potency for inclusive and sustainable transformation for the learners of the 21st century.

Keywords: Entrepreneurial learning, Single loop learning, Double loop learning, Status-quo, base of pyramid, Technical interest, Emancipatory interest.

What is learning?

Learning is a systematic process of obtaining knowledge or skills through instruction, study or experience on the phenomenon that might subsequently changes in behavior, knowledge or understanding of that phenomenon permanently. Huber (1991) defined learning as, "an entity learns if, through its processing of information, the range of its potential behaviors is changed" (p. 89). This definition highlights that learning does not necessarily have to result in changes in behaviors of the learners. Further, Cope and Watts (2000) highlights level one and level two learning. Level one learning describes the assimilation of '*factual information*' which has immediately utility but no real long-term implications which is repetitive, rote, surface learning (Reynolds, 1997 as cited by Cope & Watts, 2000), compared as '*single loop learning*'[1] of Argyis & Schon, (1978) which follows routine and immediate task. This type of learning linear in nature which follows rigorous steps. Further Cope and Watts (2000) highlights level two learning involves assimilating the subject that is transformable that describes the situation that intended to changed his conception about the particular aspect. This has similar nature as the level one learning so this also categorized as '*single loop learning*'. In the same fashion Cope and Watts (2000) has defined level three learning which is stimulating the fundamental change, encouraging the learner to reflect on self, questioning not only their '*status quo*'[2] but also underlying their values and perceptions that drive their behaviors. Level three learning is different from level one and level two learning since it's about contextualize the learning in learners own context and make vision on it and self–awareness about it and is concern to the personnel understanding the subject at deeper and critical lenses. This learning is '*double loop learning*'[3] (Argyris & Schons, 1978) where learners are intended on critical personnel self-awareness to understand the subject of learning which shape the individuals perceptions of the world (Cope & Watts 2000). This double loop learning is in multi-direction which creates the learner's critical space for the learners and make their own vision on the subject of inquiry.

What is Entrepreneurial Learning?

Entrepreneurial learning is about developing entrepreneurial attitudes like passion, flexibility, bravery, time and resource management etc. followed by skills and knowledge that enables learners to convert ideas into actions that create value in all areas of life. Hence meaningful learning should ascertains learning is based on learners own experiences, non-routine and tacit (Mursick & Watkins, 1990, as cited by Cope, 2003) which might similar to '*double loop learning*' as defined by Argyris and Schons (1978). Hence

1 Single loop learning:- See meaning in appendix
2 Status quo:- See meaning in appendix
3 Double loop learning:- See meaning in appendix

entrepreneurial learning have to be on the nature of '*double loop learning*' that intended to transform the learner's perceptions, values, and ultimately learners make vision on it. So, entrepreneurial learning is a kind of level three learning through which once were thought the skills and qualities requirements of an entrepreneur, are the qualities needed for personal and professional development of people in all sectors. Therefore entrepreneur learning may be one of the most important requirements of the education since in education the experiences, values, perceptions and vision of future are the major four pillars and reflected more than simply surficial understanding of the learning world. Entrepreneurial learning is a continuous process that facilitates the development of necessary knowledge for being effective in starting up and managing new ventures. Although there have been extensive efforts in investigating the potential learning effects of entrepreneurs' experiences, there has been very little effort to distinguish between entrepreneurial experience and entrepreneurial knowledge. A starting point for studying the process of entrepreneurial learning could hence be to draw a distinction between the experience of an entrepreneur on the phenomenon of the learning world and the knowledge thereby acquired through the experience on the learning subject. Experiences as a direct observation of, or participation in, events associated with new venture creation, while the practical wisdom resulting from what an entrepreneur has encountered represents the knowledge derived from this particular experience. Having distinguished between the experience of an entrepreneur and the knowledge thereby acquired, where learners start to investigate the experiential process where the personal experience of the entrepreneur is continuously transformed into knowledge (McMullan & Long, 1990) acquisition.

Birds Eye Views of Entrepreneurial Learning through Different Scholars

Learning is an emergent, sense-making process in which people develop the ability to act differently (Shane & Venkataraman, 2000) comprising, being, knowing, doing, becoming and understanding how to learn, when to learn and why to learn (Mumford, 1995). Learners should ask the four major questions (i) What am I going to learn? (ii) How am I going to learn? (iii) Why am I going to learn? And (iv) Who am I becoming after completing this learning? So learners should focus on the fourth questions to becoming a visionary learners. Hence, learning is associates with its learning society and construct own meaning through contextual experience of the learning society and create new reality (Weick, 1995) and internalized to the learning subject on his/her own content and context. In this connection learning is defined by Huber (1991) as, "an entity if, through its processing of information, the range of its potential behaviors is changed" (p, 89). Hence, the learning does not necessarily have to change in behavior, rather it is potential to behave differently characterize the process (Janson & Gerald, 2000) of learning. So it is the fundamental and integral part of not only for the entrepreneurial process but development of all the

aspect of cognitive and affective part of human, in which the human, social and behavioral activities are of as much concern as the economic aspects which are often highlighted (Rae, 2005). Thus, an entrepreneurship is associated with an inter-related process of identifying, creating and acting on opportunities and that combine innovation and actively used in decision making process for the learners.

Development of entrepreneurial attitudes, skills and knowledge that enable the individual to turn creative ideas into action. Entrepreneurship is not only related to economic activities and business creation but more widely to creating value in all areas of life of the learner and its society, with or without commercial objectives. Thus, entrepreneurial learning is defined, "entrepreneurial learning is fundamental within human social development" (Rae, 2005). Rae (2005) further illustrates that educationally, there is need for a holistic model of entrepreneurial learning which learners can use to make sense of their own learning, practice and development and by the achievement of this further be used to assist in learning process in the similar condition and different situation arises. The prime purpose of the entrepreneurial learning can be personnel and social change of the learner also social emergence and identification of corresponding transition in identity is a fundamental aspect of entrepreneurial experiences (Rae, 2005). At this point, Rae (2005) emphasized on two important aspects of entrepreneurial learning. First is that learning is a fundamental and integral part of the entrepreneurial process, in which the human, social and fundamental activities are of as much concern as well as highlight to the economic aspects? The second is a conceptual model which explains the entrepreneurial learning process and can be applied in entrepreneurial education and its development that can be useful further learning process. Hence, entrepreneurship is an interrelated process that identify, creates, and acting on opportunities, combining innovating decision making and inaction (Rae, 2005).

On supporting the above arguments, Jäger, Cardoza & Umaña-Timms, (2015) argued that learning should focus on developed and developing countries and try to collect case studies available on 'base of pyramid'[4] issues, the real issues comes from the such 'base of pyramid' class which are not included on the periphery of the government tax market, do not contribute in GDP and it also covers the large area of the subject of inquiry so that tendency of business schools to include experiences of informal markets and poverty into their curriculum. To articulate such phenomena there may be including practical challenges, like the one at the ‘base of pyramid’ but it is a difficult task for teachers, to articulate real situation of the learning and the learner must involve in such situational markets. Jäger, Cardoza & Umaña-Timms, (2015) argues that this is hard because it touches their basic assumptions about learning. In the words of Jäger, Cardoza & Umaña-Timms, (2015), “In essence, we understand learning as recognizing a previously unknown issue or changing the existing knowledge about a known issue to identify problems” (pp., 99 – 113), understand challenges

4 Base of Pyramid:- See meaning in appendix

and solve problems looking further into this action, learning is based on assumptions about the relation between the learners and the issue that he or she learns (Euler & Hahn, 2004). To learn is ultimately a question of how the teacher and the students assume their relation to the world in an epistemological sense. Jäger, Cardoza & Umaña-Timms, (2015) further discuss the challenges that the teachers face when working with teaching materials on the 'base of pyramid' and suggest that transformative teachers really wants to explore the hidden condition of the society should introduce the didactical[5] concepts of experience-based learning as a promising entry point to structure business school courses that intend to include poverty issues into their curriculum (Euler & Hahn, 2004) so that the students of the business school of the 21st century will explore the real situation of 'base of pyramid' society that the govern of the concern society fail to explore the real problem and have to reflect on why experiences matter for 'base of pyramid' courses and what the consequences for the role of teachers and the learners. These tendencies support management teachers of business school to argue that students need to learn about managing at the 'base of pyramid'. But the challenge of the researchers, teachers and learners starts when they have to explain the phenomena from a management or economic perspective, especially if they said economic perspective was constructed with first-world paradigms and is detached from the true context of 'base of pyramid' (Cardoza & Umaña-Timms, 2015). On this condition we have in our mind that informal markets follow rules or conventions that are poorly understood since the reason is that management and economic theories can explain only insufficiently the highly complex phenomena of alternative markets. The society of informal market are not taxed or they are beyond the tax periphery, monitored by any form of government, included in any gross national product data (Prahalad, 2009), or granted access to their country's legal framework. Thus, researchers and learner's prime purpose must explore the real situation of such informal markets then the entrepreneurial learning is meaning making and contributing on the education of the 21st century and the researcher's research explore the real, contextual situation of the learning world.

Theoretical Orientation of Entrepreneurial Learning

The theoretical foundation of entrepreneurial learning in the 21st century education draws from multi-disciplinary perspectives, creating a rich tapestry of understanding that encompasses cognitive, social, and experiential dimensions of learning. At its core, entrepreneurial learning theory builds upon Kolb's (1984) experiential learning cycle, which emphasizes the importance of concrete experience, reflective observation, abstract conceptualization, and active experimentation in the learning process. This cyclical approach is particularly relevant to entrepreneurship, where learning occurs through direct engagement with real-world that challenges and iterative problem-solving processes.

5 Didactical concept:- See meaning in appendix

The social learning theory, as articulated by Bandura (1977), provides another crucial theoretical lens for understanding entrepreneurial learning. This perspective highlights the importance of observational learning, modeling, and social interaction in the development of entrepreneurial capabilities for the learners. In the context of 21st-century entrepreneurship, social learning extends beyond traditional mentorship relationships to encompass digital communities, online networks, and virtual collaboration platforms that facilitate knowledge sharing and peer learning across geographical boundaries (Cope, 2005).

On the other hand constructivist learning theory offers additional insights into how entrepreneurs build knowledge through active construction of understanding based on their experiences and interactions with their environment (Vygotsky, 1978). This theoretical orientation is particularly relevant in the context of entrepreneurial, where individuals must create information from numerous sources, adapt to changing circumstances, and create novel solutions to complex problems. The constructivist approach emphasizes the importance of authentic learning environments that mirror real-world entrepreneurial challenges and provide opportunities for learners to construct their own understanding through exploration and discovery.

The theory of effectuation, developed by Sarasvathy (2001), represents a paradigm shift in understanding entrepreneurial decision-making and learning processes. Unlike traditional causal reasoning that relies on predetermined goals and comprehensive planning, effectuation emphasizes the ability to create outcomes through available means, stakeholder commitments, and adaptive responses to contingencies. This theoretical framework is particularly relevant for 21st-century entrepreneurial learning, as it reflects the uncertain and rapidly changing business environment in which modern entrepreneurs operate.

Adult learning theory, specifically Knowles' (1980) principles of andragogy[6], provides essential insights into how adult learners engage with entrepreneurial education. This principle emphasize the importance of self-directed learning, experiential knowledge, problem-centered approaches, and intrinsic motivation in adult education contexts. For entrepreneurial learning, these principles translate into educational approaches that respect learners' existing experiences, provide autonomy in learning paths, and focus on solving real business problems rather than abstract theoretical concepts.

The concept of transformative learning[7], as developed by Mezirow (1991), offers a framework for understanding how entrepreneurs undergo fundamental shifts in their worldviews and approaches to business challenges. Transformative learning theory emphasizes critical reflection, discourse, and action as key components of the learning

6 Principles of andragogy:- See the meaning in appendix
7 Transformative learning:- See the meaning in appendix

process that lead to more inclusive and discriminating perspectives. In entrepreneurial contexts, transformative learning enables individuals to challenge existing assumptions, embrace new ways of thinking, and develop innovative approaches to value creation.

Network learning theory provides insights into how entrepreneurs learn through their social and professional networks (Powell et al., 1996). This theoretical perspective recognizes that entrepreneurial learning is not solely an individual endeavor but occurs through interactions with diverse stakeholders, including customers, suppliers, investors, mentors, and peers. In the 21st century, network learning extends to digital platforms and virtual communities that provide unprecedented access to global knowledge networks and collaborative learning opportunities.

The theory of situated learning[8], proposed by Lave and Wenger (1991), emphasizes the importance of context in the learning process and the role of communities of practice in knowledge development. For entrepreneurial learning, situated learning theory highlights the need for authentic contexts that reflect real entrepreneurial challenges and the importance of learning communities that provide support, feedback, and knowledge sharing opportunities. This theoretical foundation supports the development of learning environments that integrate academic institutions with entrepreneurial ecosystems, creating seamless transitions between learning and practice.

Cognitive flexibility theory[9] addresses the need for learners to develop multiple perspectives and adaptive problem-solving capabilities (Spiro et al., 1988). In entrepreneurial contexts, cognitive flexibility enables individuals to navigate complex and ill-structured problems, adapt to changing market conditions, and develop innovative solutions that may not fit conventional business models. This theoretical orientation supports pedagogical approaches that expose learners to multiple perspectives, encourage creative thinking, and develop tolerance for ambiguity and uncertainty.

Finally, the theory of entrepreneurial learning as proposed by Cope (2005) integrates these various theoretical perspectives into a comprehensive framework that recognizes entrepreneurial learning as a dynamic, continuous, and transformative process. This integrated approach acknowledges the complexity of entrepreneurial learning and the need for multifaceted educational strategies that address cognitive, emotional, social, and practical dimensions of entrepreneurial development.

Hence as learning defined as ‘single loop’ and ‘double loop’ learning, entrepreneurial learning is associated to ‘double loop’ learning, which is interdisciplinary in nature as STEAM education have.

8 Theory of situated learning:- See the meaning in appendix

9 Cognitive flexibility theory:- See the meaning in appendix

What is STEAM Education?

STEAM education is an interdisciplinary approach of learning that integrates five core subjects Science, Technology, Engineering, Arts and Mathematics in a cohesive and holistic model. In STEAM approach science is used for inquiring a core component of learning, technology is used for innovation and novelty for different technology tools used in the learning, engineering is used for design thinking and problem solving skills through the innovative and alternative methods, arts is used for creative writing connecting other disciplines in the learning process and mathematics is used for to build up core concept of reasoning and computational thinking and application on solving the real world problem. So, STEAM is approach of interdisciplinary learning combining all the components of learning that generate meaning of learning in different and wide direction in the real world context.

Entrepreneurial Learning and STEAM Education

Distinguishing features of lower and higher level of learning		
Contributing Theorist (s)	Lower level learning	Higher level learning
Gibb (1995)	Cope with '*change and survive*'	Capacity to '*bring forward*'
Huber (1991)	'*Within frame of reference*'	'*New frame of reference*'
Argyris and Schön (1978)	'*Single-loop*'	'*Double-loop*'
Senge (1990)	'*Adaptive*'	'*Generative*'
Mezirow (1990, 1991)	'*Instrumental*'	'*Transformative*'
Pask (1976)	'*Serialist*' step-by-step	'*Wholis*t'
Foil and Lyles(1985)	Repetition, routine, '*short-term outcomes*'	'*Long term / new insight*', skill development
Appelbaum and Goransson(1997)	'*Adaptive*' mundane (dull), no logical	'*Transformational*' radical change

Aygyris (1992) believes that organizations require effective learning capability if they are succeeded in complex, competitive and challenging world. Beach (1990) highlights learning as achieved only where leads to some intention to behave in modified way. Hence learning entails not only a process of adaptive that cope with change and survive but also what has been deemed as generative which embodies the capacity to create and bring forward experience and transform the not only the learner but also the learning society of the learner. This process also include bringing forward to the entrepreneurial learning that incorporates four common characteristics as suggested by Williams (1998) of individual

and organizational learning namely: (i) goal directed (ii) based on experience (iii) impacts behavior and cognition (iv) changes are relatively stable. Hence Entrepreneurial learning that may contain the organizational culture should an input and output of learning culture of the learner and such types of learning should incorporates the Business school of the 21st century so that learner can articulate content and context of the real situation of the organization and the problem of the real world society will be explored. Learning is a continuous process (Mumford, 1991), many entrepreneurs become actively engaged in learning to be effective managers and faces challenges and problems can be rich sources of learning (Daudelin, 1996; Herro, & Quigley, 2017)). Furthermore, it is apparent that learning from more discrete and unusual events can often be 'transformational' (Appelbaum & Goransson, 1997), in the sense that when individuals face such non-routine situations their learned responses and habitual ways of behaving prove ineffectual (Marsick & Watkins, 1990). Such exceptional circumstances require heightened attention and experimentation, forcing individuals to question their taken-for-granted beliefs and assumptions and reframe their understanding of the situation at hand (Schön, 1983). One of the most intriguing aspects of discontinuous learning events, such as 'opportunities' or 'crises', is the notion that these incidents can stimulate different 'levels' of learning. Fiol and Lyles (1985) emphasize that some kind of 'crisis' is a prerequisite for a challenging and fundamental form of learning, which they describe as 'higher-level' learning.

Janson Cope (2003) distinguishes learning as lower level learning and higher level learning. Lower level learning focuses the repetition of past behaviors; usually short terms actions, surficial action, temporary action but with association being formed between the learning subject and the learner. It captures only certain element of the learning world and is repetition in nature also called single loop learning, routing learning etc. In my understanding lower level learning is guided by technical interest as suggested by Habermas. On the other hand; higher level learning associates with the development of complex rules and associations regarding new actions of the situation of learning world. It studies the development of an understanding of causation so it is also called double loop learning. The central norms of this learning is frames of reference and carry the agenda of assumptions of the change, status quo, core beliefs of the learner and is guided by more of emancipatory interest as suggested by the Habermas, that changes the status quo of the learner and tries to permanently change the behavior of the learner. Hence, it is transformational in nature. This learning has the capacity to challenge or redefine the individual's mental model. On the other hand STEAM education fosters the higher level learning that promotes the learner to challenges learners status quo, radical change and ultimately transform the learning and the learnt. Hence 'Higher level learning' fosters the STEAM education that carries all the characteristics and adopts the agenda of transformation in education and learning. Real problem based STEAM education fosters for develop both sides of the human brain through

the critical thinking and creative thinking through hands on tasks on the flow concept . In higher order learning concept learners are engaged for the 'Wholist' (Pask, 1976) learning similarly to integrated STEAM learning real problem based, project based learning model for the critical understanding of the problem. Hence, STEAM education fosters the higher order learning concept.

Vision and Objective of Entrepreneurial Learning

Entrepreneurial learning needs development of versatile entrepreneurial attitudes like bravery, passion, maximum utilization and allocation of resources and management and flexibility in the daily life activities. For the development of such character in the 21st century education should aimed to produce new trained manpower having such transversal competencies character. But present business school aimed to produce expert in one subject and having no knowledge and skills or little knowledge in the supportive subject matter that need to promote their skills and carrier. Such multi skills and knowledge that enables learners to convert their ideas into actions that create value in all areas of life. These skills which once were thought the skills and qualities requirements of an entrepreneur, are the qualities needed for personal and professional development of people in all sectors. That's why entrepreneur learning may be one of the most important requirements of the education sector as well to produce such versatile character who have intended to solve the problems of his/her own sector. Thus in my view entrepreneurial learning should incorporate in the STEAM education to enhance innovation and creativity in the education. To promote and fulfill my targeted goals (short, medium and long term) and proper guidance, I have my own vision that is guided by promoting and creating entrepreneurial learning environment on my own work place. The main aim to promote entrepreneurial learning in my own work place is to aware and empower my students holistic learning that aims to development of entrepreneurial knowledge, skills and attitudes which enables learners to convert their own ideas, skills into actions that creates their own values in all areas of their life including personal and professional life. Also my students will be able to aware and survive with the global crisis arises on this 21st century with their gained skills through the innovative entrepreneurial learning. In the same direction I will incorporate to my student's intuitive, opportunity and focused on real world problem based learning by doing and targeted to help in problem solving nature exposing them to address the crises which the they and their society facing. Also my mission will help to add a new dimension in education in the context of teaching/learning in an innovative, creative and critical way being applied different tools lecturer, promoter, analyst, moderator, mentor so on. My goals of incorporating entrepreneurial learning in my inside and outside class is to empower them to get higher level '*double loop learning*' by creating the learning environment their learning deep engagement with subject, generative, critical, and ultimately transformative

following '*double loop learning*' (Argyris & Schons, 1978) and also '*generative learning*' (Senge, 1990, as cited by Cope, 2003) moves beyond adaptation, requiring individuals and organizations to develop new ways of looking at the world. I hope this will made my students to deal multipurpose fully with the crisis and challenges what they are facing and going to face in their future. For this my students will continuously involve on self-reflection, on a various manner the personnel and social problems they suffer and contextualized it with the social issues. My students will be able to face the real challenges and solve the problems by creating learning environment sound and favorable to them which they experienced in their class through experienced based learning, learning by doing and changing their attitudes by the help of critical self-reflection and with the help of the teachers.

Intended Strategies of Entrepreneurial Learning

Different scholar define learning as 'lower – level' and 'higher – level' (Fiol & Lyles, 1985), 'surface' and 'deep' (Brown, 2000), 'adaptive' and 'generative' (Gibb, 1995, Senge, 1990), 'incremental' and 'transformational' (Appelbaum & Goransson, 1997), 'instrumental' and 'transformative learning' (Meziro, 1990) and 'single-loop' and 'double-loop' learning (Argyris & Schon, 1974, 1978; as cited by Cope, 2003). Janson Cope (2003) distinguishes learning as lower level learning and higher level learning. Lower level learning focuses the repetition of past behaviors; usually short terms actions, surficial action, temporary action but with association being formed between the learning subject and the learner. It captures only certain element of the learning world and is repetition in nature also called single loop learning, routing learning etc. In my understanding lower level learning is guided by technical interest as suggested by Habermas. On the other hand; higher level learning associates with the development of complex rules and associations regarding new actions of the situation of learning world. It studies the development of an understanding of causation so it is also called double loop learning. The central norms of this learning is frames of reference and carry the agenda of assumptions of the change, status quo, core beliefs of the learner and is guided by more of emancipatory interest as suggested by the Habermas, that changes the status quo of the learner and tries to permanently change the behavior of the learner. Hence it is transformational in nature. Whereas Huber (1991) states that learning within a 'frame of reference' is low level leaning whereas learning a new 'frame of reference' is the high level learning. Now to fulfill my strategies I will encourage my students get a higher level of learning is through continuous self-reflection in which they are allowed to do continuous critical reflection in which they will question their own beliefs, values, vision, decision making, their personal theory, known capabilities and relationship. They are encouraged to learn through participation in a community in which their individual experiences are related, compared and shared so that the shared meaning is constructed and such learning is relational, functional and problem solving (Rae, 2005)

and made them to increase their confidence and self-belief that make them able to achieve their targeted goals. Now 'higher level' or 'double-loop' learning regards the questioning of their underlying values that guides their action; implies an awareness of long-range outcomes so though the 'higher-level' learning they will become able to solve not only the immediate tasks but also become able to plan for their future actions. Their changing identity makes their learning more generative which develops new 'frames of reference' by which they experience their new world of learning. By the continuous involvement of critical self-reflection develop an understanding of the technical assumptions guiding the problem-solving process and ultimately they are on the 'transformative' learning process which build the capacity to transform their 'meaning perspectives' as well conceptual frameworks that form, limit and distort how individuals think, believe, feel and what, when and why they learn and leads their learning long lasting. Similarly the critical reflection process helps them to question my and their values, perceptions, hidden frames of references, humanity etc. which helps to figure out what are our limits in using earth and the resources and think about the calamities crisis of this century like global warming, land-slides, waste of plastic, epidemics, endemic etc. I think it will make them responsible towards our globe and can identify effective and innovative ideas to deal with such crises. On the other hand STEAM education fosters the higher level learning that promotes my students to challenges their status quo, radical change and ultimately transform them. Hence 'Higher level learning' fosters the STEAM education that carries all the characteristics and adopts the agenda of transformation (Aryal. 2023). Similarly by the implementation of real problem based STEAM education fosters my students to develop both sides of the human brain through the critical thinking and creative thinking through hands on tasks on the flow concept so that they are engaged for the 'Wholist' (Pask, 1976, as cited, Cope, 2003) learning. There may be several strategies but most relevant strategy will be that the me and my colleagues teachers together need to work with didactical innovations that include practical challenges so that we become moderators to help our students to involve in such actions from their reflection as well as a mentor who uses design thinking to interpret the situation on the spot (Jager, Cardozal & Umana – Timms, 2015). In this regard me and my colleagues teachers play the roles of coach, co-coordinator, supporter, monitor and organizer who are as 'just in time' support for the learners (Sullivan, 2000).

Specific Activities for Creating an Entrepreneurial Learning

Critical self-reflection is the main tool to make students aware about their strengths, weakness, interests, identity, personal theories, values, beliefs and their perception. From the self-critical reflection my students will also be permissible to develop their planning, vision, make decision, balancing and use and manage resources carefully (Rae & Carswell, 2000). This will help to modify their future actions and ultimately leads to the higher level of learning (Cope & Watts, 2000). If they are provided such crisis problem and asked to

plan to manage this crisis with their creative and innovative ideas certainly they solve the problem in different ways. I have such experiences of such critical management solve by my students in a group. To solve such problem students are divided in a groups, they worked in a group and finally present by a group leader. Students involved continuously involved three hours to work, collaborate and discuss with their colleagues, sometimes with us. Lastly they are provided feed-back by the teachers committee. In such condition we teachers also play the role of lecturer, moderator, analyst or mentors and give support to our students at that time.

STEAM education of teaching approach incorporates the ideas of transdisciplinary learning where learners learn through a true blending of the disciplines and learners are solving problem of the real world (Herro, & Quigley, 2017)). In the context of the transdisciplinary teaching disciplines, students become so engaged in solving the problem that they are excited to draw on prior knowledge and learn new concept from the different STEAM disciplines in order to reach a solution (Bush & Cook, 2019) of the problem of real world. Teachers are works together to develop integrated authentic curricula. To develop innovative curricula; they may include how to manage the present crisis of their society facing. Learners are engaged working together to solve real world problem of their social surrounding like climate crisis, global warming, loss of bi-cultural diversity, epidemic and endemic and try to find the common solution of the problem of their surrounding with an active engagement with their peers, society, teachers, etc. To solve a problem teachers and students must synthesize their knowledge of the STEAM disciplines to reach a viable solution of such crisis.

Conclusion

The reimagining of entrepreneurial learning in the 21st century represents both a necessity and an opportunity to create more effective, engaging, and relevant educational experiences for aspiring entrepreneurs. The conceptual framework presented in this article demonstrates that effective entrepreneurial learning must integrate multiple theoretical perspectives while embracing innovative pedagogical approaches that reflect the realities of contemporary business environments. The convergence of experiential learning theory, social learning principles, and constructivist approaches provides a robust foundation for developing educational programs that prepare entrepreneurs for the complex challenges and opportunities of the modern economy. The transformation of entrepreneurial learning from traditional classroom-based instruction to experiential, collaborative, and technology-enhanced approaches requires significant changes in educational institutions. Looking forward, the continued evolution of entrepreneurial learning will be shaped by emerging technologies, changing learner expectations, and the ongoing transformation of business models and market structures. The success of this reimagined approach to entrepreneurial learning will ultimately be measured by its ability to produce entrepreneurs who can navigate

uncertainty, create innovative solutions, and build sustainable ventures that contribute to economic growth and social progress. By embracing the conceptual framework presented in this article, educational institutions and program designers can create learning experiences that truly prepare entrepreneurs for the challenges and opportunities of the 21st century business landscape.

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