Designing Instruction through Context-based Inquiry Learning (CBIL) Model

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Abstract: *Finding ways to engage every learning in meaningful learning has been the goal of constructivist theory of learning. Since the inception of constructivism in education, learning models and instructional designs have always been conscious in promoting active learning and learner-centered learning strategies. This paper proposes a context-based inquiry learning model (CBIL) that will help teachers in designing more meaningful learning experiences and in creating a learner and learning-centered environment for the learners. The CBIL emphasizes the importance of the learner and learning contexts in designing instruction. It is a dynamic learning process, like all constructivist learning models, that puts premium on the prior knowledge and experiences, cultural scripts, and uniqueness that every learner brings in the learning process. This paper discusses the concept of CBIL, describes its instructional procedure, and identifies the benefits of using the model.*

Keywords: *instructional design model; context-based inquiry learning*

Introduction

This paper presents an alternative instructional learning model that could be used by teachers in enhancing the learning experiences of all the learners in basic education. Currently, teachers are facing the challenge of implementing several curriculum reforms, changes and innovations based on the demands of the Fourth Industrial Revolution and due to the influence of globalization in education. There is a need to make instruction relevant to the needs and context of the learners, and instruction should guide the learners in connecting the curriculum to real-life experiences. The importance of connecting the curriculum to the personal, social and cultural context of the learners is also becoming a necessity in the new curriculum. While the current teachers are putting more emphasis on teaching, the revised and enhanced curriculum puts more emphasis on learning. This proposed instructional learning model aims to promote more active learning that is developmentally appropriate and culturally relevant to the learners

This study offers an alternative learning model that is grounded on the learning principles of constructivism. Today's educators seek possible ways on how to effectively engage learners in more meaningful learning experiences that are relevant and responsive to their needs, nature and contexts. From the genesis of experiential learning (Kolb, 1984), inquiry-based learning (Ai, Bhatt, Chevrier, et.al, 2008; Lee, Greene, 2004), context-based learning (Rose, 2012) concept-based learning (Erikson, Lanning and French, 2017), and problem-based learning (Savery, 2006; Duch, Groh & Allen, 2001) pedagogy experts tried to harvest ideas from the success and best practices of these emerging learning approaches to create an innovative and more integrative learning model that fits the mold of 21st century learners and learning. This study attempts to integrate the best practices and principles of context-based learning and inquiry-based learning to form *context-based inquiry learning* models.

The proposed context-based inquiry learning model (CBIL) is a pedagogical approach that relies on the learners' social and personal context, learning environment and the concrete-experience of learning are paramount to the growth and gaining of knowledge. This approach believes that learning is a social activity, and to attain knowledge and everything that learning has to offer, one must have an active role in the whole learning process. Learning CBIL is a social activity where experience, active engagement, relationships, and interactions among the learners and the teacher are ess

CBIL is   based on the constructivist theory that prior-knowledge and experiences are essential in the construction of knowledge. In a way, CBIL supports the view of Rose (2012) that learning is a community activity and the idea of Stigler (1998) about learning as a cultural activity. CBIL weaves the principles of constructivism and learner centered education.

CBIL, Constructivism and Learner-centered Education

First, the CBIL draws its theoretical foundation from constructivism which is a way of comprehending how people learn and create knowledge and it is perhaps the dominant approach for human learning today (Lucas, 2000). A common understanding in

constructivism is a belief that ideas are individually constructed rather than transmitted (Bettencourt, 1993, Hodson, 1998; Martin, 2001), values and culture influence the creation of knowledge (Phillips, 1995), people develop universal forms of knowledge that facilitate their experience of reality (Piaget, 1983), learners construct meaningful learning as results of their experiences with the world (Carale and Campo, 2003; Houtz and Thomas, 1996). According to DeVries and Zan (1994), definitions of constructivist education can be summarized into three words: interest, experimentation and cooperation. Constructivist paradigm strongly proposes that learning should provide learners with experiences that are relevant to their daily life experiences and prior knowledge (Chaille and Britain 2003).

Secondly, CBIL is inspired by the principles and theories of learner-centered education, a promising product of the progressive movement in education (Ornstein and Hunkins, 1993), that considers the knowledge, beliefs, skills, attitudes, interests, and abilities that learners bring into the classroom (Kant, 2004; Curtis and Carter, 1996). It focuses on the concerns, needs, expectations, and the environment of the learners (Dewey, 2001; Gandini, 1997), includes developmentally appropriate curricular and instructional practices for the learners (Curtis and Carter, 1996; NAEYC, 2005), and pays careful attention to the language of the learners as a basis for further learning (Bransford et al., 2000).

Learner-centered education challenges educators to shift paradigms of learning to ones where the learners take control of their own education (Fogarty, 1997), provides children's social and emotional development focusing on the learner's identity, culture, interests, abilities, family life, and the need for independence and development of self-esteem (Curtis and Carter, 1996; NAEYC, 2005; Shor, 1992).

In a nutshell, aligning CBIL with constructivism and learner-centered education involves the following principles:

1. every learner bring various mental models to any learning condition
2. learners construct their own meaning based on their experiences.
3. learners learn new ideas as a result creative and critical inquiry based on what 4.they observed, experienced, and what they have been taught and integrating them into existing knowledge structures
5. Learners are active constructors of knowledge and re-constructors of their own understanding
6. conceptual, cultural knowledge, and prior-experiences of the learners are essential in the learning process.
7. designing learning based on the interest, needs, developmental level of the learners is important.

Teachers start where the learners are and pay attention to the knowledge and beliefs that learners bring to a learning task.

Thirdly, and on a more practical note, CBIL could guide teachers in developing the creative thinking of students. The Programme for International Student Assessment (PISA) 2024, creative thinking assessment measures learner's capacity to engage productively in the generation, evaluation and improvement of ideas that can result in

original and effective solutions, advances in knowledge, and impactful expressions of imagination (OECD 2024).   Creativity could be developed by the learners when they find inspiration from different issues, problems or challenges they encounter. Context provides scaffolding for the learners to experience more meaningful learning. Curiosity as one of the driving forces of creativity could also push for deeper understanding and problem-solving. The CBIL as an alternative learning model could contribute to the development of learners' creative thinking.

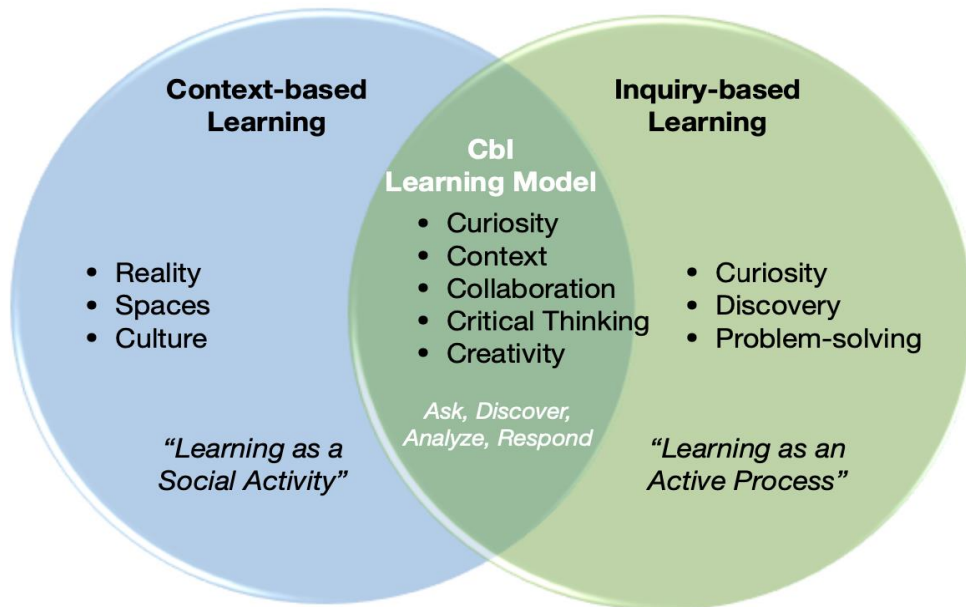**Figure 1**   *Context-based Inquiry Learning Model*

Figure 1 illustrates how the strengths and theoretical underpinnings of context-based instruction and inquiry-based learning are integrated to create the context-based inquiry learning model. CBIL is driven by the following principles drawn from the two learning modalities:

  1.Each learner is naturally curious to know, explore, experience and to learn more about the natural environment. This curiosity allows them to ask questions and find answers.

  2.The social context of the learners and the context of learning provides the necessary experience, background knowledge, connection, and relevance of what they are learning with everyday life.

  3.Collaboration is necessary in organizing learning as a social activity. Collaboration allows interactions, meaningful learning engagement, and active exchange of ideas. It allows the learners to conduct meaningful learning activities and create themselves to become a community of learners.

4.Critical thinking is developed when learners are engaged in an active community of learners and meaningful learning experiences.

5.Creativity in learning produces solutions to problems and innovations for everyday life.

These principles serve as a guide in creating an instructional procedure that is useful in the implementation of CBIL model. Figure 2 identifies   4 simple learning procedures for CBIL.

Figure 2. *CBIL Instructional Procedure*
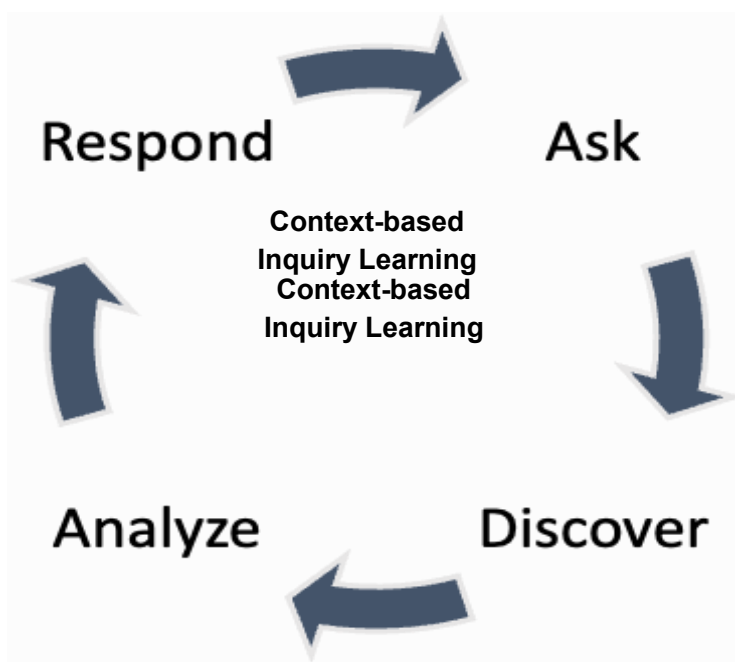
1.**Ask** – this phase of instruction allows the learners to think of issues, problems and challenges that they experience with their families and communities. The learners will identify questions that they want to pursue based on their contexts and needs.

2.**Discover** – this phase of instruction allows every learner to have actual and concrete experiences where they could interact, collaborate and work as a team in planning and implementing projects and experimentation, gather data, experience community immersion, and design other forms of learning activities.

3.**Analyze** – at this phase, the learners will develop critical thinking in analyzing data gathered, discussing alternative ideas and solutions, challenging previous ideas, and evaluating hypotheses. It allows the learners to do critical and deeper reflection

4.**Respond** – the final phase of instruction will allow the learners to apply what they learn, propose solutions, create innovations, and present ideas in a formal gathering like

symposia, conference, and academic fairs, or present ideas creatively using technology.

The teachers could select creative and learner-centered learning strategies and activities in any or in all the phases of instruction. The teacher also takes the role of a facilitator of learning and an expert instructional coach in helping the learners learn more meaningfully. To guide the teachers in using the CBIL model, a curriculum plan template was developed. In the curriculum plan template, the CBIL model could be used in planning for daily or weekly lessons. The theme, performance standards and the learning competencies will derive from the prescribed national curriculum. For each instructional procedure, instead of focusing on teaching tasks, the CBIL model focuses on the learning tasks that every learner must perform and experiences for each lesson.

Subject					
Theme					
Performance Standards					
Learning Competencies					
Learning Tasks					
	Day 1	Day 2	Day 3	Day 4	Day 5
Ask					
Discover					
Analyze					
Respond					

Figure 3. *Curriculum Plan Template for CBIL*

Instead of focusing on a linear lesson plan, the CBIL model provides an alternative instructional plan that is constructivist, learning centered, and learner centered.

Conclusion

The CBIL model was born by integrating the best practices of context-based learning and inquiry learning. It is offered as an alternative instructional design and approach to learning that aims to provide more meaningful learning experiences for the learners in any subject or topics they wish to learn. It considers the context both social and personal that the learners bring into any learning tasks and engages them in active and critical inquiry

that develops their critical and creative thinking. Implementing the CBIL in designing instruction could make teaching and learning more relevant and responsive to the learners. CBIL could be use in the preservice teacher education and in-service teacher training for the implementation of the enhanced K-12 education curriculum and can also be tried in some courses in tertiary education.

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