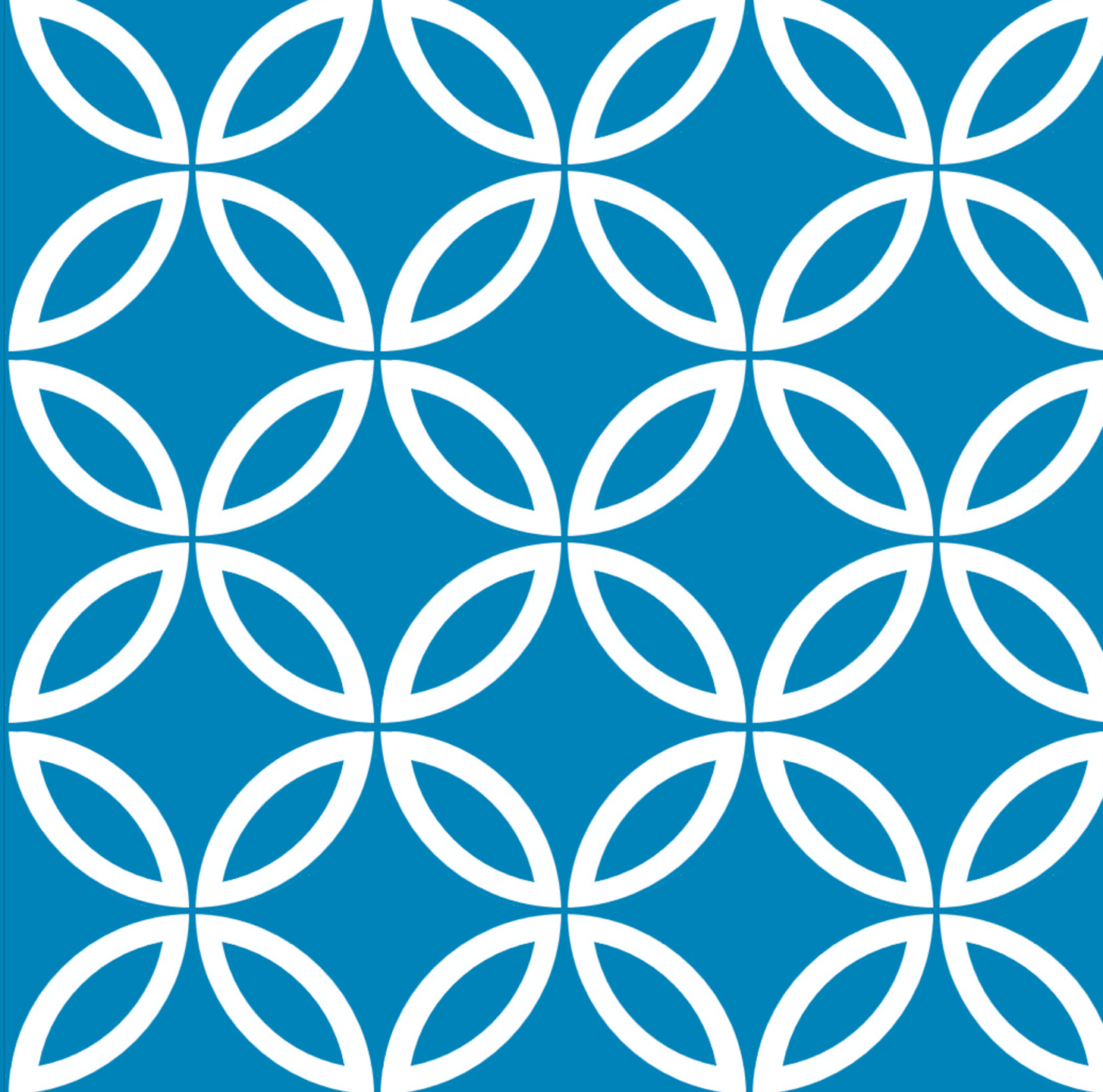
EXPERIENTIAL LEARNING THEORY

Chrissy Rey, Pongos Learning Lab



DEFINITION

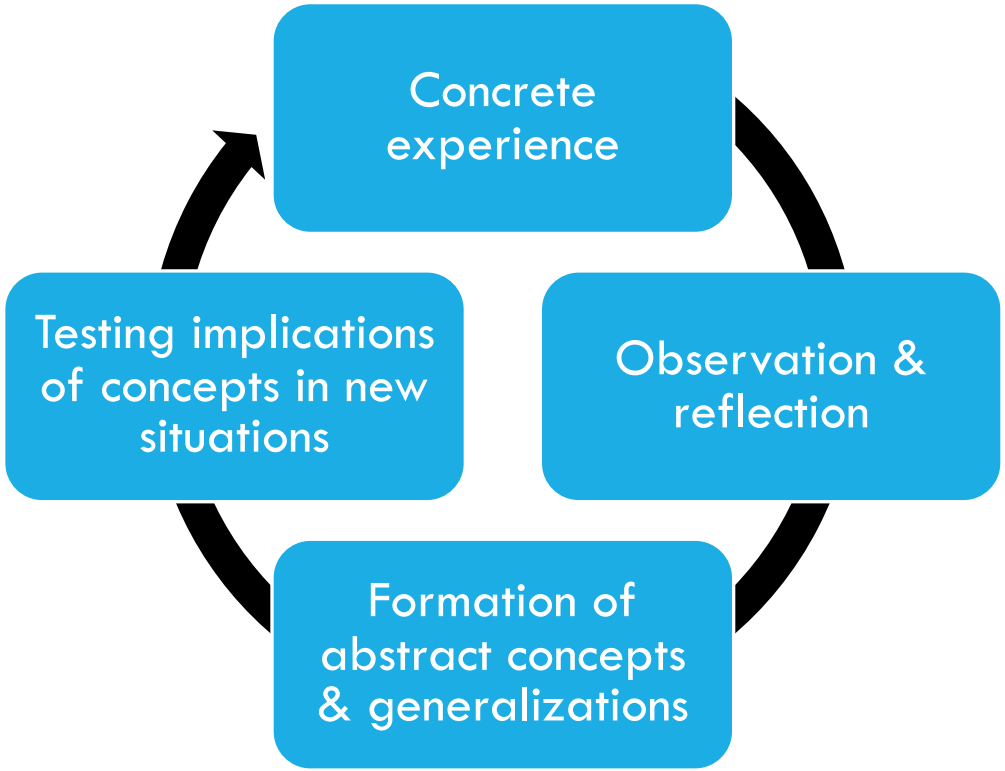
Experiential Learning Theory (ELT) defines learning as the process of creating knowledge through a cycle of experience, reflection, observation, and experimentation (Kolb, 1984). It is learning by doing, thinking about what was done, analyzing and conceptualizing the experience, and then solving new problems based on the experience.

THEORISTS

David A. Kolb and **Ronald Fry** published a detailed description of the Experiential Learning Model (ELM) in 1975. They credited **Kurt Lewin** for his earlier work in group dynamics as the basis for the model. In a later publication (1984), Kolb also credited **John Dewey** and **Jean Piaget** for the influence of their models on ELM.

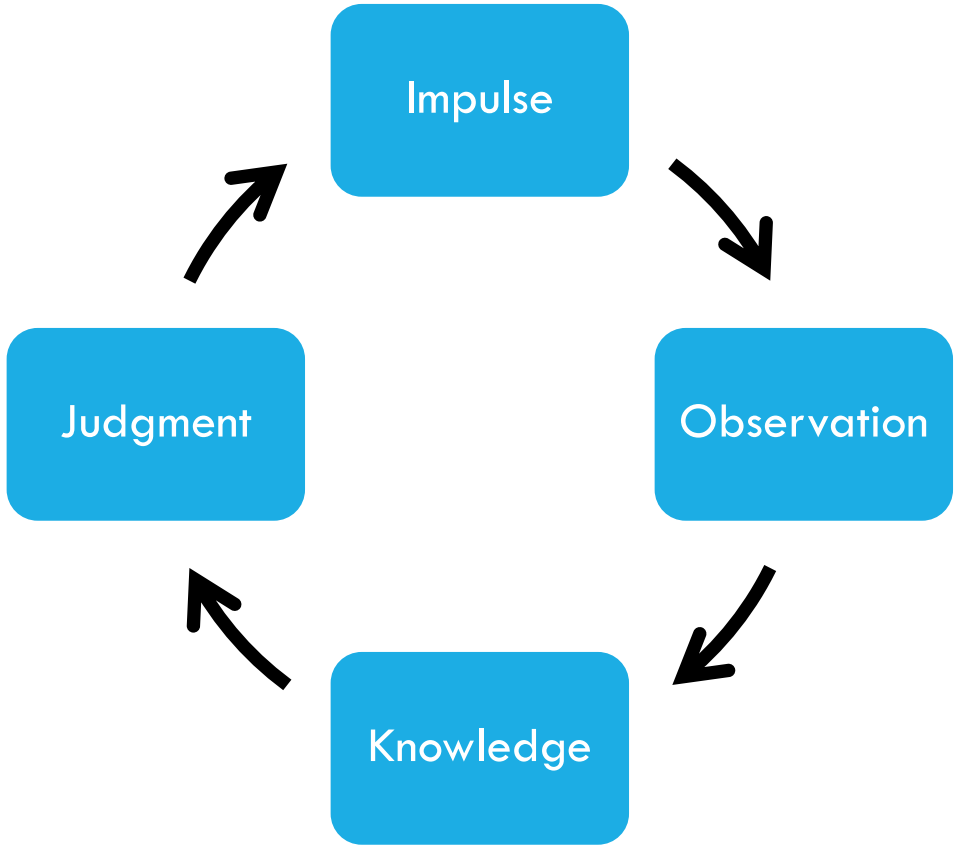
LEWIN: MODEL OF ACTION RESEARCH & LABORATORY TRAINING

Lewin's model is a four-stage cycle. Concrete experience followed by observation and reflection facilitate learning. Data are analyzed and the learner uses conclusions to modify behavior. (Kolb, 1984)



DEWEY: MODEL OF LEARNING

Dewey described learning as a feedback process that transforms the impulse from an experience into a purposeful action through observation, knowledge of what happened during similar situations, and judgment. (Dewey, 1938; Kolb 1984).



PIAGET: MODEL OF LEARNING & COGNITIVE DEVELOPMENT

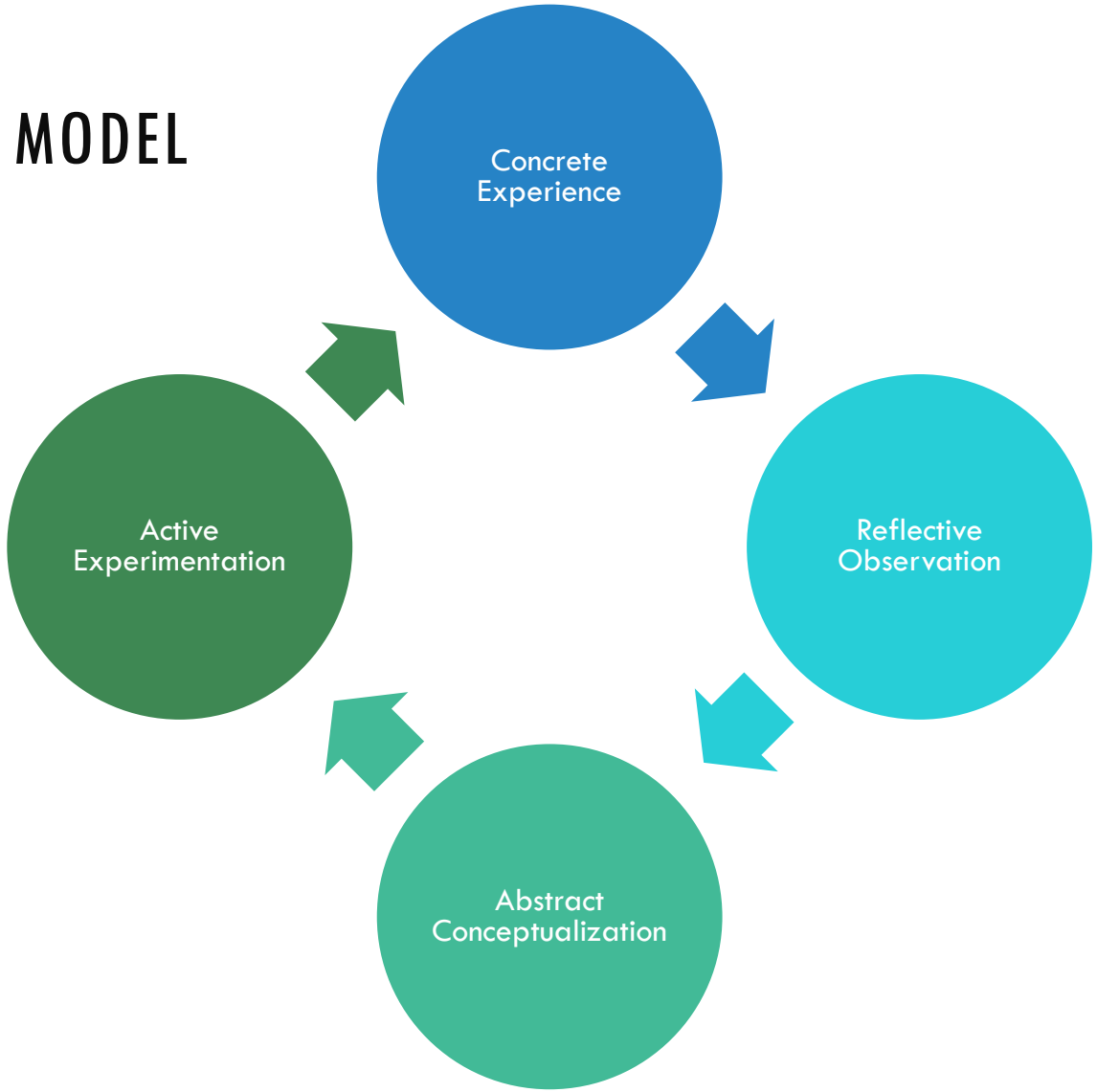
Piaget's model describes the learning process as a cycle of interaction between an individual and the environment. Learning results from a balance between accommodation of concepts and assimilation of events and experiences (Kolb, 1984).

KOLB & FRY: EXPERIENTIAL LEARNING MODEL

Kolb and Fry developed an experiential learning model with four modes:

- **Concrete Experience:** I did something.
- **Reflective Observation:** What did I experience?
- **Abstract Conceptualization:** Why did that happen?
- **Active Experimentation:** What do I do next?

It is an iterative process that can start in any mode (Kolb & Fry, 1975).



KOLB & FRY: LEARNING STYLES

Kolb and Fry (1975) contend that there are four basic learning styles, with abilities that align with the learning process modes.

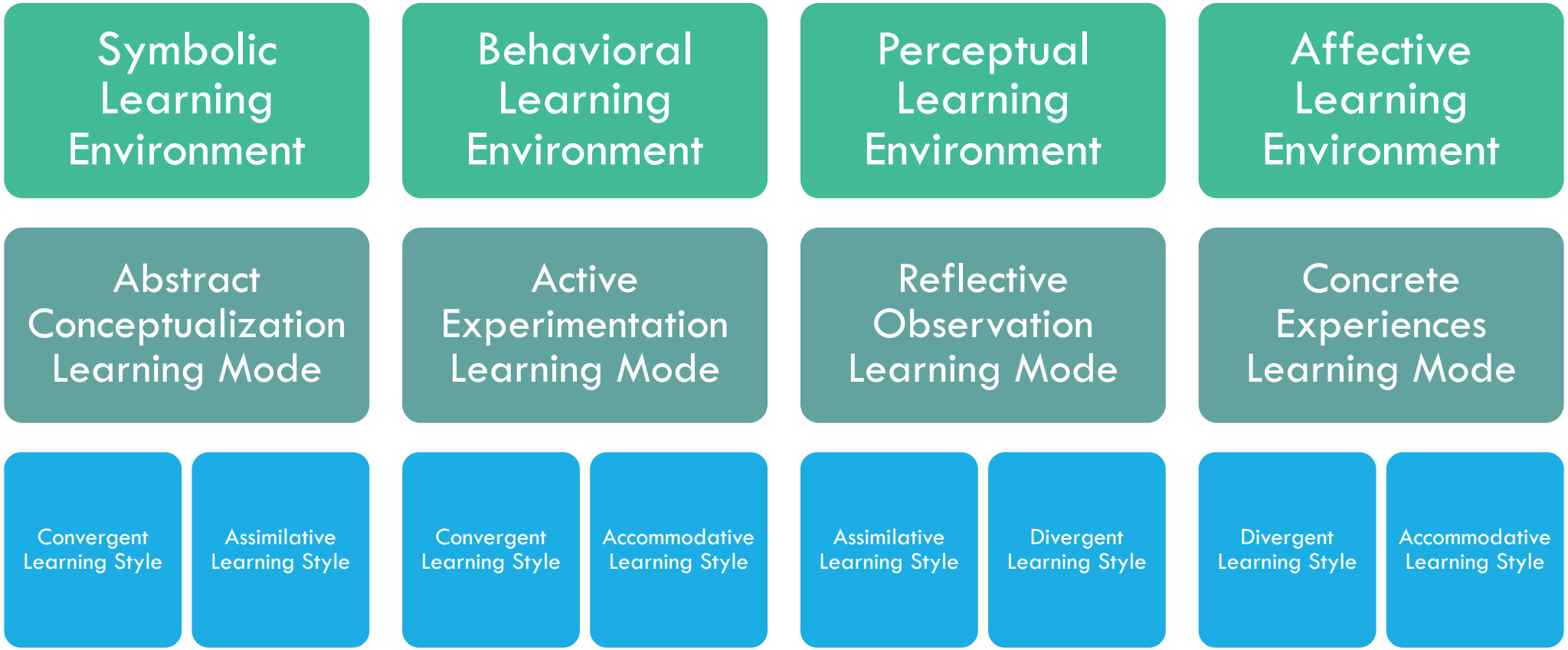
LEARNING STYLE	MODES	STRENGTHS
Convergent	Abstract Conceptualization and Active Experimentation	Practical application of ideas
Divergent	Concrete Experience and Reflective Observation	Imaginative ability
Assimilative	Abstract Conceptualization and Reflective Observation	Ability to create theoretical models
Accommodative	Concrete Experience and Active Experimentation	Doing things

KOLB & FRY: LEARNING ENVIRONMENTS

Kolb and Fry (1975) also describe four learning environments, each supporting a learning mode and its accompanying learning styles. See the next slide for a graphical representation of the relationships.

- The **affective** environment emphasizes concrete experiences. Information is peer-oriented, and the teacher is considered a role model.
- A **symbolic** environment emphasizes the recall of concepts. The teacher is the caretaker of knowledge.
- In a **perceptual** environment, the emphasis is on the process of problem-solving, and not the solution. Reflection is important. The teacher acts as a facilitator.
- The **behavioral** environment emphasizes the application of knowledge or skills. Learners are responsible for learning goals and asking for help.

KOLB & FRY: RELATIONSHIP OF ENVIRONMENTS, MODES, AND STYLES



APPLICATION IN DISTANCE LEARNING

ELT focuses on learning by doing, by providing learners with opportunities to participate in concrete experiences, such as practicing a skill. After participating in the experience, learners must also reflect and conceptualize through activities such as asynchronous discussion, synchronous chat, and homework. Finally, the learner needs an opportunity to experiment by attempting the skill again, using the knowledge gained through reflection and conceptualization.

EXAMPLE: DISTANCE EDUCATION TO TEACH CODING

Concrete Experience: After a brief demonstration via webcast or web conference from the teacher, the learner writes some code using an online code interpreter.

Reflective Observation: What did the code do? The learner can write their observations in a chat or discussion.

Abstract Conceptualization: Why did the code work? Why did it fail? As the learner begins to understand the concepts behind the code they wrote, they can share their thoughts in chat or discussion.

Active Experimentation: How can I improve the code, or make it do something different? The teacher presents a problem for which the learner writes new code.

APPLICATION IN DISTANCE LEARNING: INTERNSHIPS, ETC…

Experiential Learning opportunities are often presented as internships, apprenticeships, work-study programs, student teaching, and service learning. As the COVID-19 pandemic has demonstrated, many of these opportunities can now be accomplished remotely, using synchronous web conferencing tools such as Zoom and Google Meet.

APPLICATION IN DISTANCE LEARNING: SIMULATIONS

Multimedia simulations can provide hands-on experiences where distance or other factors might otherwise prevent it. Upon completion of the concrete experience provided by the simulation, learners will need to have an opportunity to reflect, conceptualize, and experiment. For example:

- **Concrete Experience:** Learner flies an airplane via simulation.
- **Reflective Observation:** Learner thinks about what happened during the flight. What did the airplane do during the simulation? How did I react? Share observations via chat or discussion.
- **Abstract Conceptualization:** Learner understands the concepts behind the flight. Why did the plane fly? Why didn't the plane fly? Share thoughts via chat or discussion.
- **Active Experimentation:** Learner attempts to fly again. What do I do now? How can I change my actions to make the simulated airplane do something different?

APPLICATION IN DISTANCE EDUCATION: LEARNING STYLE

Learning style is another aspect of ELT that can be used in distance education (Richmond & Cummings, 2005). Kolb (1976) developed a Learning Style Inventory (LSI) that can assess learning styles for a learner. Using LSI results, programs can personalize course activities, delivery, evaluation, and teaching styles for each learner based on the most effective learning environment for that learner.

APPLICATION IN DISTANCE EDUCATION: LEARNING ENVIRONMENT

Learning styles relate to learning environments, which can include activities and content best suited for each student (Kolb, 1984; Richmond & Cummings, 2005).

ENVIRONMENT	ACTIVITIES	CONTENT
Affective	Interactive tutorials that demonstrate concepts	Synchronous chat and discussion with both teacher and peers
Symbolic	Quizzes and tests, evaluation of research, and case studies	Lectures that focus on theories or broad concepts
Perceptual	Online reading journal and lecture summaries	Interactive lectures, asynchronous chat and discussion
Behavioral	Structured group projects and homework that applies to theories	Peer interactions guided by the teacher

APPLICATION IN CONTEXT: PONGOS LEARNING LAB

Pongos Learning Lab is creating a distance education program to teach kids in grades K-8 science, technology, engineering, arts, and math (STEAM). We plan to implement elements of experiential learning by doing the following:

- Create courses to include activities that provide hands-on, concrete experiences for children to "learn by doing," such as creating stop-motion animations, producing YouTube videos, coding games, and planning science experiments.
- Use synchronous and asynchronous means for learners to share their observations and conceptualizations.
- Present problems for learners to solve and allow them to experiment.
- Use simulations for some topics.
- Develop versions of each course to effectively address the appropriate learning environment for each learner.

REFERENCES

Kolb, D. A. (1976). Learning-Style Inventory, Boston, MA: McBer and Company.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall.

Kolb. D. A. and Fry, R. (1975) 'Toward an applied theory of experiential learning;, in C. Cooper (ed.) *Theories of Group Process*, London: John Wiley.

Richmond, A. and Cummings, R. (2005). Implementing Kolb's Learning Styles into Online Distance Education. Int J Instruct Technol Dist Learn. 1.