Designing Rational and Emotional Learning Experiences via the Learning Experience Canvas (LXC)

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Rational Design

When designing learning experiences, instructional designers should engage learners with designs that balance rational and emotional experiences. The Learning Experience Canvas (LXC) is a process model that designers can use individually, with a team, and/or with stakeholders to gather and document learning experience design ideas. The designer can then turn those rational and emotional ideas into one or more "fuzzy visions," which is a designer's preliminary vision of the instructional content, methods, media, and sequencing that learners might experience. The LXC aims to deliver a learning experience high in effectiveness, efficiency, and appeal.

Introduction

This article proposes an improvement to the Instructional Theory Framework (ITF)[1] (Honebein & Reigeluth 2020, 2021, 2023; Reigeluth & Carr-Chellman, 2009) that guides instructional designers in how to accommodate rational and emotional experiences when designing a learning experience. As instructional design is a linking science, this article incorporates "multiple traditions" (Jahnke et al., 2022) from a wide variety of domains, such as instructional design, marketing, imagineering, happiness, complexity, user-centered design, human performance technology, and business analysis, to name a few.

Eight Criteria that Characterize Good Learning Experience

The early work that contributed to the shift in the field toward learning experience design (LXD) occurred in the 1990's constructivist revolution. Bednar et al. (1992) and Duffy and Jonassen (1992) proposed that "understanding is indexed by experience" (p. 88), which involves both physical contexts and cognitive/physical tasks. Back then, learning

experiences were known as "constructivist learning environments" (Honebein et al., 1993, p. 89), which embodied instructional ideas such as authentic activities, multiple perspectives, complexity, and context, as well as the "Seven Goals"[2] for constructivist learning environments (Cunningham et al., 1993; Honebein, 1996; Knuth & Cunningham, 1993). Carr (1997) and Carr-Chellman et al., (1998) added the idea of user research (referred to today as user experience design). Now 30 years later, Jahnke et al. (2022), Grey (2020), and others have recognized these elements as key constructs for LXD.

Peter C. Honebein and Darryl L. Sink began using the term "learning experience" commercially in 2005 (Darryl L. Sink and Associates, Inc. and Learning Tree International, 2008). Our client, Learning Tree International, asked us to reimagine a series of mostly lecture-oriented business management courses. Employing constructivist philosophy mixed with user experience (UX) principles, the result was an International Society for Performance Improvement (ISPI) award-winning learning experience called RealityPlus™. This learning experience focused on "attendees experience in the classroom," projects that combine "one part fantasy, two parts technical possibility, and a large dose of reality," and "creating effective, efficient, and appealing learning experiences" (p. 1). The Learning Tree project and Honebein's later work with Richard Goldsworthy and the Academic Edge, Inc. (Honebein & Goldsworthy, 2009, 2012) hatched many of the ideas found in this paper.

How does a designer know that they have created a learning experience? In our work with Learning Tree, we asked customers, and there was only one question to ask: Will you recommend this (product, service, learning experience) to another person? (Reichheld, 2003). We agreed with that idea, and, over time, we included a few other Likert-scale items inspired by theory, observation, and experience to differentiate a commodity course from a learning experience (Figure 1).

Figure 1

The Learning Experience Scale Aims to Differentiate a Commodity Course From a Learning Experience

 This table differentiates a commodity course from a learning experience using a six-point scale. Rater rates eight criteria. Score of 0, 1, and 2 suggest a commodity course. 4, 5, 6 illustrate a learning experience. There are eight criteria

This list is grounded in three experiential theoretical constructs: flow (Csikszentmihalyi, 1990, 1997), transmergence (Honebein, 2009), and loyalty (Reichheld, 2003). Items 1 through 5 are characteristics that indicate a learner has likely experienced a flow state. A flow state is a mental state that occurs in an activity where time flies by, self-consciousness decreases, concentration and focus increases, and happiness abounds. Vann and Tawfik (2020) suggest that incorporating flow principles in a learning experience helps avoid learner boredom and frustration.

Items 6 and 7 represent ideas related to complexity theory (Jahnke et al., 2022), interpreted as a concept called transmergence (Honebein, 2009). Figure 2 illustrates the difference between an expository learning experience and a transmergent learning experience. In an expository learning experience, the instructor sets the agenda and tasks for learning, where learners work independently. A transmergent experience, on the other hand, describes a dynamic learning experience that leverages the principles of a neural network, a system of inputs and outputs that models the brain. Through this neural network, the learning experience has the potential to transform a learner in a positive way. Transform, in this context, represents a learner's self-directed change that achieves an aspiration, such as a new skill (Pine & Gilmore, 1999). Emergence, in this context, is the generation of new knowledge and ideas created by the learner. Where flow is in the moment, transmergence is after the moment, representing a worthwhile change or outcome in the learner.

Figure 2

A Comparison of Expository and Transmergent Learning Experiences


Graphic illustrates expository course, where learners work independently, and compares it to a transmergent course, where learners and instructors work collaboratively and dynamically.

Note. An expository experience is very instructor-centered and independent, with each student completing a task specified by the instructor. A transmergent experience is the opposite. A student (or students operating as a group) can leverage the resources of other students or the instructor to deliver a result, typically an inspirational goal.

Item 8 represents loyalty, which is a customer satisfaction construct that designers can repurpose for a learning experience. It is operationalized as the Net Promoter Score (Reichheld, 2003): "I will recommend this learning experience to a colleague."

The scale presented here has been informally vetted through use in practice contexts but has not been formally validated. The scale's primary purpose at this time is only for formative evaluation.

Leveraging Rational and Emotional Experiences

Learning experience designers should seek balance in their designs in terms of how they utilize rational and emotional experiences. Norman (1988, 2004) introduced many designers to foundational ideas about rational and emotional design in the books The Design of

Everyday Things and Emotional Design. Honebein and Cammarano (2009) (Figure 3), suggested that rational and emotional experiences must work together to deliver delight to customers, which, in an instructional theory context, is represented by a balance of effectiveness, efficiency, and appeal (Honebein & Honebein, 2015; Honebein & Reigeluth, 2020, 2021, 2023; Reigeluth & Carr-Chellman, 2009). If one of the two factors (rational or emotional) is hindered, it may result in an experience that is dysfunctional (high appeal, low effectiveness, low efficiency), dissatisfied (low appeal, low efficiency, low effectiveness), or directed (low appeal, high efficiency, high effectiveness).

Here are some examples of the four experience types. A learner is delighted when a learning experience evokes feelings of joy and pleasure. These emotions are often associated with a flow state. Our design experience with adult learners suggests that instructional methods such as authentic tasks (Reigeluth & Keller, 2009) activate learner motivation and delight.

Designers can identify a dysfunctional experience when a learning experience delivers a feel-good, charismatic presentation that does not deliver learners any kind of useful or actionable skills. In other words, learners master nothing but they really like the learning experience. Typically, these kinds of learning experiences reveal themselves as affective sales presentations that employ instructional methods such as expository teaching (Reigeluth & Keller, 2009).

A learner experiences dissatisfaction when a learning experience lacks effectiveness, efficiency, and appeal qualities. The typical causes for this situation include poor instructional design skills, the absence of formative evaluation, and inappropriate instructional methods.

A directed experience enables performance, which includes effectiveness and efficiency, but sacrifices appeal. Learners are able to master the instructional objective independently, but there is not a lot of fun or enjoyment for the learner along the way. The instructional method of drill-and-practice (Reigeluth & Keller, 2009) illustrates a directed-type of learning experience.

Designers should avoid designs that increase the likelihood of introducing the three types of negative outcomes because these types of outcomes increase negative learner emotions about the learning experience.

Figure 3

The Memorable Experience Model

 Two by two table that illustrates elements of rational experiences and emotional experiences. The four boxes, starting at the upper left and moving clockwise, are dysfunctional, delighted, directed, and dissatisfied.

People are wired for both rational and emotional experiences (McLean, 1990; Ornstein, 1992). The new brain, featuring the cerebral cortex, controls rational thinking and reasoning skills, such as math, reading, and problem solving. The old brain, consisting of the amygdala, hypothalamus, and hippocampus, manages emotion and instinct. This controls flight or fight and pain or pleasure responses. Plutchick's (1980) classification of human emotion describes three states: positive (joy), negative (anger, fear, sadness), and neutral (curiosity, surprise, acceptance). To guide learning experience designers to deliver a delighted experience, Honebein and Cammarano (2005) and Pine and Gilmore (1999) developed models for customer experience (CX) design. Instructional designers can apply these models to LXD.

Honebein and Cammarano's (2005) contribution to CX design was the Coproduction Experience Model (Figure 4), which outlined a balanced mixture of four rational experience elements: vision, access, incentive, and expertise. Utility drives rational experiences (Nielsen, 2012; Pagonis, 2021; Rachels, 2009), which reflects the functional usefulness of an experience. This thinking incorporates such concepts as ethics, self-interest, and preference-maximization, "which all point to an experience in which people can achieve what they calculate to be best" (Honebein & Cammarano, 2005, p. 123).

Figure 4

Honebein and Cammarano's Coproduction Experience Model

 This figure illustrates a continuous circle of the four elements of the coproduction experience model. Starting at the upper left and moving clockwise, the elements are vision, access, incentive, and expertise.

Note. The four experience elements are systemic, as they all interact and condition the entire experience.

Vision includes such constructs as goals, expectations, plans, and feedback, which, from an instructional design perspective, represent instructional objectives (Mager, 1984). Access includes policies, procedures, people, tools, interfaces, information, and nuances (the latter being sensory cues such as aroma, lighting, tastes, and music (Gobé, 2001). Incentive includes rewards, punishments, negative reinforcement, and removal of punishing conditions. Expertise includes, from an instructional perspective, basic tools, embedded tools, premium tools, problem tools, and support tools. The four experience elements are systemic, as they all interact and condition the entire experience.

Pine and Gilmore's (1999) contribution was the Experience Realms model, which focuses on emotional experiences. As shown in Figure 5, on the outside of the model are two sets of continuous engagement variables. The horizontal axis represents passive-to-active participation. The passive-participation extreme is when participants don't influence the performance at all; they are, for example, observers of a lecture. The active-participation extreme is when participants personally and strongly affect the performance; they are, for example, doers participating in an instructional game. The vertical axis represents

absorption and immersion. Pure absorption is when an experience is manipulated with one's mind (for example, the content of a lecture). Pure immersion is when one engages completely in the experience (for example, a fully immersive virtual gaming zone (Atria Admissions Team, 2022).

Figure 5

Pine and Gilmore's Four Realms of Emotional Experiences

 This figure illustrates a continuous circle of the four elements of the experience realms model. Starting at the upper left and moving clockwise, the elements are entertaining, educational, escapist, and esthetic.

Note. The Experience Realms model is also systemic, interacting and conditioning the entire experience.

These variables activate a mixture of four emotional experience realms: entertaining, educational, escapist, and esthetic. Thus, being passively absorbed represents a state whereby one is passively entertained. Actively absorbed represents an active educational state in which an active learner pursues knowledge rather than having it poured into them – see the Nürnberg Funnel (Carrol, 1990). Actively immersed represents an escapist state, which is best described as being like in an amusement park or a flight simulator. Passively immersed represents an esthetic state, such as observing the grandeur of Yosemite National Park or visiting an art gallery. Similar to the Coproduction Experience Model's four elements, the Experience Realms model's four realms are systemic as well, interacting and conditioning the entire experience.

Thus, we propose that a good learning experience embraces and balances both rational and emotional experiences. Rational experiences blend vision, access, incentive, and expertise qualities. Emotional experiences blend entertainment, education, escapist, and esthetic qualities. When brought together, these eight experience types enable designers to create learning experiences in which learners experience flow, transmergence, and loyalty. When combined with the eight criteria, we call the entire structure the 8-by-8 Learning Experience Model (Figure 6).

Figure 6

The 8-by-8 Learning Experience Model Represents Learning Experience Outcome Criteria and Rational/Emotional Experience Elements

 The 8-by-8 learning experience model chart summarizes the previous models, providing their classifications: criteria, rational, emotional, and experience.

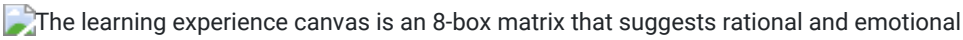
The Learning Experience Canvas

Conceived by Peter Honebein and first taught at a Training Magazine event in 2013, The Learning Experience Canvas™ (LXC) (see Figure 7) is a template that enables designers and their stakeholders to generate a vision for a given learning experience. Osterwalder and Pigneur's (2010) Business Model Canvas, a template for developing and documenting business models, inspired the LXC.

The LXC focuses on constructivist oriented (Honebein et al., 1993) rational and emotional design factors that assume situational variables are already known to the designer (explained shortly near Figure 8).

Figure 7

An Example of The Learning Experience Canvas™ (LXC; Honebein, 2013)


The learning experience canvas is an 8-box matrix that suggests rational and emotional questions that help a designer plan a learning experience.

Note. The LXC focuses designers to think about how to incorporate rational and emotional experience into their learning experience. It assumes that designers have already determined situational variables.

As shown in Figure 7, two sides divide the LXC. The left side helps a designer visualize, think about, and design learning experience elements that are associated with rationality. The right side helps a designer visualize, think about, and design the learning experience elements associated with emotion. The building blocks within and spanning each side are containers for design ideas.

Before a designer begins working with the LXC, the designer and the participants the designer has recruited should have a good understanding of the situation (Gronseth, 2022; Honebein & Reigeluth, 2020, 2021, 2023; Reigeluth & Carr-Chellman, 2009) (Figure 8). Situation refers to the conditions and values that a designer elicits from stakeholders that "are useful for deciding when and when not to use a particular instructional method [or medium]" (Reigeluth & Carr-Chellman, 2009, p. 21). Kinds of situational variables include content, learner, goals, and priorities. The LXC process itself is a way to further identify and refine situational variables that a designer uses to develop a "fuzzy vision"[3] (Reigeluth & An, 2021, p. 14). The LXC design process has seven steps, which we illustrate in the following sections using a real-life business need involving electric vehicles.

Figure 8

The Upper "IF" Section of the ITF

 A flow chart that begins with Situation, branches then to two analysis tasks, Conditions and Values, then ends with the specification of instructional objectives.

Note. The Upper "IF" section of the ITF represents the collection and synthesis of situational variables, which include conditions (matters of fact) and values (matters of opinion). Conditions and values then influence the nature of instructional objectives. Conditions tend to represent more rational variables, where Values tend to represent more emotional variables.

The Seven Steps of the LXC Design Process

Step 1. Orient Participants

Participants enter a large room and are greeted by a facilitator (designer). Projected on a whiteboard is a blank LXC (Figure 9). To the left of the LXC is a set of flipcharts or posters summarizing the situation, specifically the need, the context, and the customer/stakeholder requirements. To the right of the LXC is another set of flipcharts or posters that introduce the audience personas – the fictional people who represent the characteristics of the target audience.

Figure 9

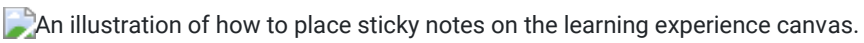
The Starting Elements for an LXC Design Session Include Situational Variables and a Blank LXC

 A blank learning experience canvas, with situational variables presented on the left, and learner personas presented on the right.

The facilitator of the design session begins with an introduction and describes the goal for the session: In this example, the goal is: Develop a learning experience for electric vehicle customer service. The facilitator then reviews the situation and introduces the group to the learner personas.[4] The personas are a trio of people who work in a utility company's customer service call center. Jon Lee is a supervisor, RaShaune Banks is a veteran with 10 years' experience, and Sandra Davis is a new hire. To reinforce the connection of the personas and their requirements to the LXC, the facilitator creates a sticky note that reads, "CSRs and Supervisors" and puts it in the Access box (as it represents "people") (Figure 10). During the review, the facilitator answers questions about the situation and target audience personas and makes appropriate modifications to ensure the group understands the situation and are aligned with what it represents.

Figure 10

We Call Adding Data to the LXC "Painting the Canvas"


An illustration of how to place sticky notes on the learning experience canvas.

Note. The data added in this example is "rational" audience data, representing customer service representatives and supervisors.

With the participants aligned with the situation, the facilitator points to the Vision box on the LXC. The facilitator explains that the group will start by generating ideas that address four questions. These questions are the same as shown in the Figure 7 job aid that the designer distributed to participants.

1. What is the key goal for your learners? What is their mission?

2. What expectations do you have for your learners?

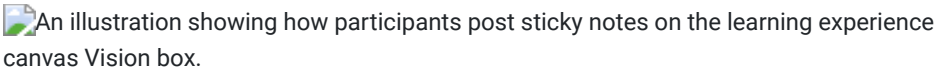
3. What is the plan for accomplishing the learning experience's goal?

4. What key feedback will learners receive during the learning experience?

The facilitator directs participants to write their ideas on sticky notes, explaining that it is best if one writes only one idea per sticky note. The facilitator also asks participants to label their sticky note with the appropriate topic: goal, expectation, plan, or feedback. To demonstrate what the facilitator is expecting, the facilitator shows a learning experience from another project (Figure 11).

Figure 11

An Example of Data in the Vision Box


An illustration showing how participants post sticky notes on the learning experience canvas Vision box.

Note. The facilitator models the desired data for the Vision box by showing participants an example of another learning experience, where the audience was truck drivers.

Step 2. Generate Ideas

The facilitator directs participants to get started. Participants write their ideas (answers to the four Vision questions) on sticky notes, and then stick them in the Vision box. The

facilitator also has the option of generating ideas as well. It shouldn't take more than five minutes to generate a good set of ideas. The LXC should now look like Figure 12.

Figure 12

An Example Shows Participants Generating Ideas for the Vision Box

 Graphic showing sticky notes being added to the learning experience canvas Vision box.

Note. Ideas for each of the LXC boxes are guided by the LXC's questions (shown in Figure 7).

Step 3. Synthesize and Elaborate Ideas

While the facilitator could move on to generating ideas for another box, the facilitator does not. Instead, the facilitator invites participants up to the LXC to discuss what ideas have been painted into the box. First, the participants visually organize the ideas by affinity mapping[5]: goal, expectations, plans, feedback. Then the facilitator asks the participants to "yes, and..." the ideas, starting with the goals.

What is "yes, and..."? It is a brainstorming method associated with appreciative inquiry's positive principle idea (Mishra and Bhatnagar, 2012). For example, "Yes, I like that CSRs are listed as the target audience in the goal." Then the group builds off of that appreciation to elaborate the idea: "And, I think we should add CSR supervisors as well, since they are one of the personas that were identified."

The "yes, and..." direction is very important. In design situations, participants tend to be negative, along the lines of, "yes, but..." (also called skeet shooting), which is demotivating. The "yes, and..." alternative represents beach balling, where the group tries to keep ideas flowing and up in the air.

Step 4. Wash, Rinse, Repeat

After the facilitator and participants get through synthesizing and elaborating ideas in the Vision box, the facilitator moves the group to another box. Typically, that would be the Role box. The choice is up to the designer. The starting question in the Role box is, "What functional, authentic, possessive, or fantasy roles might people in your learning experience play?" The facilitator then directs the participants to generate ideas for the Role box. The result looks something like this (Figure 13).

Figure 13

This Example Illustrates Adding Ideas to the Emotional "Role" Box

 Graphic showing sticky notes being added to the learning experience canvas Role box.

Note. Roles (or role play) (Kirk & Jay, 2018; Reigeluth & Keller, 2009) provide useful memorable signposts for learners. For example, in 1969, Honebein played the role of Neil Armstrong in his kindergarten's reenactment of the first lunar landing. Another student played the role of flight surgeon. She made sure Neil Armstrong was healthy before boarding Apollo 11, and then again when he returned to earth. After 55 years, Honebein still remembers this experience (and the flight surgeon, whose name was Karen).

Step 5. Freeform

At some point the LXC will have enough ideas for the facilitator to either 1) continue with the wash, rinse, repeat process, or 2) freeform. Freeform is a type of improvisation where the facilitator takes ideas generated by the participants in one or more boxes and uses those ideas to generate ideas for other boxes in the LXC.

Using the content thus far generated, the facilitator improvises on the idea that the learner should experience the role of an Electric Vehicle Owner. First, the facilitator asks participants why the learner should play that role. A participant responds:

> *Perhaps because customers will have more trust in a CSR's recommendations if they*
> *know the CSR has actually experienced owning an electric vehicle, even if it is just for*
> *30 minutes. Remember the requirement we gathered from the discussion board analysis:*
> *"Increase the trustworthiness of the CSR's recommendation."*

The response pleases the facilitator, since the participant used requirements from the situation analysis to defend the design. The facilitator then asks the participants, "If learners are going to play the role of an electric vehicle owner, what will learners need to play that role?" The participants start suggesting ideas (which the facilitator asks them to write on a sticky note), and then posts the notes in the appropriate box, as shown in Figure 14.

Figure 14

An Example of Data in the Access Box

 Graphic showing sticky notes being added to the learning experience canvas Access box.

Note. Access box may contain policies, procedures, people, tools, interfaces, information, and nuance. In this example, participants have added ideas associated with people and tools, which are rational-experience elements.

Step 6. Take a Museum Walk

The facilitator continues to use the wash, rinse, repeat and freeform methods until 1) there is a reasonable set of ideas in all the LXC's boxes, 2) participants have no more ideas, or 3) time runs out. Given the participants' high motivation, the LXC has a reasonable set of ideas in all the boxes, as shown in Figure 15. The facilitator gives participants a short break.

Figure 15

A Representation of What a Completed "Painted" LXC Might Look Like

 Graphic showing a completed learning experience canvas, with lots of sticky notes in all eight boxes.

When the participants return from their break, the facilitator invites them to take a museum walk. The facilitator explains that a museum walk is a reflection activity in which participants explore the entire LXC with a critical eye. Participants read the ideas. Based upon what they read, they may add, re-organize, or even re-write an idea. Participants can discuss, debate, and/or explore "what-if's." The facilitator guides this to a point where participants begin generating the narrative of the learning experience from the point of view of the learner. What will learners experience first? When in the sequence will learners actually drive an electric vehicle and charge it? What kind of role-plays will learners experience? Ultimately, the group will reach a point where it agrees that the LXC is good enough, and that the prototype narratives have promise, at which point painting the LXC session ends.

Step 7. Wrap It Up

The facilitator thanks the participants and summarizes the next steps in the design process. The facilitator takes digital photographs of the LXC and posts them in a shared drive accessible to participants. The facilitator creates an electronic version of the LXC from the pictures and distributes it to participants – making sure participants understand that it is a living document. If there are additional ideas, the facilitator or participants add them to the LXC. Then, the facilitator can further develop the learner narrative (which represents in words and/or pictures what the learner's journey might look like) for the learning experience.

Cleaning Up the LXC

If the LXC session goes well, the LXC will have numerous ideas in the various boxes. This is good for the designer. However, the LXC cannot remain a sticky notes mess. The designer must resolve redundancies, prioritize ideas, prune each box, and synthesize so only the most important ideas remain. This is not to say the designer gets rid of all the pruned ideas – a good analyst should always keep the foundational data. But it is difficult for a designer to explain to clients, colleagues, and managers, especially those in decision-making roles, a

LXC with hundreds of sticky notes. The designer must whittle it down to communicate the main features of the learning experience.

The narrative is one type of artifact. Another is a digital representation of the LXC. To create this, designers use software tools such as Visio™, PowerPoint™, Miro (https://miro.com/), and others to create a template representing the LXC. As the designer reviews the raw data from photographs or from the actual LXC itself, the designer captures the essence of the ideas on the digital canvas.

Here is an example of how to do this. Remember the idea about the learner's role as an electric vehicle owner, which spawned numerous ideas about what learners needed to do to play that role? The designer can synthesize all of those ideas into two main ideas. An example is shown in Figure 16.

Figure 16

An Example of How the Designer Can Take Raw Data (Left Panel) and Synthesize it Into a More Concise Presentation of the Main Ideas (Right Panel)

 Graphic showing before and after sticky notes in the Access box that illustrates how to synthesize ideas.

Another way of synthesizing ideas is visually. Let pictures with words do the talking. Figure 17 shows an example. Pictures with words are better for illustrating and communicating the ideas for a LXC design. In fact, the whole LXC could be a collection of pictures with words.

Figure 17

This Shows an Alternative Synthesis, Where the Data in the Left Panel are Represented in Graphical Form in the Right Panel, Which the Design Can Repurpose as a Storyboard

 Graphic showing before and after sticky notes in the Access box that illustrates how represent ideas using pictures and images.

After completing the clean-up process, the LXC could look like the one shown in Figure 18.

Figure 18

The Data From All LXC Boxes Synthesized Back Into a Clean LXC, Suitable for Sharing With Participants, Clients, Colleagues, and Managers

 A completed learning experience canvas that has synthesized ideas in each of the canvas's eight boxes.

There are several interesting design details in this LXC that align with the 8-by-8 Learning Experience Model. The role of Electric Vehicle Owner (emotional: escapism) was a key catalyst for a number of other ideas. This activity enabled CSRs to empathize with customers, in that they both shared the pleasures and excitement of driving an EV. Because CSRs had to recommend to customers a "lowest cost" electric rate (there were three to choose from) to charge an EV (rational: vision), customers needed to trust the CSR from the beginning. The shared experience of driving an EV was the focal point for that trust, so it became a key part of the plan (see the Vision box) and a key part of the tools the learning experience needed to conduct the activity (see the Access and Nuances boxes).

Providing EV services to customers was new for this organization. Thus, the desired relationship recipe was to engage customers as collaborators and co-designers. This was operationalized through the expectation that "CSR's will help refine how to talk with EV customers" (see the Vision box). Thus, in the roleplay activities (emotional: escapism/educational), the design provides ample opportunity to experiment and explore ways of communicating with customers, with debriefing to capture good practices (rational: expertise).

Although being assigned to the electric vehicle project was incentive enough for CSRs, the organization recently introduced new pay grades for employees linked to acquisition of new skills and competencies. Thus, the primary external reward for completing the EV training was that it counted toward earning a promotion to the next pay grade level (rational: incentive).

The challenge for designing an LXC like this one is ideating methods that entertain learners without being too gratuitous or contrived. However, participants generated some interesting ideas by freeforming off other ideas in the LXC. Based on the role of EV Owner and the customer empathy that role desired to build, the idea to have man-on-the-street interviews with EV owners (emotional: entertaining) came into being. As it turned out, CSRs had never met a real customer who owned an EV. The interviews gave them that opportunity. This also led to including recordings of calls with EV customers (and untrained CSRs) (emotional: entertaining) to better understand what it felt like to stand in the customer's shoes.

The LXC is a flexible construct. Up until now the authors have represented the LXC as a single, monolithic design of an entire learning experience. However, a designer might also use multiple LXC's, which could represent chapters, modules, units, and/or instructional objectives. Thus, as shown in Figure 19, a designer can create multiple modular LXC's, similar to a storyboard, to capture smaller parts of the design.

Figure 19

Monolithic Versus Modular Canvases

 Graphic illustrating one big monolithic canvas compared to four modular canvases.

Note. The LXC can be monolithic or modular, depending on the size and scope of the designed learning experience.

Ultimately, the LXC's usefulness, in whatever form, informs downstream design tasks. This is when the Methods and Media part of the ITF comes into play (Figure 20).

Figure 20

The Lower "THEN" Section of the ITF


A flowchart showing how the designer will clean up the mess by recommending instructional methods, media, and management methods, which lead to the learning experience.

Note. Data from the LXC informs the selection of instructional methods, media, and management methods, which ultimately results in a functional learning experience.

As shown in Figure 21, the LXC's data informs detailed personas and a swim-lane-style[6] linear blueprint to establish the learning experience's content sequencing and timing. The designer may then push the linear blueprint to more detailed hierarchical blueprints, narratives, storyboards, or prototypes. The designer can then refine and test the elements via co-design activities (which involves content experts, instructors, and/or learners) and user testing (Carr, 1997; Durall et al., 2020; Honebein & Cammarano, 2005; Malinverni et al., 2016).

Figure 21

This Diagram Illustrates the Flow of LXC Data to Other Design Elements and Activities


A process diagram that illustrates how the learning experience canvas data can inform personas, linear design blueprints, hierarchical blueprints, narratives, storyboards, and prototypes.

Note. The data enable designers to improve personas and build linear and hierarchical blueprints, narratives, storyboards, and prototypes that designers can refine via co-design and user testing.

Co-design involves designers working collaboratively with stakeholders and users (funders, colleagues, learners, subject-matters experts, technical specialists, and so on) to contribute to the design of a learning experience. The key benefit of co-design is the faster adoption of possible design solutions. Through the co-design process, groups can review, revise, and improve the variety of design artifacts (Figure 21) generated by members of the group. When promising ideas emerge, the group can recruit members of the target audience, who then user-test prototypes. The data that the group collects from these user tests then guide design decisions and/or further design iterations.

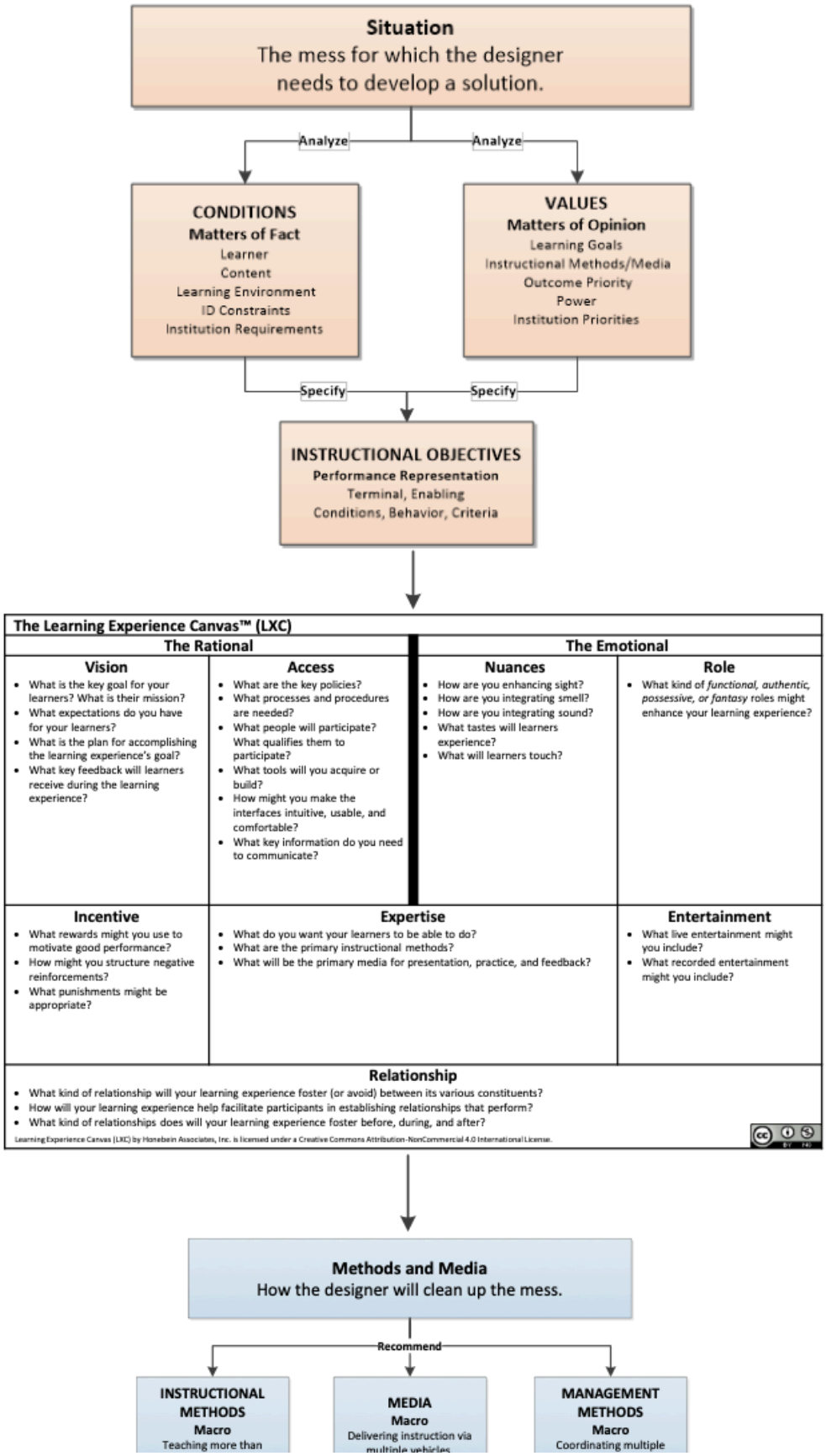
Conclusion

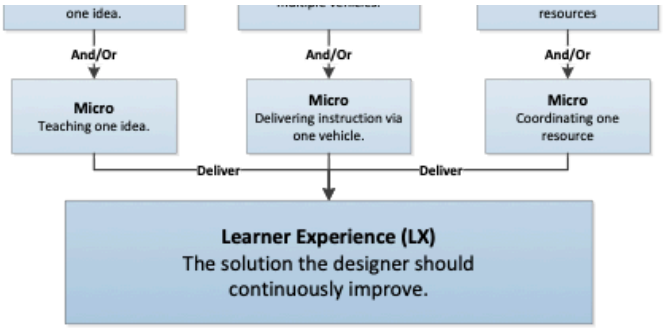
This article introduced the LXC, a learning experience design model that is compatible with the ITF. By "plugging-in" the LXC between the IF and THEN parts of the ITF, designers can better balance the effectiveness, efficiency, and appeal outcomes of their learning experience. When designers use the LXC early in their design work, they can elicit from stakeholders both rational and emotional qualities that lead to creative 8-by-8 instructional design solutions that deliver flow, transmergence, and loyalty.

Designers can think of the LXC as an optional plug-in design theory that is compatible with the ITF. The LXC overlaps situational analysis and the selection of instructional methods, media, and management methods (Figure 22). The desired outcome for using LXC is a tighter balance between effectiveness, efficiency, and appeal outcome variables.

Figure 22

The LXC is a Design Bridge Between Two Core ITF Constructs: Situation and Instructional Methods, Media, and Management Methods


Situation
The mess for which the designer needs to develop a solution.
Analyze
Analyze
CONDITIONS
Matters of Fact
Learner
Content
Learning Environment
ID Constraints
Institution Requirements
VALUES
Matters of Opinion
Learning Goals
Instructional Methods/Media
Outcome Priority
Power
Institution Priorities
Specify
Specify
INSTRUCTIONAL OBJECTIVES
Performance Representation
Terminal, Enabling
Conditions, Behavior, Criteria
The Learning Experience Canvas™ (LXC)
The Rational
The Emotional
Vision
What is the key goal for your learners? What is their mission?
What expectations do you have for your learners?
What is the plan for accomplishing the learning experience's goal?
What key feedback will learners receive during the learning experience?
Access
What are the key policies?
What processes and procedures are needed?
What people will participate? What qualifies them to participate?
What tools will you acquire or build?
How might you make the interfaces intuitive, usable, and comfortable?
What key information do you need to communicate?
Nuances
How are you enhancing sight?
How are you integrating smell?
How are you integrating sound?
What tastes will learners experience?
What will learners touch?
Role
What kind of functional, authentic, possessive, or fantasy roles might enhance your learning experience?
Incentive
What rewards might you use to motivate good performance?
How might you structure negative reinforcements?
What punishments might be appropriate?
Expertise
What do you want your learners to be able to do?
What are the primary instructional methods?
What will be the primary media for presentation, practice, and feedback?
Entertainment
What live entertainment might you include?
What recorded entertainment might you include?
Relationship
What kind of relationship will your learning experience foster (or avoid) between its various constituents?
How will your learning experience help facilitate participants in establishing relationships that perform?
What kind of relationships does will your learning experience foster before, during, and after?
Learning Experience Canvas (LXC) by Honebein Associates, Inc. is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.
Methods and Media
How the designer will clean up the mess.
Recommend
INSTRUCTIONAL METHODS
Macro
Teaching more than
MEDIA
Macro
Delivering instruction via multiple vehicles
MANAGEMENT METHODS
Macro
Coordinating multiple



What the LXC adds to the ITF is a bridge between analysis and design via rational and emotional constructs. The rational constructs are vision, access, incentive, and expertise (Honebein & Cammarano, 2005). The emotional constructs are the realms associated with entertaining, educational, escapist, and esthetics (Pine & Gilmore, 1999). Originally developed in customer experience (CX) contexts, both the Coproduction Experience Model and Experience Realms Model are useful when applied to designing a learning experience.

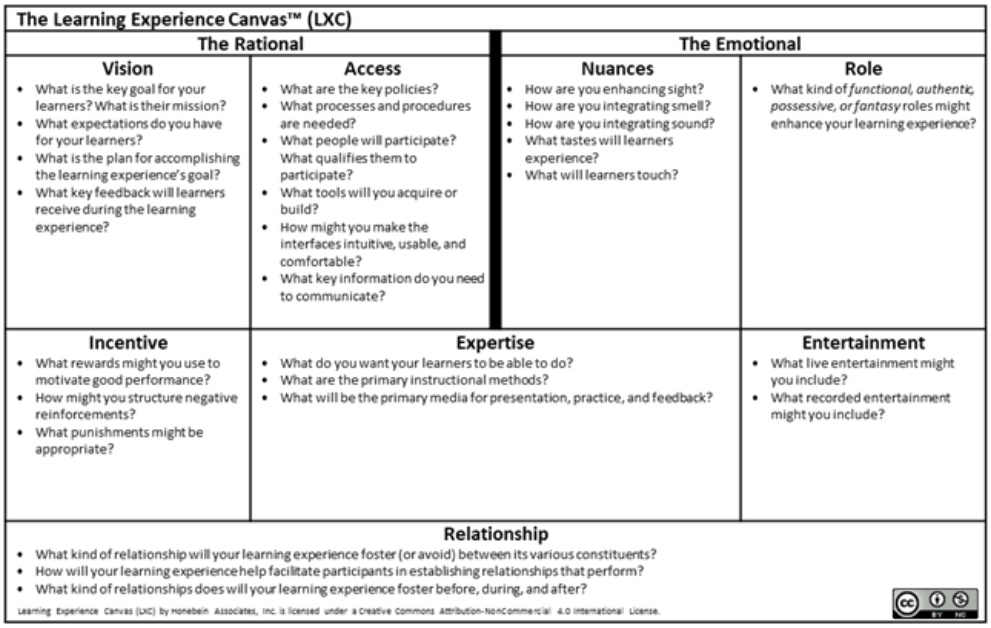
Eclecticism (Honebein & Sink, 2012) and situationism (Reigeluth & Carr-Chellman, 2009) are guiding forces in instructional design. This means that the LXC can accommodate both traditional instructional design and LXD. For example, the facilitator or participants can use the LXC's Expertise box to function as a time machine that can bring forth useful, fundamental ideas from the past related to the type of instructional objectives that best fits the situation (i.e., Briggs, 1984; Gagne, 1985; Mager, 1984). Similarly, the LXC's Access box can blend with sociotechnical-pedagogical dimensions (Jahnke et al., 2022) to combine certain tools, interfaces, and people in a way that enables foundational LXD structures.

Additional Resources

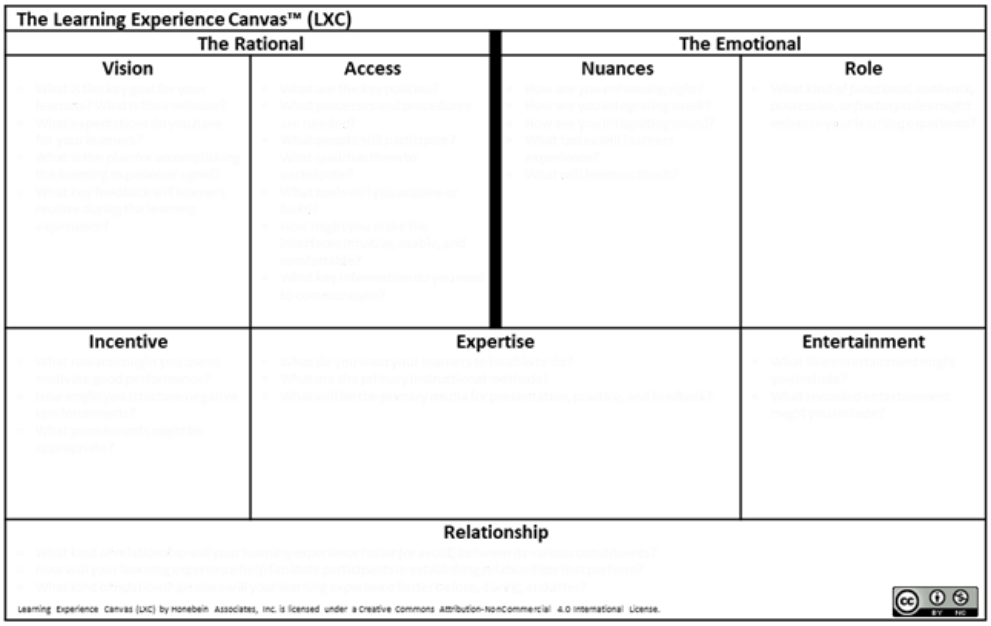
LXC Job Aid Template (PPT)

LXD Job Aid Template (PDF)

Example of a Completed Learning Experience Canvas™



Blank Learning Experience Canvas™



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[1] Readers who are not familiar with the Instructional Theory Framework should pause their reading of this paper and learn more about the Instructional Theory Framework. EdTechBooks provides two open-access chapters on this topic: Making Good Design Judgments via the Instructional Theory Framework (https://edtechbooks.org/id/making_good_design) and How Do We Solve a Problem Like Media and Methods? (https://edtechbooks.org/foundations_of_learn/also_32_media_method).

[2] The seven goals are:

1. Provide experience with the knowledge construction process;

2. Provide experience in and appreciation for multiple perspectives;
3. Embed learning in realistic and relevant contexts;
4. Encourage voice and ownership in the learning process;
5. Embed learning in social experience;
6. Encourage the use of multiple modes of representation;
7. Encourage self-awareness of the knowledge construction process.

[3] "Fuzzy vision" is a phrase coined by Reigeluth and An (2021) that represents top-level instructional design featuring analysis, design, and evaluation (ADE). ADE involves, at a big picture level, content, sequencing, instructional methods, and delivery (media).

[4] Learner personas are fictional characters that designers create during situational analysis. These personas represent the expected target audience for an LX. Personas are typically shown as photographs of people with a backstory associated with the instructional situation. Personas help designers understand and empathize with their audience.

[5] Affinity mapping is the process of taking a bunch of ideas, typically written on sticky notes, and then grouping the ideas based on similarities.

[6] In process mapping, a swim lane defines the tasks that a specific stakeholder performs in a process.