Master of Education in Learning Design Plan II
Graduate Projects

College of Technology, Architecture and Applied
Engineering

Spring 5-8-2015

Today's Classroom Is Changing. The Living Classroom Concept

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Repository Citation

TODAY'S CLASSROOM IS CHANGING. THE LIVING CLASSROOM CONCEPT

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A Major Project

Submitted to the Graduate College of Bowling Green

State University in partial fulfillment of

the requirements for the degree of

MASTER OF EDUCATION

May 2015

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ABSTRACT

Dr. Fei Gao & Dr. Gary Benjamin - Advisors

The purpose of this project is to research, develop, deliver and evaluate a continuing education unit based on the concept of the living classroom. The unit was designed for Education Managers and other industry experts to present to Architects and Designers (A&D) who are associated with the International Interior Design Association (IIDA) and the American Institute of Architects (AIA).

The trainees were both educated in the role of student and instructor. The overall project goal was to educate those associated with the educational industry and educate them about the learning revolution that is transforming the way we teach and learn and how this revolution has changed the current classroom design. We want to inform designers about 21st century, non-linear classroom furniture needs and how to implement the living classroom concept. It is important for those associated with the educational furniture industry to understand how the classroom is changing and what the currents needs of teachers and students are so that they can design a space that is functional in today's world.

Attendees actively participated in the one hour-long unit where they were encouraged to contribute in discussions. Upon completion, students completed an open round-table designed knowledge quiz where they discussed learning objectives and how best to present this course to future A&D learning communities. Participants concluded that the continuing education unit was a good synopsis of the six-zone classroom, and many noted that they particularly liked how the learning styles were incorporated.

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SECTION I: BACKGROUND AND GOALS

General Statement of the Project

The purpose of this project was to create an hour long continuing education unit based on the concept of the living classroom. The unit was designed to educate industry officials on the changing needs of today's classroom.

Intended Audience

This unit has been created especially for Educational Managers and other industry experts to present to Architects and Designers (A&D) who are associated with the International Interior Design Association (IIDA) and the American Institute of Architects (AIA).

Background

In past years, Artcobell has not invested much time or money in creating courses for those who are directly involved with selling or using our product. Just recently Artcobell has made it their mission to develop new courses every year that help industry representatives better understand their trade and become an active participant in advancing industry knowledge through education. It is our goal to serve as the premier advocate for continuing education in the advancement of the interior and architectural design profession and to inspire and guide providers to deliver high-quality, lifelong learning activities for practitioners. Artcobell recognizes that continuing education in architecture and design is crucial to advancing and improving the profession. The A&D community needs continuing education to maintain competency, to prepare for the future, to fulfill the continuing education requirements for memberships, and frequently to renew state licensure. The trainees will gain 1 hour of credit (0.1) for this course. The overall goal of the project was to educate those associated with the educational industry and teach them about the learning revolution that is transforming the way we educate, learn and sit and how this revolution has changed the current classroom design. Today's classrooms are getting "smarter", becoming

more connected, flexible, and adaptive to a range of learning styles, teaching strategies, and technologies. It is our objective to educate those individuals who are designing these learning spaces and share our expertise in the furniture industry. We strive to inform designers about 21st century, non-linear classroom furniture needs and how to implement the living classroom concept. It is important for students to understand how the classroom is changing and what the currents needs of teachers and students are so that they can design a space that is functional in today's world. In this revolution, we see that students are dealing with more complex thinking and receiving education from many different sources, both in and outside of the classroom. This course takes an in-depth look at the needs of future learning spaces by highlighting aspects like natural elements, flexibility, mobility, and creativity of the classroom while keeping 21st century classroom design needs in mind. This project will propose a way to integrate organic living with today's modern technology along with flexible, collaborative classrooms. The project goal is to develop a Continuing Education Unit (CEU) that trains people how to design a learning environment that supports a variety of pedagogical approaches and learning experiences with natural elements in mind. These elements include physical environment, sight, sound, movement, and emotions.

Statement of the Problem

The furniture in many of today's classroom is from yesterday. Each student in the classroom has a work surface and a chair. The chair is usually connected to the work surface to make a single unit. This configuration makes group work difficult. In some classrooms the chair and work surface are separate. When the chair and work surface are not connected, the work surface can be an individual student desk or a table shared by more than one student. Some desks have adjustable heights. Because students are not the same size at all grade levels the desks and chairs are made in a few different sizes. Under the chair or work surface may be a storage space for students to hold materials. Very few of the chairs in the classrooms are padded moreover, this

keeps the chairs inexpensive, durable, and washable. Plastic, steel, and laminate are the major components of classroom furniture for students.

CEU Course Objectives

With the speedy progression of science and technology, a computer is no longer considered a source of luxury but rather a necessity for the 21st century classroom. Technological developments like Internet and tablets have all become essential classroom tools for students and teachers, but classrooms have not always been this well-equipped. Prior to the digital era, students and teachers used less advanced tools such as chalkboards and overhead projectors. After engaging in this course,

1. students will be able to explain how technology has changed in the classroom over the course of the past 125 years. In education, agriculture, and industry, advances in technology demand that we rethink our standard ways of operating. The 21st century/non-linear classroom adapts to different teaching and learning strategies, from the traditional lecture to collaborative problem solving.

2. learners will be able to define the living classroom concept and delineate the six learning zones associated with this model. This concept is based on the idea that a classroom has multiple functions and the activities in the space keep changing based on the style of instruction and the participants. In addition to students defining the six zones, they will be able to outline the natural elements of the living classroom and how these elements work together to create a safe, welcoming, engaging and respectful atmosphere. Transforming the classroom from the 19th century mechanical/industrial age to the 21st century, organic living classroom age is an important part of reinventing today's school systems.

Those who participate in this CEU are able to define the Organic Living Classroom Toolbox and its contents.

3. students will be able to determine how furniture design and classroom configurations can improve learning experiences. Research shows that flexible configurations give students a big boost in performance compared to students in traditional classrooms. They are able to understand the impact of the psychological and emotional environment. A space that promotes and encourages creativity is playful, peaceful, and not restricted to a schedule. This can be accomplished through a community of collaborators. This process facilitates trust between classmates and instructors and creates a safe environment where classmates are encouraged to listen to one another and respect each other. Those who feel safe in their environment, both emotionally and physically, are more willing to engage in group projects and activities.

Definition of Terms

Culture - The collection of rules, values, and attitudes held by a society which allows people to communicate, to interpret behavior, and to attach shared meaning to behaviour and events (Knots, p. 372). The customs, history, values, and languages that make up the heritage of a person or people and contribute to that person's or people's identity. (WCP)

The living classroom concept: The living classroom is a concept similar to organic growth - where the classroom is rearranged as per the evolving and changing needs of the students as well as methodology of learning. The physical elements such as furniture and walls can move. It can be a place where it is a classroom today, a meeting space tomorrow, and a cafe/social area the day after. Students stay engaged and can learn at their pace through innovation and encouraged creativity. Introduction of elements such as plants, natural light, and flexible furniture serve as a learning medium that teaches student life skills and respect for ideas, art, design, science, theories, and nature.

Continuing Education Unit (CEU): The Continuing Education Unit (CEU) is a currency that measures a person's participation in a formal, non-credit continuing education program, such as a workshop, seminar, tutorial, or self-study course.

Resources

1. Purchased ScreenFlow software to create screencast content

2. Adobe Creative Suite

3. IDCEC and AIA application fees

4. Prezi

5. PowerPoint

6. Microsoft Word

Review of Literature

The literature review covers the transformation of the classroom and how natural elements, aboriginal teaching tactics, and holistic styles have made their way into the 21st century classroom. Technology is a very big part of today's classroom especially with the 'Bring Your Own Device (BYOD)' movement. Robert Sommer, in *Personal Space,* states, "At some future time, the model may become the individual student in his study carrel equipped with a teaching machine, TV unit, and various information retrieval devices connected to a central computer (Design Quarterly, 1974)." Research on the education of aboriginal students has shown that schools that respect and support a child's culture and language demonstrate significantly better outcomes for students (Greymorning, 2001; Haig-Brown, Hodgson-Smith, Regnier, & Archibald, 1997; McCarty, 2002; Paul-Gould, 2012; Sock, 2012). As European settlers colonized North America and the many groups of indigenous peoples living here over the past several hundred years, European knowledge and ways of learning were imposed through oppressive institutions such as residential schools (Regan, 2010). Indigenous ways of learning were overruled and minimized, as were Indigenous literacies. Today, there are efforts to apply an understanding of indigenous perspectives on learning in schools (Lipka & Adams, 2004; Lunney Borden, 2010), and support materials have been developed to help teachers decolonize their practices (McGregor, 2012). Emerging research is affirming that a decolonized approach can be effective (Kisker et al., 2012), yet much remains to be done in order to ensure more widespread adoption of these ideas (Haig-Brown, Hodgson-Smith, Regnier, & Archibald, 1997; McCarty, 2002; Paul-Gould, 2012; Sock, 2012). Battiste and Henderson (2009) note that indigenous views on learning characterize them as sacred, holistic, and a lifelong responsibility. From an

indigenous viewpoint, every child is unique in his or her learning journey and knowledge construction (Battiste & Henderson, 2009).

21st century education

The *I Am The Future's Child* essay (Beare, 2012) and the many iterations of the video, Did You Know? (Fisch & McLeod, 2007), speak urgently to adults, calling them to acknowledge that the world and the experience of most people in the world have changed drastically. A growing number of researchers (Gardner, 2007; Jacobs, 2010) are asking educators to look closely at the way people are interconnected through the internet, ponder the exponential rate of information-creation, consider looming planetary crises, and admit that we are raising children to work as adults in jobs that have not yet been conceived and, to solve problems that we do not yet know exist. Many people are coming to realize that the current system of schooling does not adequately prepare our children to be successful in a rapidly changing, globally interdependent world (Brown, 2009). The world is changing and school structures are fundamentally based on outdated systems. Leaders and theorists have been evaluating these transformations and offering ways to reconstruct learning so that all young people are well educated for the 21st century. Stewart (2010) examined five global trends that are "transforming the context for future generations" (p. 98). He highlighted economic trends (international marketplace), science and technology trends (digitization of production and international teams), demographic trends (immigration and emerging economies), trends in security and citizenship (borderless issues), and trends in education (global talent pool), suggesting "education as usual won't do" (p. 101).

Benefits of Continuing Education Units

Continuing education strengthens the interior design profession by improving individual attitudes, competencies, knowledge, and skills in specific subject areas essential to the interior design community. Learning experiences focus on the individual and involve activities that encompass thinking, doing, and reflecting. By participating in these units, architects and designers are receiving high quality advancements in their profession. It allows them to grow and succeed within the architectural and design industry (A&D). Obtaining additional education can also increase one's marketability in the job market, improve promotion opportunities, and qualify one for higher wages. Continuing education is a great way to learn about subjects of personal interest and does not necessarily have to be directly related to an individual job or profession. Continuing education courses are perfect for life-long learners who might not have the time to enroll in college programs. Working professionals wanting to keep their jobs but obtain more education can enroll in online continuing education programs. We live in a digital world. Digital literacy has been commonly identified as an area of need for the 21st century because students will use technology as a source of information and as a vehicle or tool for communication. However, students will also need to develop competencies in multicultural, informational, aural, visual, emotional, ecological, physical, nutritional, and financial literacies (21st Century Schools, 2008). Researched data indicates that a strong emphasis is placed on promoting creativity, innovation, and collaboration, skills that may have been emphasized with students from upper classes (Anyon, 2005) but should be considered as essential for all students. Some educational analysts have examined the processes of highly successful 21st century companies around the world and suggest that schools should emulate these processes, in particular creativity and innovation (Brown 2009). T. Wagner (2012) stated, "A nation's long-term economic health

depends on innovation" (p. 66). Friesen and Jardine (2009) have cautioned that generic skills may only be acquired through connections with specific content and the disciplines' ways of knowing. Students will develop their multiple literacies, along with their creative, innovative, problem-solving, and collaborative skills, when they are engaging with a topic of some significance to them and to the world. Which content is of most value is widely contested, but there seems to be agreement that a stripped down emphasis on discrete skills and a narrow curriculum of reading and mathematics does not serve students well, either in achieving high scores on international exams or in preparing them for their current and future lives (Munson, 2011). Closely associated with the notion of students' learning concepts rather than discrete facts is the focus on inquiry as a model for instruction (Goos, 2004; Singh, 2002). Barell (2003) has stated, "We need inquisitive people to grow into this new millennium" (p. 18) and claimed "wonder, inquiry, skepticism, and doubt [are] the pillars of our civilization, the promise of our future on the planet" (p. 22). This child-directed and teacher-facilitated approach to planning the curriculum is known as emergent curriculum. Learning occurs naturally and children learn best when their attention is captured with something that interests them. There is a great deal of flexibility and creative brainstorming that must take place thus opening up an exciting curriculum for these co-constructors. This instructional model requires the teacher to release aspects of leadership in the classroom, while still being accountable to learning goals set by the province (Stacey, 2009). The emergent curriculum collaborates well with the way young people learn in this digital world. Wilmarth (2010) has observed that "by participating through blogs, wikis, podcasts, video productions on sites such as YouTube, email, text messaging, and shared online photostreams... our students are no longer primarily consumers of content…they are content creators" (p. 82). He further proposed the "messy, nonlinear, highly organic process of

learning…seems to be at the core of what it takes to be a successful citizen of the 21st century"

(p. 95).

Investigation (Development) Procedure

1. Learning points were identified by gathering and documenting information to be included in the continuing education unit (CEU). The information was collected from credible sources that have expert knowledge in 21st century classrooms. The data was collected from a variety of industry experts both internally and externally. The research conducted from this analysis as well as the knowledge obtained internally from industry officials served as the course objectives for The Living Classroom CEU. This included retrieving submission information such as:

    a. Information regarding organic learning spaces

    b. data regarding flexible, collaborative furniture

    c. feedback from teachers and industry experts

2. Prior CEU's were analyzed to gauge usability and expectations for future presentations. The analysis was conducted by the Vice President of Product, Sales and Marketing and myself. It was important to know what the topics of other CEU's were in order to ensure students are not engaging in material that has previously been taught. I have concluded that there was only one other CEU (Tomorrow's Classroom) that was created and presented by Artcobell. Unfortunately, there was no survey data collected or course feedback documented from the attendees or the Education Managers.

3. Potential content areas:

    a. History of technological change in the classroom

        i. 1890 | School Slate & Chalkboard - In use for over 100 years, the school slate helped students work (and rework) problems.

ii. 1925 | Filmstrips - Thomas Edison claimed that the film projector would soon render books obsolete in schools: "Scholars will soon be instructed through the eye."

iii. 1960 | Overhead Projector - Originally used for police I.D. work, their expansion into schools created an interactive classroom at a minimal cost.

iv. 1970 | Educational programming - educational programs such as "Sesame Street" and "Mister Rogers' Neighborhood" were introduced into the classroom after the establishment of the Public Broadcasting System (PBS).

v. 1972 | Scantrons - Machine imaging technology was used to "read" multiple choice answer sheets filled in with a No. 2 pencil which saved teachers time grading.

vi. 1977 | Personal Desktop Computers - With the advent of the Apple II in 1977 and other personal computer in the 1980s, a generation of kids learned math and geography from computer games like "The Oregon Trail" and "Where in the World is Carmen Sandiego?"

vii. 1996 | Internet - Educational potential skyrocketed after the introduction of the web gained greater acceptance within home and schools by the mid 1990s

viii. 1999 | Interactive Whiteboards - The first introduction of interactive technology was introduced with whiteboards. The latest models can connect with mobile devices like smartphones and tablets and can be

projected onto any surface allowing technology to be flexible within the learning environment.

    ix.   2004 | YouTube - This internet staple has been used by educators since the mid-2000s to upload and share free instructional videos with classrooms worldwide.

    x.   2005 | Audience-response devices - The invention of polling devices allowed instructors to survey students on multiple-choice questions during lecture and get results in real time.

    xi.   2007-2010 | Smartphones and Tablets - Mobile devices give students and teacher more capability in the palm of their hands than astronauts took to the moon just a few short decades ago.

    xii.   Today | Interactive Mobile Apps - There is an astronomical number of educational apps that are used for teaching and learning anytime, anywhere, and for all levels.

b. Living Classroom Concepts

    i.   Define the three major types of learners and how the living classroom concept caters to each type of learner. Auditory learners would rather listen to content being explained than read it. Reciting information out loud and having music in the background may be a common study method. Other noises may become a distraction resulting in a need for a relatively quiet place. Visual learners learn best by looking at graphics, watching a demonstration, or reading. For them, it's easy to look at charts and graphs, but they may have difficulty focusing while listening to an

explanation. Kinesthetic learners process information best through a "hands-on" experience. Actually doing an activity can be the easiest way for them to learn. Sitting still while studying may be difficult, but writing information down makes it easier to understand.

c. Community Learning Benefits

    i.   There are many benefits to community learning including social skills. Asynchronous conversations including question and answer sessions promote healthy learning environments. Community learning also encourages confidence through collaboration. With non-linear teaching techniques on the rise, students no longer rely solely on the guidance of their teachers. Students who tutor other students are acquiring valuable skills and it helps with their self-esteem. Community collaboration indirectly encourages teamwork and builds confidence while working with other students.

d. Design Matters

    i.   Thoughtfully designed classrooms that include flexible configurations, visual stimulation, and natural light are shown to increase both student performance and teacher retention. Expert construction means furniture that lasts, better student performance, higher teacher retention, and fewer replacements costs. Good design is smart investment.

    ii.   Companies are remodeling with open concepts. Employees are no longer restricted to their cubicles. The walls are coming down and collaboration is encouraged.

      iii.   The contents of the Organic Living Classroom include flexible classroom

              furniture, teacher podium, access to technology, natural elements, and

              movement.

4. Budget

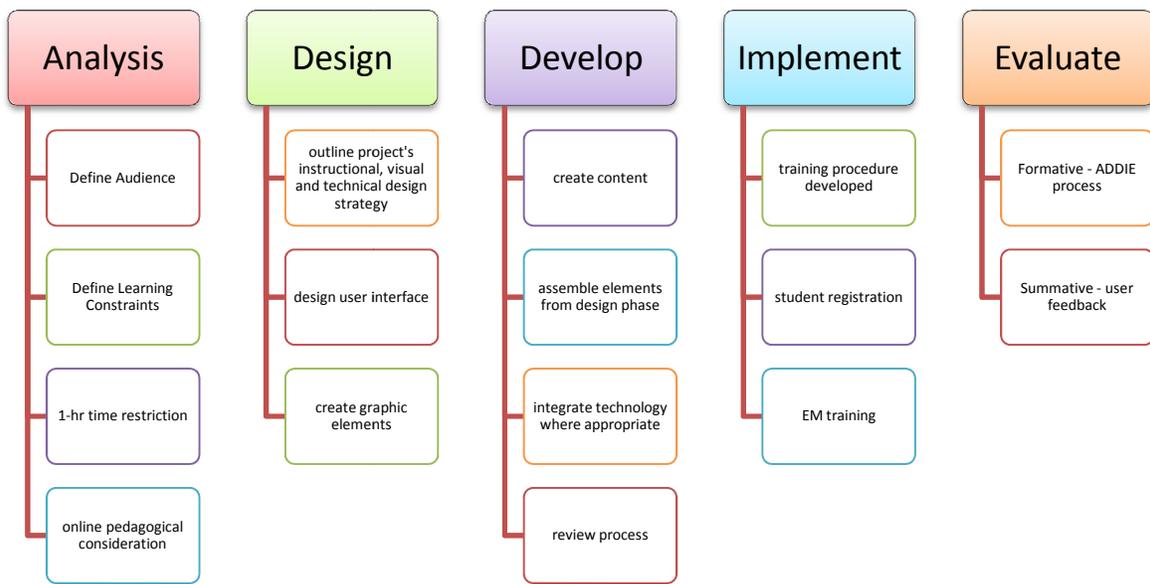| Itemized Expenses	Cost
CEU Submission Fee	$350
Annual IDCEC P0rovider Registration	$175
Prezi (Desktop Version)	$150
Other research expenses: (software, books, copying fees, etc.)	$100
Time (100hrs x $30/hr.)	$3,000
Total Requested:	**$3,775**

5. Project Timeline

Submit Proposal to Committee	Defend Proposal	Finish Project Development	Defend Project	Submit Final Project to Committee	Submit Final Copy of Project
10/19/14	12/9/14	2/24/15	4/15/2015	4/18/2015	5/8/2015

Development Procedure

  This course was developed and designed using the ADDIE model method. The five

phases – Analysis, Design, Develop, Implementation, and Evaluation – represented a dynamic,

flexible guideline for building an effective training. During the analysis phase, the learning

problems, goals, objectives, and audience were defined. There was no need to gauge existing

knowledge of the material because the module was designed with complete novices in mind.

Outlines, storyboards, graphic elements and the user-interface were created during phase two: the

design phase. The development stage was dedicated to the actual creation of the project-based

content and materials defined in the design phase. The plan was put into action and a process for

training the teacher and learner was established. Lastly, there was an evaluation. This consisted

of two phases (1) formative and (2) summative evaluations. The formative assessment was

ongoing throughout each stage of the ADDIE model to ensure that all stated goals and objectives

of the learning process were met. The summative evaluation referenced feedback from the users.

Revisions were made where necessary.

Analysis	Design	Develop	Implement	Evaluate
Define Audience	outline project's instructional, visual and technical design strategy	create content	training procedure developed	Formative - ADDIE process
Define Learning Constraints	design user interface	assemble elements from design phase	student registration	Summative - user feedback
1-hr time restriction	create graphic elements	integrate technology where appropriate	EM training	
online pedagogical consideration		review process		

Participant Selection

The audience for this portion of the training was the Artcobell Education Managers. There were a total of eight participants and their involvement was mandatory. These members are required to be trained before being able to schedule CEU trainings with A&D members or other individuals in the industry. An electronic invitation was sent out via email with available training dates.

Measures for Completion

Once the Education Managers accepted their invitation, they joined their peers in an on-line training via web-conference. During the introduction, course participation and expectations were shared. It was clarified that in order to receive credit, they must stay present in the chat room for the full hour. They were expected to participate and ask questions during the Q&A session.

SECTION IV: RESULTS, EVALUATION, AND RECOMMENDATIONS

Results

The success of this assignment, to design, deliver, and evaluate a continuing education unit on the theory of The Living Classroom, needs to be observed from two viewpoints. Did the module meet the guidelines set by IDCEC and did the course knowledge assessment indicate that the trainees walked away with newfound knowledge of The Living Classroom?

Of the eight trainees, all completed the knowledge assessment with a ninety percent or better. IDCEC does not require participants to log scores. They solely give credit based on participation, but I did think it was important to informally measure the learning transfer for this course. There were a total of ten questions that included a combination of multiple choice, true/false, and short answer. One of the learning objectives was to define the six zones of the living classroom. Seven of the eight trainees answered this correctly. Another objective was for learners to define the three major types of learners and how the living classroom concept caters to each type of learner. The learning assessment asked the learner to check what types of learners should be considered when designing a learning space. All eight answered correctly by checking auditory, visual, and kinesthetic. The knowledge check also asked learners to describe, in their own words, what the living classroom meant to them. I believe this is where we can really measure the learning transfer as the whole unit was designed around this concept. For learners to be able to understand the idea and then explain it in their own words tells me that they understand. The knowledge assessment was conducted three weeks post training so I am confident that there was a high retention rate since six of the eight participants scored 100% on the questionnaire. Lastly, I polled each learner to gauge their comfort level with this course. Five of the eight participants felt 100% confident in their ability to teach the course. Of the three who

did not feel as confident, two are fairly new employees and one does not enjoy any type of public speaking. Overall, the learners are motivated and looking forward to teaching this concept to the architectural and design (A&D) community.

CEU Completions (1 hour 0.1 credit)

Assessment of The Living Classroom commenced at the end of the presentation. Per IDCEC guidelines, participants need to attend the hour-long session in order to obtain their 1-hour (0.1) CEU credit. All eight participants received credit for the training session.

Evaluation Categories

1.) Question & Answer (Q&A) Comprehension Checks

Periodically throughout the course, the presenter would take breaks to allow attendees to ask questions. If no questions were asked, the host would create round table discussions by asking questions related to the module that was just studied. One question that I asked was, "How has technology changed in the classroom since you were in school?" The average age range of these attendees was 45 years old. This conversation was very engaging, especially when it came to discussing technological advances. We also conversed about how teachers now cater to different learning styles. Many expressed that there was no such thing as "visual" or "kinesthetic" learners when they were in school. Attendees discussed how a typical classroom functioned. They indicated that teachers would sit at the front of the room facing the students who were lined up in straight rows of combination desks (chairs attached to the desk.) Lastly, we discussed how teachers are integrating 21st century concepts in their classrooms. These eight individuals are on the forefront of selling 21st century learning environments so they had some really great insight to share. They are seeing a transformation from the linear industrial influenced way of teaching to a collaborative, BYOD movement. These discussions were

implemented to keep trainees involved in the presentation as well as engage them in new knowledge.

Strengths Observed by Trainer

> 1.) The questions were an interactive part of the presentation. It gave the attendees a chance to clarify subject matter and discuss freely with other learners.
>
> 2.) It permitted the host to adjust the presentation on the fly. Talking directly with the audience allowed the presenter to gauge the knowledge and interest of the participants.
>
> 3.) It offered the presenter an opportunity to learn more about the audience.

Weaknesses Observed by Trainer

> 1.) Opening up the presentation to the audience allowed the presenter to get off task.
>
> 2.) The time allotted was only one hour. Due to the time restriction, a few of the Q&A sessions were cut short.

Attendee Suggestions for refining the session

> 1.) Sales tools or suggestions on how to get teachers, principals and other school officials on board with "21st century" learning. This presentation taught what the living classroom was but not how to sell it.
>
> 2.) Connect the living classroom concept to a specific curriculum or grade.

2) The Living Classroom "Course Design and Instructor Delivery" evaluation.

The purpose of the Living Classroom final assessment was to determine if the course design was successful based on the following criteria:

> • Presentation of Learning Goals and Objectives
>
> • Course Organization
>
> • Instructional Design

• Instructional Strategies

Table 1: Evaluation Relating to the Course

Evaluation Criteria • **Strongly Agree = 5** • **Agree = 4** • **Neither Agree nor Disagree = 3** • **Disagree = 2** • **Strongly Disagree = 1**	Mean	Median	Mode	Standard Deviation
The curriculum was well planned and organized	4.75	5	5	.4330
The course objectives were clearly defined	4.5	5	5	.7071
The course met my expectations	4.5	4.5	4,5	0.25
The course was the appropriate level of difficulty	4.25	4.5	5	.9682
The course enriched my understanding of the topic	4.25	4	4	.6614
I would recommend this course	4.625	5	5	.4841

Table 1: Course Evaluation Outcomes Exit Survey Results (n=8)

Overall, the participants found this course experience to be well planned and organized. Trainees noted that the information was relatable and the content could easily be shared with others. One learner was quoted saying, "The slides were visually interesting but not too busy." The evaluation concluded that the participants gained an understanding of the living classroom and they all would recommend this CEU to others.

Table 2: Evaluation Relating to the Instructor

Evaluation Criteria • **Strongly Agree = 5** • **Agree = 4**	Mean	Median	Mode	Standard Deviation

• **Neither Agree nor Disagree = 3** • **Disagree = 2** • **Strongly Disagree = 1**				
The instructor was knowledgeable	4.5	4.5	4,5	0.5
The instructor started and ended the course on time	4.875	5	5	.3307
The instructor was available for questions and was helpful to learners	4.5	4.5	4.5	0.5
The instructor used effective teaching methods that enhanced my learning	4.375	4	4	.4841
The instructor encouraged me to raise questions or make comments	4.5	4.5	4,5	0.5

Table 2: Instructor Outcomes Exit Survey Results

Overall, the participants found the instructor to be knowledgeable of the subject matter and they stated that the course started and finished on time. Timing was important because students do not get credit for classes that are less than or over an hour long. Participants found that the instructor was helpful and available to answer questions. Effective teaching techniques enhanced student learning as noted by the scholars.

Additional feedback from participants

All attendees agreed that the course was beneficial especially since their job/career requires them to have ongoing professional development. One trainee stated that, "Understanding new theories, trends and changes in design of learning spaces is key to servicing my clients and representing my company." Another learner mentioned, "Although there is no annual ongoing development required for my position, I like to keep up to date with rapidly changing information related to the education industry. I specialize in learning environments and due to the quickly changing education market, keeping abreast of new information is imperative."

Comments indicated that our Education Managers would like to participate in future Artcobell CEU's specifically related to movement and case studies. Color theory was also suggested as a future topic. One EM stated that, "We are constantly working with principals, teachers, or board members who do not believe in integrating technology into their classrooms. They are old school. It would be great to have a presentation that helped open their minds to new ideas."

The most constructive feedback received was information on "how to instruct" based on the audience. This evaluator felt as if the presentation flipped between educators and designers. It was suggested that we tailor a presentation specifically for education officials and a separate one for the A&D community. It was also noted that the course was not challenging enough. This particular trainee has been with the company and in the industry for quite some time. He suggested that training be held for those who are new to the company and/or the education field and another, more advance, training created for seasoned teams.

Global Project Developments

Based on the evaluations, the difficulty level was the least successful aspect of the course design. Four learners strongly agreed (5) that the difficulty level was appropriate, three noted that they agreed (4) the difficulty level was appropriate and one learner disagreed (2) that the level of difficulty was appropriate. Although the objectives were discussed during the presentation, they were not clearly noted on a PowerPoint slide. This visual reference might have helped the learners know what the objectives were. In addition to the unsatisfactory difficulty level, it was evaluated that the course objectives were not as clearly defined as they could be. They were verbally spoken during the presentation, but there was not a PowerPoint slide dedicated to calling out the learning objectives and there should have been.

Additionally, I would like to incorporate an interactive module using the Kits Collaborator application on iPads. This app would bring an element of gaming to the presentation and give trainees a visual while working towards learning objectives and creating connections. Ideally this would lead to student motivation and interest in the living classroom concept.

Lastly, I think it is important to provide new resources for clients to use while presenting the learning classroom concept to them. These resources would include animations, idea books, and the slide deck from this presentation to use as tools. Hopefully this tool kit would motivate clients to sell the idea of the living classroom.

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APPENDIX A

Guidelines for Creating a Continuing Education Unit (Per IDCEC website)

1. Submission - All new CEU submissions will be accepted through the online portal only. Paper-based forms will not be accepted. A CEU provider must register as a provider before a CEU is submitted. The website link is

   https://www.idcec.org/Pages/Forms/Public/CEProviders/CEProviders.aspx

2. Registering as a provider

   a. Review the IDCEC fee schedule on the website at

      https://www.idcec.org/Pages/Forms/Public/CEProviders/CEProviders.aspx

   b. Register as a Provider by selecting the category of Provider that fits your business description (Individual, Corporate or Preferred). Descriptions of each provider type can be found on the registration page.

   c. Fill in your email account, and create a password

   d. The system will generate a provider account and number for you

   e. Login with this user number and password that you have created

   f. Fill in the administrator and business profile details

   g. You will then gain access to your provider dashboard.

   h. Click on "Payment (CAD Only)" in on the left to pay the annual registration fee to complete registration.

   i. You can now submit a new course for approval and manage your account online.

3. Turnaround time - From the time a course is submitted online, the review and approval process takes about 3 weeks. Providers are encouraged to submit as early as possible, in case revisions are requested, the 3 week time frame can be extended. This will allow the

provider time to make any necessary changes prior to their first upcoming event. The

provider must check their account dashboard regularly, paper approval letters are not sent

out to course providers.

Design and Submission Guidelines

According to the IDCEC website, there are a specific set of design instructions that are

required for the submission. They are as follows:

1. Include PowerPoint slides and speaking notes for CEU submission

2. The CEU contains proprietary content – do not include company/product names,

   product numbers, or logos in the body of the CEU presentation. Please restrict

   your company name/logo to the first and last slides of the presentation only.

3. A file must be less than 5MB to upload directly to the site. On step two of the

   course submission web form, you will see near the bottom a place where you can

   add a link to your course material. An application such as Dropbox, Hightail, We

   Transfer, etc. can be used for this purpose.

4. Bibliography

5. Justification statement.

In addition to creating a PowerPoint, a Prezi will be created as well. These PowerPoint

will be used for the submission but the Prezi will most likely be used for the continuing

education programs.

APPENDIX B

Course Outline

A. The Living Classroom

    a. History of technological change in the classroom

        i. Coverage includes 1650 – present day

        ii. Multimedia YouTube Video – A look at how our classrooms are changing

    b. Living Classroom Concepts

        i. Contents of the organic living classroom

            1. Flexible classroom furniture

            2. Teacher podium

            3. Access to technology

            4. Natural elements

            5. Movement

        ii. Benefits of community learning

            1. Social skills

            2. Confidence

            3. Peer tutoring

            4. Self-esteem

        iii. Three types of learners

            1. Auditory

            2. Visual

            3. Kinesthetic

        iv. 6-zone living classroom

1. instruct

2. learn

3. collaborate

4. gather

5. reflect

6. share

c. 21st century learning

    i. Bring your own device (BYOD)

    ii. Fosters creativity

    iii. embraces different learning styles

    iv. strays from standardization

    v. experiential and exciting education

    vi. self-directional

d. Good design delivers results

    i. Design matters

e. Knowledge assessment (Q&A)

APPENDIX C

Course Feedback Survey (created by the author of the CEU)

1.	Today's Date:
	Course Title:
	Instructor's Name:
2.	Does your job/career require professional development (either for licensing/certification or to learn rapidly changing information)? If yes, please describe:
3.	Have you taken any other CEU created by Artcobell? If yes, please list.
4.	Are there any CEU's that you wish were offered through Artcobell (i.e. specific subject or concept)?
5.	Check the title that best represents your job in the industry: □ Architect □ Designer □ Principal/Owner □ Sales Rep □ Administrator □ VP of Sales □ Marketing/Publications □ Project Manager □ VP of Operations □ Education Manager □ Other, please specify:
Relating to the Course *(Please indicate your agreement with the following statements):*	
6.	**The curriculum was well planned and organized:** □ Strongly Agree □ Agree □ Neither Agree nor Disagree □ Disagree □ Strongly Disagree
7.	**The course objectives were clearly defined:** □ Strongly Agree □ Agree □ Neither Agree nor Disagree □ Disagree □ Strongly Disagree
8.	**The course met my expectations:** □ Strongly Agree □ Agree □ Neither Agree nor Disagree □ Disagree

	□ Strongly Disagree
9.	**The course objectives were clearly defined:** □ Strongly Agree □ Agree □ Neither Agree nor Disagree □ Disagree □ Strongly Disagree
10.	**The course enriched my understanding of the topic:** □ Strongly Agree □ Agree □ Neither Agree nor Disagree □ Disagree □ Strongly Disagree
11.	**The would recommend this course:** □ Strongly Agree □ Agree □ Neither Agree nor Disagree □ Disagree □ Strongly Disagree
12.	**What I liked best about this course:**
13.	**What I liked least about this course:**
14.	**Do you have suggestions for this instructor or the course?**
Relating to the Instructor *(Please indicate your agreement with the following statements):*	
15.	**The instructor was knowledgeable:** □ Strongly Agree □ Agree □ Neither Agree nor Disagree □ Disagree □ Strongly Disagree
16.	**The instructor started and ended the course on time:** □ Strongly Agree □ Agree □ Neither Agree nor Disagree □ Disagree □ Strongly Disagree
17.	**Instructor was available for questions and was helpful to learners:** □ Strongly Agree

	□ Agree □ Neither Agree nor Disagree □ Disagree □ Strongly Disagree
18.	**The instructor used effective teaching methods that enhanced my learning:** □ Strongly Agree □ Agree □ Neither Agree nor Disagree □ Disagree □ Strongly Disagree
19.	**The instructor encouraged me to raise questions or make comments:** □ Strongly Agree □ Agree □ Neither Agree nor Disagree □ Disagree □ Strongly Disagree

APPENDIX D

Approval & Document Maintenance

       Once approved, the CEU will be available for two years. Once the two year period has expired, the continuing education unit will need to be resubmitted and will enter the approval stage once more. The fee for a course renewal is $350 and will have a 2-year validity once re-approved.

Knowledge Assessment

1. What are the benefits of community learning?	*(Check or highlight all that apply)* □ social skills □ confidence □ peer tutoring □ self-esteem
2. When designing a learning space, what type of learners should be considered?	*(Check or highlight all that apply)* □ auditory □ visual □ kinesthetic
3. List the six zones of the living classroom?	1. 2. 3. 4. 5. 6.
4. What elements are being incorporated into 21st century classroom?	
5. Today's students are encouraged to take responsibility for their own learning	□ true □ false
6. When designing a space, should you include natural elements such as plants, natural sunlight and movement when possible?	□ yes □ no
7. Is technology integration an important aspect of the living classroom?	□ yes □ no
8. What does the acronym B.Y.O.D. stand for?	B Y O D
9. The living classroom should be flexible.	□ true □ false
10. In your own words, what does the living classroom mean?	