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DESIGNING SUSTAINABILITY FOR ALL

Edited by Marcelo Ambrosio and Carlo Vezzoli

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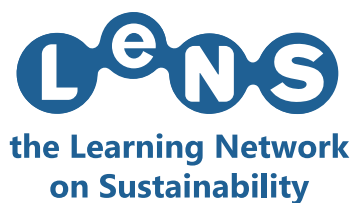
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Designing sustainability for all

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SUSTAINABLE DESIGN TRENDS WITHIN CREATIVE LEARNING ENVIRONMENTS

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ABSTRACT

This paper discusses planned and on-going research on understanding how we aim to increase awareness of sustainable design trends within the interior design curriculum framework in the context of creative learning environments. The findings of the research will support the case that creative learning environments are pivotal in the development of design innovation within education.

Key words: sustainable design, interior design, creative learning environments, design education

1. INTRODUCTION

Developing focused interior design curricula within a fast-paced evolving design environment is challenging. How do we as educators stay up to date with global sustainable design trends? How do we incorporate these trends into our learning outcomes and curriculum in a timely manner? With a focus placed on formative learning through industry-based assessments, we encourage critical design thinking similar to industry interior design practices. Although environmentally sustainable interior design (ESID) has become a major issue in interior design practice, according to the literature the frequency with which interior designers make sustainable choices in real practice is still limited, particularly where materials selection is concerned (Hayles, 2015).

Many interior architecture schools have already included some theoretical sustainable design courses in their curricula. However, theoretical courses alone are not enough to teach students how to apply sustainable design in professional life (Karsli, 2013). This study looks at how we propose to develop the topic of sustainability within interior design trends in a global context as part of design curricula within the structure of a creative learning environment. The research has the ability to aid educators in developing an approach and awareness of sustainability within interior design and design trends to allow for impact in the design education framework and design innovation for every student's learning journey.

2. THEORETICAL BACKGROUND

Sustainable interior design is defined as design and practices that significantly reduce or eliminate the negative impact of interiors on the environment (Karsli, 2013). Whereas, in response to the role of the interior designer, the International Federation of Interior Architects and Designers (IFI) consider their basis of understanding in their declaration, "Interior designers and interior architects determine the relationship of people to spaces based on psychological and physical parameters, to improve the quality of life" (IFI, 2011).

If we are in continuous pursuit of improving the quality of life in the technical sense when it comes to design, then sustainability is not an academic pursuit or even a professional activity: it is a way of life affecting everything an individual does. Knowing what kind of a relationship we want to have with the global and local environment is the first consideration. Then, we should address how to achieve this relationship. To move from theory into practice, it is necessary to understand the impacts associated with our work- and life-related activities (Sassi, 2006).

A study investigating the effect on interior design studios engaging with students to teach principles regarding the use of sustainable choices within design applications revealed that the studio experience enabled a heightened awareness that sustainability was a multidimensional concept that required critical thought processes and further recognized that environmentally responsible design was imperative in education (Gürel, 2010).

In a framework for an integrated approach to sustainable interior design the idea of knowledge creation is discussed as outcomes of learning. To create a proper sustainable design framework for the educational setting knowledge creation as a learning process is conjoined with the core ideas of integrated design processes from the built environment practice community alongside the science and business communities (Lee, 2014).

Numerous studies have focused on the importance of sustainability (Ruff & Olsen, 2009) and incorporating sustainability into the design curriculum, however there is little research on understanding of what kind of teaching environment would offer the greatest success in future interior designers making sustainable choices in practice that reflect current global design trends.

A study on collaborative learning and sustainable design recognized the studio environment as the ideal pedagogical structure (Gale et al., 2014) however, theoretical learning objectives alongside practical tutorials often overestimate the ability of students to fully understand the application of information and skills. A creative learning environment plays an essential role in facilitating the creative thinking process of learners (Lau, 2015). When we place students in a creative learning environment how is the individual learning journey impacted with sustainability in mind and with respect to trends forecasted? Are the students able to see the outcome?

For the purpose of this initial phase of research we define the 'creative learning environment', with respect to global design trends, within the quintessential hub of design at the Salone (Salone Internazionale del Mobile also known as Milan Design Week) in Milan, Italy as shown in Figure 1. The Salone incorporates business, culture, the history of design with the future of design. It is a global platform with an emphasis on innovation (Salone del Mobile Milano, 2019).



[Figure 1] Milan Salone del Mobile 2018, Edra

Our research intends to identify the importance of the role the creative learning environment plays within interior design trends – where sustainability is key to the focus of critical thinking and understanding within design education and design curricula.

3. RESEARCH METHOD

In 2018, we set to formulate the appropriate creative learning environment, the first of its kind in our design curriculum. The practical component is a qualitative ethnographic study that employs observation, the use of a survey (based on perceptions and reflections), discussion and formative evaluation of design work, which will be produced after engagement of the creative learning environment.

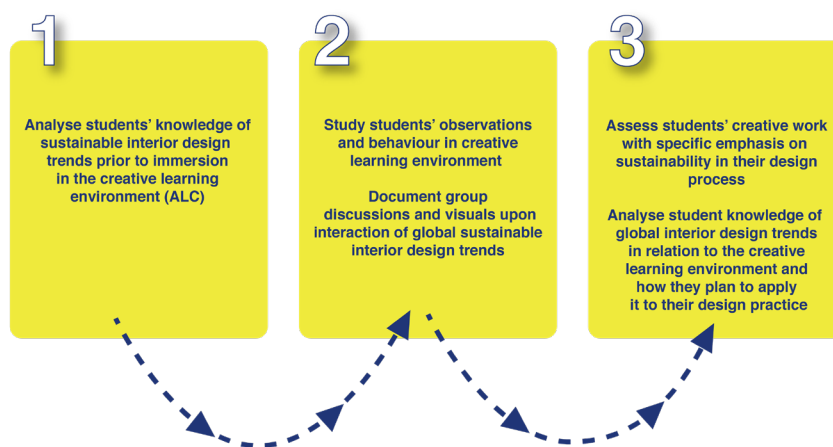
As all participating students are the active learners in our creative learning environment, it is important to note that the creative learning environment acts as the active learning classroom (ALC) and the well-documented educational trends recorded in the rapid growth of the ALC should aid us in understanding if the environment itself helps the learner discover, invent, solve problems and create knowledge in their sustainable design process (EDUCAUSE, 2018).

In April 2019, we aim to study four diverse groups of students within the same creative learning environment. The first group are undergraduate design students studying a bachelor of design arts from Melbourne, Australia. The second group are undergraduate students undertaking a bachelor of interior design from Barcelona, Spain. The third group of undergraduate students are undertaking a bachelor of interior design and architecture from Costa Rica, South America and the fourth group are postgraduate students currently completing a Master's degree in Interior Design from Milan, Italy.

To obtain relevant objective results we ensured that the participating students' profiles, in the respective four groups of students, are all diverse in age, geographic location, education level and ethnic background. The common key criteria are that the students are all studying an interior design tertiary degree and are all being immersed in the same creative learning environment. Ethics clearance for this study is important to ensure that the research documented from the participating students is accurate, independent and verifiable.

In our process outlined in figure 2 below, the three phases of research are divided into our methodology. Through these three phases of study we are able to critically analyse our findings at various stages of immersion of the creative learning environment to understand its relevance within the design process of the student.

Phases of planned research methodology



[Figure 2] Process mapping of planned research methodology

In phase one, we have developed a questionnaire for the students to complete that focuses on their understanding of sustainability within interior design and their knowledge of how this impacts global design trends. This will be completed prior to the students being immersed in the creative learning environment in their respective home countries. The questionnaire will be available in their mother tongue to ensure clarity and comprehension of information.

In phase two, they will be observed on immersion of the creative learning environment. We will be observing the students' behaviour, interaction, actions and selection criteria of global design trends. This will be documented daily for the duration of the Salone using video recording with audio. Some students in the study are actively taking part in an international project within the Salone itself. This will be further observed to understand how their results could differ to those students not involved within the creative work of the learning environment, but rather using the creative learning environment as their ALC. Within the observation immersion phase of the study we will document visually, through video and audio group discussions of the students' responses to their interaction with new global design trends and how they understand and perceive sustainability.

In phase three, the students undertaking the project, and on completion of the Salone, will be asked to create work within their field of study. The work will focus on what they have taken away from being immersed in the creative learning environment. This work will form part of their formative evaluation in a design unit as part of their assessment. All students in the study will also be given a second questionnaire to analyse how their individual ap-

proach affects their ability to develop their awareness of sustainable design within their design process. Elements of content and context will be analysed.

The planned research methodology will be beneficial to the creation of a communication support system (CSS) focused on the nature of creativity, which could be extended into a PhD study.

4. RESULTS AND ANALYSIS

Analysis of the students and their understanding at various stages of their learning trajectory will enable us to record the impact of the approach.

In phase one, we expect the students to provide an elementary understanding of the perception of sustainability in relation to interior design. This will be similar to the response we anticipate when asked the question in a standard classroom setting. The student recognizes the terminology and theory but struggles to understand how this is placed in the context of global design trends and its impact within the design process. In a representation of current design curriculum, when asked the question in a contextual design written assessment, “What does sustainable design represent to you as an interior designer?”, Figure 3 below is an example of a student’s individual response. We expect to receive responses similar to this nature on completion of our questionnaire.

[Figure 3] Interior Design student’s response to “What is sustainable design?”



In phase two, we expect to observe the students, immersed in the creative learning environment, discovering new sustainable design trends, in practical applications from various global designers, business communities and installations. The group of students undertaking the International project will have had discussions in a one-on-one environment with designers from around the world to examine, analyse and understand their sustainable design response as part of a global design event (the Salone). We expect these discussions to be more robust, specific and transformative as they will be more than learners in the creative learning environment, but contributors to creation of the ALC itself.

By phase three, all the students will have had sufficient time in the creative learning environment to have developed a substantial understanding of newly presented sustainable global design trends. The formative evaluation of design work created will establish a clear understanding of what sustainable trends were applied in their creative design process. We expect the assessment measured through the rubrics to clearly reflect the application and awareness of said trends. The second questionnaire’s responses should reflect a clear understanding of the sustainable global trends, but more importantly, an ability to apply the trends actively in their design process.

5. IMPACTS ON SUSTAINABILITY

Through the three phases of research we anticipate to see a positive response in the understanding of sustainable interior design trends within the ALC. As this is still planned and ongoing research, it is too early to definitely say if the creative learning environment is the most successful method. However, the research indicates that the current methods are not as effective. Teaching methods on the concept of sustainability are frequently searched in interior architecture education. Students are asked to produce considered design concepts with a variety of global trends in their approaches to the design process. These decisions affect the health of current and future generations and the planet on which they live and work (Jones, 2008; Karsli, 2013). By immersing them in a creative learning environment we are able to change the way students learn, understand and approach sustainable design in context to design trends. The importance of the creative learning environment is critical in their influence on understanding the impact of sustainable design innovation, environmentally responsible design and the impact they as designers have on

future sustainable design trends.

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