

Design Management in the Design High School

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Abstract: This article focuses on current examples of project or design-based learning at the secondary school level in the context of the increasing importance of creativity and innovative thinking in the twenty-first century. The authors argue that students today learn more effectively in pedagogical practices that emphasize holistic thinking, active learning, visual media and problem solving. Design-based learning presents new ways for realizing longterm goals and learning outcomes. The purpose of this article is to investigate best practices of design education in the community and to propose instructional resource examples on design to K-12 school teachers. This article points out the importance of systemized process for the work of design-based teachers and learners, addresses the study of design as a subject of investigation and a mode of inquiry that engages a variety of student learning styles and makes direct connections between subjects and problem solving in daily life. Our belief is that the case studies explored in this article represent the seeds of a new model of education based on creative and applied learning. The exemplar communities chosen for onsite research are the Art Center College of Design in Pasadena and the Design High School in Los Angeles, the United States.

Key words: *Design Management, Design-Based Learning, Design Education, Design High School, Design Research.*

1. Theoretical Framework

The theoretical framework of this study is qualitative in nature and grounded in phenomenological theory. According to Bogdan and Bilken [2], “Phenomenology is committed to understanding social phenomena from the actor’s own perspective. The phenomenological perspective is central to a qualitative methodology. What qualitative methodologists study, how they study it, and how they interpret it all depend upon their theoretical perspective” (p. 99). The phenomenologist, then, views human behavior—what people say and do—as products of how they define their worlds. Because this inquiry centered on the phenomenon of the design high school, its focus was how the students are experienced by the program the author provided. The reality that the study sought to describe, then, is primarily that of the students; the aim is to explain the phenomenon satisfactorily using case-based inquiry [7].

In this study I sought to identify the essential structure of the phenomenon of the design high school by studying multiple perceptions of the phenomenon as experienced by the students and the developed programs, and then trying to determine what was common in the perceptions of these different individuals.

2. Introduction

The author argues that design-based learning presents new ways for realizing long-term goals and learning outcomes. The purpose of this article is to investigate best practices of design education at the community level and to propose instructional resource examples of design education to K-12 school teachers.

When students are engaged in the process of designing, they are learning to observe, identify needs, seek and frame problems, work collaboratively, explore solutions, weigh alternatives, and communicate their ideas verbally and visually [3]. The design process includes periods of self-assessment, critiques of works in progress, revisions, and opportunities for reflection [9].

Design-Based Learning (DBL) experience teaches students a problem-solving process that they can adapt to many situations [3]. As John Dewey noted in 1910, a critical failing of the institution of school is that it was conceived as a place separate from daily life where lessons were learned and certain habits formed [5]. Whether focusing on everyday problems in immediately observable settings or projecting problems into the future, using design in the classroom builds bridges between school and life. Rather than beginning with abstractions, design activities demand that students derive concepts and principles from real encounters with their world. They learn the unfamiliar by finding it in or comparing it to what they already know [3].

Design is inherently interdisciplinary and encourages systems thinking. It combines concepts and thinking skills found in both art and science, and it concerns itself with social, cultural, and physical contexts. Likewise, the most successful uses of design in the classroom are interdisciplinary. While there is a tendency to think of design activities as the purview of the art or industrial arts class - due largely to definitions of design education that focus on visual aesthetics or preprofessional training - design has relevance across the curriculum. Design activities empower students to make decisions, modeling the responsibilities of adult citizens. Through design, students learn the consequences of such decisions and prepare to be active participants in shaping their physical, social, and cultural environments [1].

3. Partnership between the Art Center College of Design, Pasadena and the Design High School, Los Angeles

High schools that offer an academic emphasis in architecture and design are starting to appear in cities across the United States [8]. Why start a school of design? It may be that the importance of design in enhancing economic growth and quality of life is beginning to enter public consciousness.

One of the leading design schools in the world, The Art Center College of Design in Pasadena, California, has a partnership with The Design High School in Los Angeles, a new charter high school that uses design methodologies to teach all subjects. Through research conducted at The Art Center College of Design, as well as at peer schools in the U.S. and around the world, it has been shown that strategies of design-based learning are more aligned with the cognitive processes attributed to students of the millennial generation and younger than are strategies used in traditional schools. In other words, these new forms of learning are a better fit with the way today's high school and college students receive and process information, and are thus likely to produce higher success rates. The year-old Design High School in Los Angeles already reports significantly higher attendance rates than the Los Angeles Unified School District average [7].

4. About The Design High School, Los Angeles

The Design High School in Los Angeles is a free public charter school that is sponsored in several ways by The Art Center College of Design. The collaborative relationship and dynamic interaction between Art Center designers and Design Based Learning-trained instructors have evolved and deepened, resulting in a powerful and unique curriculum that is an exciting new way of teaching and learning that can be widely replicated.

The mission of The Design High School is to empower 9th-12th grade students of the underserved areas of Los Angeles to become lifelong learners, problem-solvers and creative leaders. The vision of the charter school program is: to create inspired leaders who are exceptionally intelligent, skilled and talented, and to whom others look for direction - leaders who make things possible that could not otherwise be done; to cultivate powerful communicators who are articulate, engaging and influential, who move their audience, and who are able to strongly affect other people's thinking and emotions - communicators who are able to produce results; and to nurture engaged, creative learners, who are imaginative, resourceful and unstoppable, and who know how to find solutions - learners who create things that previously did not exist [4].

Learning to think as a designer gives students the experience and skills they need for productive decision-making. At The Design High School, the concepts and practice of design are used to deliver a rigorous and relevant college preparatory and career-oriented curriculum. Design, a way of thinking and an approach to creative problem-solving, is a methodology that engages students in higher-level critical thinking while embedding and addressing grade-level, California Standards-based, academic content [4].

The Design High School emphasizes that when classrooms are student-centered, the role of the teacher and the relationship between student and teacher are transformed. The student becomes the focus of the teaching and learning process, and the teacher becomes the facilitator and the leader. Teaching is transformed from "telling about" to "doing" through student participation in complex, real world projects. Authentic activities are used not only to teach subject matter, but also to foster understanding across the curriculum. The student becomes empowered to take responsibility for his or her own learning. Understanding how to learn and taking control of one's own learning creates a personal investment and commitment that promotes a habit of life-long learning. The students' ability to discover what they want to learn, and how to acquire this knowledge, is necessary to thrive in the 21st century [8].

5. Methodology

The grounded theory approach to the collection and analysis of the data was used [11]. Three methods of data collection were employed: document analysis, observation, and interview [1, 6, 10]. I visited the Design High School in Los Angeles, from January 2009 to July 2009. I interviewed the Design High School students and observed the classes as a social space. I obtained impressions of the physical space and observed the Art Center programs and interactions in the classes, all the while searching for patterns and categories of phenomena [6]. As I did so, I noted what seemed to be emerging patterns and themes arising from the evidence, frequently tying them to present design education theory and practice [6].

6. Interviewing

At The Design High School, students engage in hands-on, meaningful, shared experiences that become the common language among students and instructors. Thus, the school provides a forum in which students develop

their unique voices. Hands-on projects that integrate the required curriculum engage students and maximize learning. As students apply basic skills and knowledge from different subject areas, they are challenged to think critically at the highest level.

Referring to Design High, one student says, “I wanted to get a good career involving art, and this looked like a great opportunity to improve my work.”

Another student remarks, “I have made lots of friends and learned to be open about my art.”

Yet another student explains, “There is no fighting; this school is really safe. People care about each other. . . .Coming from a school with almost 40 kids per classroom, it’s great to be in such a small and close-knit environment. . . .This school has given me so many opportunities and has given me so many useful skills.”

A Design High teacher concludes, “Students learn more when they enjoy their classes. They have better options after they graduate.”

7. Observation

The author arranged the schedule: every last Friday of the month, from 10am to 3pm, two Art Center student speakers were sent to the art class of The Design High School. The student speakers, representing different majors, presented their portfolios and talked about their respective disciplines, also describing their school experiences and high school lives. The process of selecting student speakers began with recommendations from each Art Center department chair. These candidates were interviewed by the author who selected those most passionate. The following examples of notes were recorded by the author while describing the student speakers’ classes:

7.1 Observation 1: The Design High School Friday Event (March 27, 2009)

Last Friday (March 27, 2009), Demetrius May from the Illustration department led the morning periods and Robby Smith from the Interaction Design department guided the afternoon periods.

Demetrius May brought many examples of his work: silk-screened and commercial product designs and T-shirts designed for a retail shop. Coincidentally, the fact that the shop was owned by the parent of one of the DHS students generated a great deal of excitement about the T-shirts. Demetrius donated about 20 of the T-shirts that he had designed to the students. He also shared the story of his high school life and his graffiti-painting experiences, giving the students detailed information about The Art Center’s illustration program.

Similarly, Robby Smith talked about a more theoretical and philosophical approach to design. As an example, he referred to the advantages and disadvantages of the digital clock as compared to the analog clock: The digital clock could be read more easily, whereas the analog clock could more easily be used to visualize the entire day. Another example given was text messaging: Although it may seem convenient, the message’s intended tone of voice may be lost. The presentation seemed a good chance to reflect upon the relationship between human development and technological advances.

The students loved the classes, and the art teacher, Carol Reynolds, appreciated the interactive nature of the visiting speakers’ presentations. Some of the students submitted feedback (thank you letters) intended for speakers who had visited the high school previously.

7.2 Observation 2: The Design High School Friday Event (May, 8, 2009)

Last Friday (May 8, 2009), an Art Center student speaker, John Park, from the Entertainment Design department, led the afternoon periods. He had majored in Product Design for two years and had then transferred into

Entertainment Design. Currently, he is taking two years off from his education to work for DreamWorks, Electronic Arts, and Scott Robertson's design studio.

John showed his portfolio to the students. It featured animation images mostly, like Shrek, Peter Pan, and Macho Man, and architectural images. He discussed the step-by-step animation design process from prototype, with initial sketches, to final work, with rendered characters done on Photoshop. He added explanations of the characters' positions, fashions, and patterning. He also suggested to the students that, when they draw something, they should ask themselves a series of questions: What creature or vehicle do I want to draw? Why draw this creature or vehicle? What is its purpose? What material and functional ability does the character have? He concluded this discussion by stating, "Research first and then draw. Do not just draw without planning or thinking." The students nodded their heads in agreement.

John said that he spent his high school life in Chino Hills and Riverside. He drew pictures all the time. One student asked him to identify the source of his inspiration. He replied that observing nature influenced and informed his work.

John also demonstrated how to draw with a marker. The students requested a mechanical monkey and a zombie lady. He instantly drew a thumbnail sketch of each character and then, in no more than 12 minutes for each drawing, blocked in the completed image.

At this time, many students handed in their "thank you" letters written to the previous visiting Art Center speakers, Demetrius May and Robby Smith.

8. Findings

From the positive feedback and responses offered in the "thank you" letters, observations and interviews, it is clear that the students learned a great deal from the Art Center speakers. The program conducted by the author utilized an approach to learning in which design was an integral part of the curriculum and pedagogy. Increasingly, innovative student speakers have explored with their students the mode of inquiry used by graphic designers, product designers, entertainment designers, interior designers, film designers, and architects. The student speakers used active-learning experiences that model the cognitive and social problem-solving demands of adult life. The program offers genuine promise of preparing students to think constructively about their future careers as informed professionals who can shape future progress. This research presents findings derived through observation and interviews at a design high school art class and demonstrates that the use of design experiences in education can provide students with the learning construct for the future.

9. Conclusion

In every aspect of our lives, we make design decisions that reflect our personal, social, political, aesthetic, and economic desires [8]. As such, these decisions reflect our ideas, ideals, and our compromises. The purpose of design management and design education in the design high school is to provide a framework for teaching young people the skills needed to become active, informed participants in planning and shaping their world. In looking at the design of cities, students explore the social, physical, and cultural environments that shape human behavior [4]. In analyzing visual communication, students decode meaning found within the relationship between word and image. Such assignments integrate skills in the language arts, art, history, and technology [4]. While active involvement in the design process usually characterizes most design-based learning, these reflective activities

also form a foundation for the development of discriminating consumers who make critical choices in their adult lives (Lee, 2009).

Through its presentations, The Design High School Friday Events program enables students to better understand design and discern its influence on their lives. This high-quality program can engage other schools in the design process as well, promoting skills such as active observation, critical discussion, strategies for visual communication, and critique. K-12 classroom teachers can bring the program into their classrooms to enhance the study of other disciplines, ultimately increasing academic performance and connecting school curricula to real life issues and experiences. The knowledge acquired through this article may be incorporated into the development of any design management and design education programs.

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