# IGNITING THE FIRE FOR SELF LEARNING – FACTORS FOR STUDENT MOTIVATION IN THE TECHNOLOGICAL CLASSROOM

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## ABSTRACT:

A field observation conducted for the class D45 - interior and environmental design second year student final project in a period of one year indicates the problems involved in motivating students in their research for their projects and their interests in exploring topics that may inspire their design. By adopting an interdisciplinary teaching approach, several factors are considered as to how the instructor should conduct the student design project and the ways of initiating self learning in student in a studio setting that encourage free ideas but dictated by technological means of communication and computerized tools of creation.

Keywords: **Interdisciplinary, learning, motivation**

# 1. PROBLEMS IN A TECHNOLOGICAL CLASSROOM

More and more design students are carrying their own laptops to class. The laptop computer has become an emblem of personal device and personalized space in a public arena such as the school campus or the classroom. Each year, while many design schools spend a large amount of budget updating their computer equipment and software, trying to play the catch up game to the digital revolution in design, students on the other hand, seem to prefer working on their own personalized laptop computers than switching on the school's computers. Though this new trend undoubtedly can help save design schools from spending unwisely on soon-to-be outdated software, the preference of using these personalized laptops also blurred the line between classrooms as a place to learn, and classrooms as a socializing arena and a platform of leisure and fun. The computer screen is a hub for all forms of activities, of work, of leisure and creativity. The instructor in a design studio setting, as a result, has to constantly fight for student's attention away from their more attractive computer screens. In the age of machine interactions and interfaces, what kind of interaction should supersede the relation between the teacher and the students over the machine?

What is crucial, after a year of observation on class D45 (a group of interior design final-project students who have learnt the basic skills for computer CAD drafting and digital 3D modeling), is that technical skills of using the design software only satisfy students' short-term desire to learn marketable skills for their first job. Their real passion for self-motivation in design research and concept development in thinking must be initiated by other ways of learning.

With students' attention span getting shorter, and their focus on task and thinking becoming weaker in a media-saturated culture, students nowadays are not as patient with the one-way delivery of knowledge in the form of traditional lectures (albeit many of these are filled with wonderful images or accompanied with charismatic delivery). Design history and discussions on design trends also failed to ignite in the student a sense of beauty and wonder of the design world. Their aesthetic judgment and critical thinking are further numbed by showing of images of what the instructor termed as 'good designs'. Examples of good design and comparisons between what is defined as good and bad do not train in depth the students' aesthetic perceptions. Design and aesthetic qualities have to be experienced first hand, especially interior design and architecture that are spatial in nature. Students need to understand haptically and feel the quality of a design before they can apply and transform their experience into ideas and solutions for new problems. The authoritarian tone of the instructor, or insisting on students to sit through a one-way lecture can only be sustained up to a certain point, even so doing might add to a negative effect on learning and the resulting lack of interest altogether.

Experience tours and field trips outside the classroom with the teacher as the tour guide are essential components to more efficient and interactive learning, however such dealings are sporadic and consuming (both in time and monetary terms), and cannot be conducted frequently for students to benefit fully. What is more important then, is for students to begin their own path of interest and research, and seek their own journey of discovery with the teacher as a guider and facilitator. The question then becomes how and what to do in order to ignite that initial spark of interest.

## 2. THE "MYTHIC EMOTIONS" OF STAR WARS

Today our cultures are fragmented by bytes of information and tidbits of sensations that we hardly have time to consume before moving onto the next channel of reception. The technological and digital age has imbrued us with an infinite reservoir of information at our figure tip, and yet navigating through these myriads of data has not contributed to our wisdom - the wisdom to live and to re-acquaint with our basic needs. The virtual worlds of the Internet and cyberspace give rise to more distractions that consume our time. Our shortened attention span over information overload prevents us from experiencing anything beyond the surface; a novel, a piece of music, a narrative, a relationship, all require time to allow deeper understanding of ones' feeling and reflections.

In the movie *Star Wars Episode 4 – A New Hope* (1977), George Lucas ingeniously transported the age-old mythic intelligence of Joseph Campbell into Hollywood space age. The young protagonist Luke Skywalker is just like any young man entering the age of going to the academy, with aspirations to leave home for an adventure in the bigger world of the galaxy. (Fig. 1) Time is just as hard in that galaxy long ago and far away, run by the empire and ruled by the ruthless Darth Vader, who is inspired by the dark side of the Force. Yet Luke our young protagonist, does have the spirit of adventure which was ignited by a quest to know the Force, to learn the way of the Jedi knight, and a calling from his mentor Obi wan Kenobi.

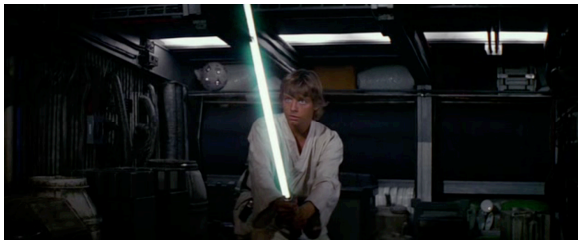

Figure 1: Aspirations as "mythic emotion" in *Star Wars* (1977)

If myths are true in all ages, then the young minds entering design schools should be no different. Their confused senses of the future are just as weighty as their aspirations to having a better live and a successful career in the world of design. There are knights who had traversed the vastness of the galaxy and had excelled, and these set role-models for the younger to follow. I do not suggest, however, that all design students should read myths and epic stories; yet students' passion for an adventure and to begin their own journey of discovery is deeply linked to such mythic, primal emotions of wonder, of possibilities of a great passion and noble causes. It would be likely that teachers cannot inspire respect and attention from the students without such narratives. There are instructors of technical knowledge, but a giver of wisdom and spiritual knowledge is a true teacher.

In a class where design students were taught 3D modeling, the important motivating point is was not on how to obtain the desired results by pressing certain buttons, but to focus on what beautiful and wonderful designs a student wanted to achieve. Such motivating point was first initiated by the instructor suggesting a starting point of exploration - students looked at designs and ideas that were similar to his/her approach to a problem/task. When they researched for information, instead of relying solely on the Internet, students were encouraged to look up for secondary and tertiary information sources. They should read extensively, have various kinds of documents, and aim at producing a mixed media digital sketchbook. Students also benefited from having multiple supervisors. In the D45 class, three supervisors, each specialized in theory, technical matters and practice were rotated six-monthly to provide different perspective and thinking on a students' project. Students had feedback from teachers of different expertise, and a more balanced

development in the student's approach to design could be thus achieved.

It is noted that in the mythic universe of Star Wars, Obi wan Kenobi as a teacher to Anakin Skywalker was somewhat of a failure, only redeemed later as the mentor to Anakin's son Luke, this story point is significant in relation to the character of Anakin as described in depth in *Episode One: A Phantom Menace* (1999). Anakin's love of machinery and his mastery in technology has forecasted his falling into the dark side of the Force and the eventual tragic results of his life. The film casts a dialectical opposite between the supernatural Force that is revered by the Jedi knights and the technological control of the Galactic Empire. This analogy from the film to real life tells the importance of noting, that without spiritual teaching or guidance, design education will become a materialistic practice, serving an ultra capitalistic economy, producing a surplus of objects that do not truly serve the needs of people. This perspective uniquely puts us back to the question of what is design and what ultimate purpose it serves in our time.

## 3. FACTORS

1. Instead of the traditional role of teachers and students being the giver and receiver of knowledge, a new relation may be forged. Teachers and students could become friends who share knowledge. This moves away from the conventional hierarchy of knowledge and power, to a level sharing of experience within the classroom. The teacher is simply the one with more experience to share and so gain respect from this way. The authoritarian figure of the teacher thus changes to a friendly counselor. In the D45 class, being a friend of the students allowed discussions out of the scope of school curriculum. This helped because design activities always involve the wider perspective of life in general.

2. The teacher is also a mentor with his/her own path and undertakes an adventure and quest of him-/herself. In an article describing a school in New York where some of the highest paid teachers are employed, the key to be a successful and good teacher is the teacher's own enthusiasm in his/her field of work. Without the belief and ardor in the knowledge itself, the teacher cannot convince his/her audience to enter a world of adventure and possibilities.

3. The call to adventure and possibilities is a powerful motivator for students to explore the world beyond the computer screen. The physical and authentic world is an important counterpart to the virtual and synthetic world of the Internet. The world of people and tactile objects need to be experienced first hand in order for designers to create convincing artwork that contribute back to the physical world. For a virtual reality to be convincing, it also needs to receive its cue and information from the raw material that is the physical reality. The virtual space is not a reality if it has nothing to compare to.

4. Even for a two-year diploma curriculum, the design school must go beyond the technical, and introduce to the students the worlds of feeling, instincts and aesthetic perceptions. An outstanding, hyper-realistic computer rendering from 3D visualization triggers in students the primal emotions when people look at beautiful objects and experience rewarding feelings. These emotions are essential factors in motivating students to achieve improvement in their own work, as well as approval from peers. A healthy peer competition develops as a result of striving for better outcome and representation of design. Thus the better the presentation, the more feedback one is able to get from the endeavor.

5. Passion of one's own path of discovery

Concentrating on improving the teaching of 3D computer modeling and design, the instructor can suggest ways to create outstanding visual effects in improving the quality of space in students' design. The stunning visual results could motivate students to create exciting images to test his/her design and gain approval and admirations from peers. Students are motivated to further sharper their skills and improvements by finding their own learning material at their own cost.

6. Desirable goals
Instructors should provide regulated guidelines for presentation and give exciting examples to stimulate students to attain a degree of excellence in their own portfolio. The goal of getting a solid portfolio is first stated in each and every project. This provides a clear and practical goal for the student to have a clearer picture of getting a desirable job position. Portfolio preparation motivates the students to attain practical goal, with achievable objectives as reinforcement for further pursuit in studies. The portfolio gears them up to confront practical experience with a more positive and optimistic mindset.

## 4. RESULTS

The following are the visible results of the implementation of teaching approach within the period of one year.

1. An improved attendance rate was recorded throughout the last six months of the final project.

2. Students showed an overall improved quality in presentation and dedication in the final project, they cared for their work as a portfolio piece and made serious effort to do their best in giving the best impression and presentation during a jury review.

3. Students were willing to spend long hours working (even staying overnight) at the studio. Assisted by a sense of comradeship in the studio, they helped each other out in solving problems and companied each other in a studio setting.
4. Such companionship also fostered a healthy competition among the graduating students, who were motivated by a scholarship and awards system in the graduation show.

5. Most students understood the benefits of having feedback and advise from their supervisors and therefore demonstrated a willingness to accept feedback and showed the openness to others' ideas.

6. After the graduation show students have requested for more classes and were eager to learn about opportunities for further studies.

7. There were indications that more iteration in students' design development reflects more in-depth thinking in their design process.

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