Teaching the use of creativity in digital design and business

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The paper is related to the use of creativity within the design/business model. An educational experiment was conducted where business-oriented and design-oriented students were teamed up to design and propose a creative digital design/business plan. The goal of the experiment was not only to observe the results of the interaction but also to offer some thoughts on the complexity involved in forming groups with members of different background, culture, ethnicity and genre.

Creativity, pedagogy.

Creativity as a Business Model

Creativity is the ability or power to create. Usually, it is characterized by originality, expressiveness, and imagination. While in the world of arts and design creativity has been an underlying assumption for almost any project, in the world of business a more rational, confined, organized, and methodical model exists. It suggests efficiency, effectiveness, and productivity, while, at the same time, it may be resistant to emotion, experimentation, humor, irony, metaphor, or analogy

One of the key themes of today's technologies is *integration*. From cars and computers to social groups and corporations we see a great deal of effort spent on how to connect, integrate, merge, and blend into new entities. New entities are produced every day that are the result of integration or merging of other sub-entities From merger names and company logos, to blending racial groups and multi-purpose buildings we constantly experience a trend towards a new type of interconnection, that of blending. This trend involves creativity as an important part of the business structure. Sensitivity, expressiveness, and imagination become key contributors to a future business's success and merit and, as such, these values need to be incorporated within the existing corporate strategy.

As the world of business is starting to shift from the "hamburger" model towards the "multimedia" business model, a need arises to integrate two seemingly contrasting worlds, that of creativity and that of productivity. What makes creativity so problematic for businesses is that they have maintained an ethics of *rationalistic determinism* in the field. It is the theory that the exercise of reason provides the only valid basis for action or belief and that reason is the prime source of knowledge. Because of its clarity and efficiency, rationalistic determinism has traditionally been a dominant mode of thought in the business world. The problem with this is that it assumes that all business activities abide to the same principles. In contrast, creativity, as defined in the arts and design, is based on quite different, if not opposing, principles. Rather than following a rationalistic model, designers often employ the acceptance of empiricism, authority, spiritual revelation, metaphor, or analogy as sources for their inspiration. In addition, they quite often defy the rules of business planning and scheduling. This mode of thought comes in contrast to the dominant business model where a methodical, predictable, and dividable process exists. More than ever now, as creativity enters the business world, a complementing and harmonious mix of both thought processes is needed.

In some creative business fields, however, creativity has been incorporated quite successfully within the business structure. For instance, *architectural practice* is a business model where creative design is a significant part. Here creativity is separated from the production phase in the *pre-design* stage where sketching, brainstorming, iterative drawings, visual analogies, and metaphorical notions are utilized. The project management and scheduling at that stage consists only of mere deadlines rather than processes or methods. Once a design idea is agreed upon, the architects move into the production phases where most business models and methods are applicable. What makes architectural practice most exceptional is

that it is the same people that are involved in both creative and business activities. In contrast, in other creative business practices, such as, for instance, the movie industry, different people are involved in different activities each of which is an expert within one's own domain. Integration, therefore, of different talents and expertise becomes a major business challenge.

Challenging these assumptions, an educational experiment was conducted to explore and investigate the interaction between design and business administration students. The experiment involved two prominent universities, one known for its strong business orientation and the other known for its design strength: two competing teams were formed by mixing architectural design students with business administration students. The task for both teams was to design and propose a creative business plan for one of the world's most famous cartoon companies using a top leading telecommunication company's newly developed device in a "creative way". While the resulting business plan was a significant part of this experiment, the process itself of group formation, inspiration, and interaction was of equal, if not higher, educational value.

Observations on the Experiment

Contrary to a common belief that asserts that efficiency is proportional to the number of people assigned to a task, group dynamics are more complex, idiosyncratic, personal, and often unpredictable than most people may think. Complex tasks require *complex group formations*. Because creativity is based on originality, expressiveness, and imagination, each individual's ability play a significant role in the brainstorming/idea formation stages. However, individual expertise does not necessarily guarantee a collective success. In fact, because creative tasks are highly subjective, personal rivalry that forms out of an individual's attempt to prevail one's own idea may do more harm than good to the team. In contrast, the recognition by the team of one dominant creative member or direction may lead to a constructively complementary decision process. As groups were formed in our experiment, each team was faced with two dilemmas: to have "too many chiefs and no Indians" or "too many Indians and no chief". Both teams were free to emerge out of the students' own initiatives, taking under consideration friendships, rivalries, recruitments, and preferences. As there was no intention for "external forces" to interfere with the process of group formation, students were expected to learn from their own mistakes if their group composition was proven later on to be problematic. In our case, one of the two teams was formed around a core group of friends that recruited others to fill in their gaps, whereas the other team was formed out of members with heterogeneous and diverse backgrounds.

Creative teams are often composed of seemingly unrelated members. Rather than combining individuals with high expertise oriented towards one single task, a *complementary* model may be used instead. It is based on members supplying mutual needs or offsetting mutual lacks. By forming or serving as a complement, each member completes one another. This synergy leads to a combined effect that is greater than the sum of their individual effects. Such a creative team can be more flexible, resilient, diverse, well rounded, and multi-faceted. At the same time, such a group seems to need a strong leader that would manage and assess each member's strength and use it at the appropriate time and at its highest potential. In our case, the creative team composed of members with complementary expertise was inventive and enjoyable.

Diversity is the fact or quality of being different. In contrast, homogeneity is the uniform similarity in structure or composition. While homogeneity suggests similarity, normalization, standardization, and uniformity, diversity implies variety, mixture, originality, and innovation. A team composed of members with multiple perspectives creates dynamism. Creativity can be significantly enhanced by the diversity and dynamism of its compositional forces. In contrast, because of its static, concurring, and introversive nature, homogenization can lead to the lack of originality, expressiveness, imagination and, therefore, creativity.

Tacit is a term that differs from, but is often confused with the term *implicit*. While implicit suggests the presence of absence, tacit involves the shaping forces of connotative understanding. Tacit arises by operation of cultural values rather than through indirect expression. In communication between members of a creative team, implicit and tacit messages are transmitted in addition to literal messages. While conversations between members may involve verbal interaction, tacit communication often utilizes awkward behavior, such as meaningful silence, body language, or cultural assumptions as means of transmitting information. For instance, designers often use non-verbal means of communication such as sketches, drawings, analogies, expressions, gestures, or metaphors. What makes verbal communication so problematic for creative people is that it is too literal, leaving little, if any, ground for interpretation. It assumes that for every notion or idea there is a word or a phrase to describe it, but that may not be the case for those *yet to be defined* creative concepts. In contrast, implicit and tacit information suggests much more than their spoken counterparts. Both of our teams were composed of students of different nationality, ethnicity, religion, genre, and culture. Many of the members employed tacit means of communication understandable and often extendable outside their own cultural sub-group. This is not to say that this was intended to exclude the other members but rather to facilitate the flow of ideas.

In the design field, designers learn to create winning designs by trying over and over again. Multiple attempts are not a sign of weakness but rather a measure of perfection. In architectural design, for instance, competitions are the dominant format for evaluation and assessment of creative design ideas. By using comparison, juxtaposition, and criticism, creative concepts can be identified and pointed out. In creative projects, there is no such thing as an *absolutely perfect solution* but rather a *comparatively better solution*. Competitions simply serve the purpose of comparison and search for the most appropriate proposal. The process of iteration and repetition serves the purpose of understanding the limitations rather than conforming to the limits. In our case, one of the teams came up early on with one creative idea, which they perfected for the remaining of the course. In contrast, the other team developed three different creative ideas and, thus, spent less time focusing on the presentation details. In creative projects, it is common that ideas may be formed at the last moment. Since creativity is based on repetitive trial and progressive improvement sudden inspirations are common practice. This involves flexibility, self-confidence, stamina, and optimism in order for a creative team to put together a new version in a small amount of time.

Conclusion

"To be creative, an idea must also be appropriate, useful, and actionable. It must somehow influence the way business gets done; by improving a product, for instance, or by opening up a new way to approach a process."

The ultimate goal of a creative project is the development of a frame breaking solution or process. Creativity involves originality and originality involves departure from previous practices. Creativity is about the fresh, new, unusual, and inventive. Creative projects stand out not only because they satisfy the requirements but mainly because they are unexpected, surprising, reactive, imaginative, different, and ingenious. More than ever now, the world of business needs to reconsider its previous practices and restructure its goals and aspirations. The desire for creativity is intimately linked with survival and outlast. The surprise of the unexpected, gentle or jarring, infuses new energy to the act of creating as well as conducting business. The intention (what should be accomplished) precedes the technical consideration (how it can be accomplished). A new creative practice may negate the rigidity of the old practice and must assert the freedom of an open system where innovation is celebrated