

# **A Proposal for the Web 2.0 Revolution in Online Design Education: Opportunities for Virtual Design Learning Using Social Networking Technologies**

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## **Abstract**

New Web 2.0 tools are enabling new avenues for online communication. Social networks that have sprung up from these tools are not only the basis of information dissemination but also a means of sustained learning. Educators are now able to investigate beyond traditional teaching pedagogies and student participation roles. By exploring learning theories and the philosophies of design education, this research proposes a framework for leveraging recent innovations in social networking technologies to facilitate these values in an online environment. Unlike many other subject areas, at the center of design learning is an underlying method of inquiry and dialogue that cannot be objectively transferred to students through typical learning management systems. The growth and popularity of social networking services has created a communications space that is distinct from the confines of the physical world. By taking advantage of the rich complement of applications that comprise this alternative communication space, educators can import the reflective learning approach essential to design education.

## **Keywords**

Learning; Reflective Practices; ICT

This paper examines the pedagogy of university-level online design education with specific emphasis on the utilization of Web 2.0 social networking tools. By exploring learning theories and the philosophies of design education, this research proposes a framework for leveraging recent innovations in social networking technologies to facilitate these values in an online environment. The goal is to open up the discussion of eLearning in design by investigating design education in conjunction with its virtual counterpart.

The area of design has been somewhat slow in adopting online eLearning formats. Perhaps because design learning is so tied to the tacit knowledge gained during the production process that forays into online design education has been somewhat tentative. There is now, however, a critical mass of data from which meaningful conclusions can be drawn as design vaults itself into the online realm.

With the advent of Web 2.0, the growth of eLearning has taken on a new complexion. Open source programs and application programming interfaces are now available to provide richer, more enhanced learning experiences. Web 2.0 has the potential to bring enriching experiences to online design education. A prototype design course environment using a selection of current Web 2.0 tools is presented in Appendix A; demonstrating the potential of these emerging technologies.

## **Current Online Learning**

In general, online courses at universities are administered through one of several popular learning management systems. Typically, there is a personal homepage where general announcements are posted, courses are listed and tools such as calendars, task reminders and grade reports are available. On specific course pages, there is space for a syllabus as well as a medley of communication tools including email, forums and provisions for digital drop boxes. On the backend, instructors have a vast array of database-driven modules for building quizzes and lessons. Also available is a set of statistical tools showing student performance which can be used to generate learner profiles and help instructors prescribe remediation activities as needed on an individual basis (de Castell, et al., para .20).

Proponents of these systems have detailed a number of documented success stories and contend that the tools in these systems allow for engaged learning experiences. However, as Susan de Castell et al. explain in their article "Object Lessons", despite the sophistication of the LMS

environments with their powerful content management capabilities and integrated communication functions, the majority of courses do little more than utilize the display and distribution capabilities of computers and the Internet.

The argument continues that this pre-programmed approach to education is fundamentally rooted in textbook-based knowledge that encourages compliance above learning. Clearly, as advanced design education is a subject area that has few explicit textbooks of knowledge, the pedagogical constructs of current online learning would have limited application for design courses.

To address the needs of design courses we first turn to a consideration of the principles of design learning as it occurs in the design studio. This assessment will establish a concrete definition of design learning needs before attempting to evaluate how the unique capabilities afforded by new Internet technologies can be leveraged for online design courses.

## **Design Learning Defined**

Particular to design education is the studio as an environment for instruction. The elements and philosophies of design learning were investigated with the following means.

### **1. An historical account of studio-based design learning**

Tracing the history of studio learning will provide a deeper understanding of the purposes and goals of this model of learning. This understanding would, in turn, provide guidance to the application of new methods and processes afforded by the current information age.

### **2. A close reading of the studio learning model as proposed by Professor Donald Schön**

Described as being “among our generation’s most influential philosophers of design and design education,” (Waks, 37) Schön’s detailed study on studio learning provides insight into the specific workings of design studios – the roles of students and educators and the interactions that constitute design learning.

### **3. The observations of a current studio-based class at the undergraduate level**

To understand the goings-on in the contemporary design studio and how design learning is imparted in such a setting, in-class observations of a studio-based design course were undertaken. The course description and project brief given to students at the beginning of the term is included in Appendix B.

## ***Design Studio Origins***

As a learning model, studio-based training can trace its roots to the guilds of the Middle Ages where apprentices learned under the direction of a master artist or craftsman. More formally in North America, the teaching system of the Ecole des Beaux Arts has been recognized as one of the standards under which studio-based education was founded. (Lackney, para. 2)

Beginning with a preliminary sketch of the “design problem”, then progressing to an interim critique (“crit”), the Beaux Arts system culminates with a final juried evaluation. Throughout the term, studio instructors guide students towards the completion of a final product. Although it has been over two and a half centuries since the adoption of this system, the essential elements within it has remained largely unchanged in present-day studios found at institutions of higher learning.

## ***Donald Schön and Reflective Learning***

In the 1980’s Professor Donald Schön put forth a series of essays that examined modern design studio learning in detail. After presenting the dialogue from a hypothetical design review between a student (Petra) and the studio master (Quist), Schön dissects the exchange to substantiate how learning in the studio environment is a reflective process. Reflection-in-action takes place on the part of both the studio master and the student. As Quist probes Petra about her design experiments he is testing (or reflecting upon) the effectiveness of his interventions and the student’s understanding of design. To the extent that Petra can translate Quist’s interventions and express them through design experiments demonstrates her process of reflective learning. Through a series of “telling” and “demonstrating” by Quist and “listening” and “imitating” by Petra,

the master and student engage in what Schön refers to as “reciprocal reflection-in-action” until there is a convergence of meaning. (1985, 64)

Schön’s framework of the design studio has three implications: (Waks, 44)

1. Design can only be learned by experimentation. No explicit teachings can achieve the same results. Schön recognizes this dilemma by calling it the paradox of reflective learning whereby the student must start working on a design problem without adequate knowledge; the knowledge required can only be gained after working on the design problem.
2. Design cannot be learned in isolation. Each move or experiment undertaken affects the whole, which in turn affects subsequent moves putting constraints on possibilities. When Quist instructs Petra to make a move that can always be changed later, he demonstrates how design is to make new coherent patterns and meanings of all the components of the situation.
3. Designing depends on the ability to appreciate or recognize the desirability of outcomes whether or not they were intended. Negotiating the outcomes of successive experiments through operational moves and material back talk will develop a student’s ability to designate the quality of designs achieved.

This process is unique to the studio-learning environment and the fact that this learning model uses a conversational approach is significant. The dialogue is not only between student and instructor; it is also between students and their classmates and between students and their work. Social media that has expanded and enhanced the communication space of the Internet points to increasing possibilities for online design courses without compromising the core principles of design learning.

### ***The Contemporary Design Studio***

To explore how the traditions of the design studio and Schön’s model of learning have evolved, in-class observations of a current studio-based design course at the undergraduate level were conducted. Key features of the course revealed limited detraction from the studio system as it was adopted in the mid-nineteenth century and a close mimic of the descriptions presented by Schön.

As the course/project descriptions indicate, assignments are semester-long endeavours that start with an initial proposal, proceed through a series of “crits” before the final is submitted. In the sessions attended, the focus was on progress critiques for each student. Each week, classes were structured such that the iterations of student projects and work-in-progress was presented for class “pin up” reviews or one-on-one critiques with the instructor. This fostered “culture of criticism” akin to the imported model from the Ecole demonstrates this feature as a fundamental aspect to design learning.

In terms of the roles of the instructor and students in the course, interactions were a close match to those described by Schön. As the expert in the studio, the instructor’s role in the observed class was primarily centered on guidance and feedback. In fulfilling this role the instructor used a combination of lecture-style presentation material, group peer review or “pin-up” sessions and personal one-on-one critiques. To address the class as a whole, the lecture portion of the class concentrated on showing examples and highlighting areas of significance. The presentation was relatively short, spanning less than 20 minutes in a four-hour class. The remaining time was reserved for providing feedback to students. During the observed classroom “pin-up” session the instructor emphasized the need for all process work to be available in order to understand how different pieces of the same publication fit together to create a unified whole. While the session provided a non-confrontational opportunity for students to look at each other’s work and make suggestions, students were generally reluctant to show their work and hesitant in offering comments. Comfort for sharing ideas and sketches changed remarkably during the one-on-one critiques. The instructor was also the most thorough during this portion of the class. As Schön describes, through both classroom and personal critique sessions, the instructor guides students using a series of “telling” and “demonstrating” while students learn by “listening” and “imitating.”

Further to the instructor-student relationship described by Schön, the studio environment also allowed students to “tell” and “demonstrate” or “listen” and “imitate” amongst themselves. When not engaged with the instructor, students were observed to be actively helping each other, giving

constructive feedback, answering “how to” questions and wandering about looking at each others' work.

By acknowledging that the process of design learning is predicated on a series of reflective dialogues and social negotiations, it becomes evident why online design courses have so far only shown moderate success. More often, successes have come in design courses where the objective is the acquisition of a design-related skill (i.e. software tutorials) that had little need for peer/instructor feedback.

What has changed? The online environment has evolved.

## **Advent of Web 2.0 Social Media**

### ***Background***

Web 2.0 has brought a new set of principles on the use of tools available online. These principles, described by Tim O'Reilly, from whom the term was originally coined, include: (O'Reilly Media, para. 6)

1. The web as a platform
2. Harnessing collective intelligence
3. Data is the next Intel inside
4. End of software release cycles
5. Lightweight programming models
6. Software above the level of a single device
7. Rich user experience

These principles show that Web 2.0 was founded based on a platform of sharing and participation where users are in the driver's seat and collaboration builds success. This essential aspect of Web 2.0 closely aligns with the established fundamentals of design learning. Continued growth and penetration of these tools has created fertile ground for offering online design courses in an increasingly accessible platform.

### ***Growth in Popularity***

The surge in the adoption of Web 2.0 tools, particularly social media, has touched nearly every facet of life. Marketing gurus dare not discount the feedback of online network groups; during the most recent election, political spin masters were abuzz on Twitter; and our daily vocabulary has been permanently expanded by the terms YouTube, Facebook and Wiki. A recent technology presentation by Morgan Stanley highlighted the fact that social network connections had 16% of worldwide online time, second only to the general category of communication at 22%. More astounding is that the category of social connections did not even exist four years ago. (Morgan Stanley, slide 9)

To visualize Web 2.0 in terms of the specific tools being used, a sample of 100 popular web services and applications were analyzed. Since Web 2.0 tools are in continuing flux with new applications being pushed out by developers on an almost daily basis, the larger sample of 100 services (out of 3,000) were surveyed to avoid bias or misrepresentation. The tools were chosen for this study by combining the popularity votes on various Web 2.0 directory sites<sup>1</sup> with the rankings and statistics from Compete.com.<sup>2</sup>

Statistics showing the number of unique monthly visitors for each site was mapped in the word cloud formation in Figure 1. The comparative size of each is provided in the top left-hand corner. From this image it can be seen immediately that the giants in the Web 2.0 universe are YouTube, MySpace, Wikipedia, Facebook, Amazon, craigslist and Blogger. A larger version of the graphic is available in Appendix C.

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<sup>1</sup> These sites include: [www.go2we20.net](http://www.go2we20.net), [listio.com](http://listio.com), [www.allthingsweb2.com](http://www.allthingsweb2.com).

<sup>2</sup> Much like the Neilson TV ratings statistics, Compete collects data from over 2 million Internet users and extrapolates their usage patterns to generate web domain analytics.

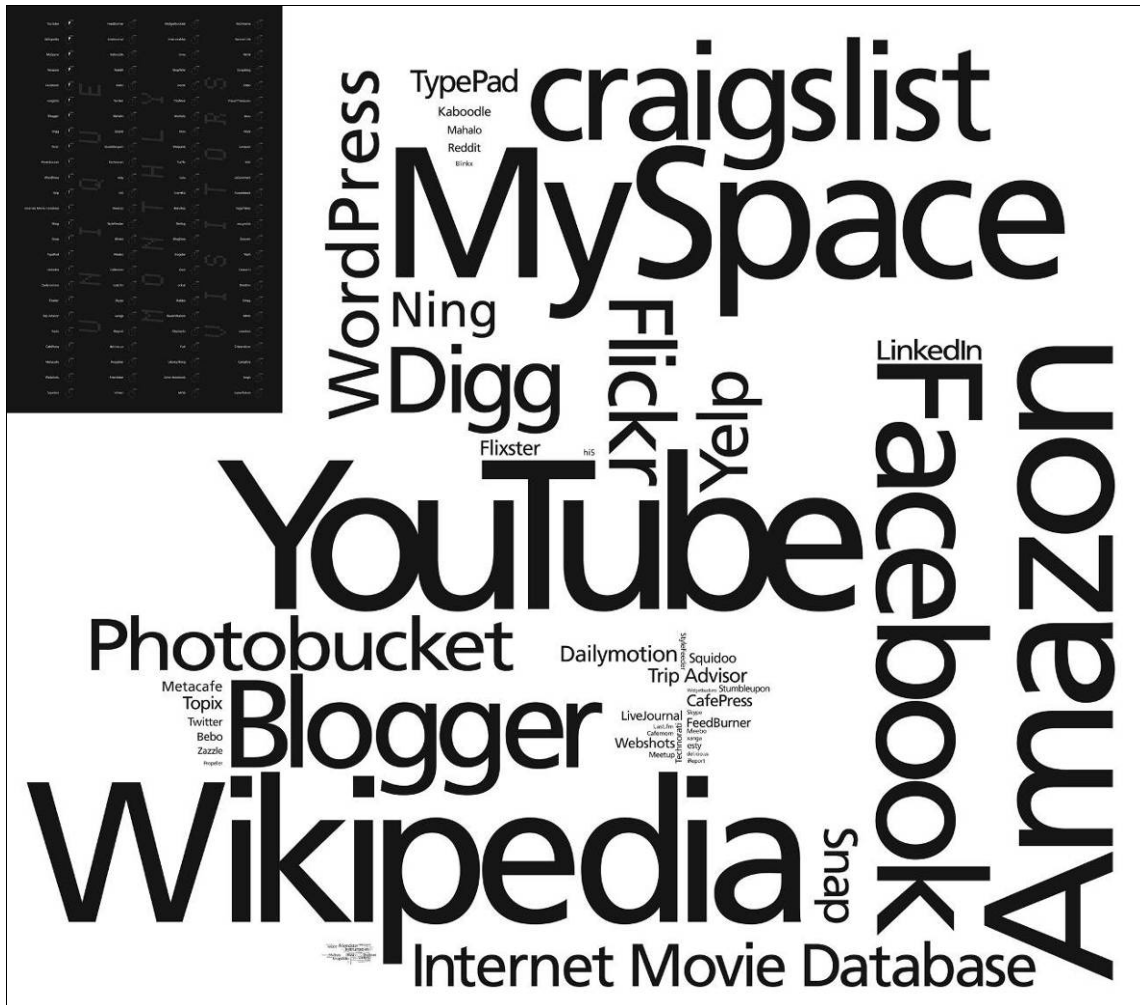


Figure 1 Word Cloud of Popular Web 2.0 Tools

### Alignment with Learning Theories

As online learning via Web 2.0 tools begin to gain wider traction with mainstream institutions and students, this section evaluates these tools with established learning theories and how they align with the previously defined concept of design learning. Specifically, the learning theories examined are:

- **Social Constructivism:** where learning is an active and contextualized process of constructing knowledge rather than acquiring it. Knowledge is constructed based on personal experience, interactions and social negotiations.
- **Cognitivism:** where the focus is on the inner mental activities – opening the “black box” of the human mind. Learning under this theory centers on the individual and how they “make sense” of their environment.
- **Behaviourism:** a worldview that a learner learns by responding to environmental stimuli. With this school of thought the learner is assumed passive.

The “culture of criticism” handed down from historical models of studio learning and demonstrated in the observed undergraduate class is a close match to the social constructivist theory of learning. In the studio setting, the constant feedback from peers, instructors and invited guest experts all contribute to a student’s learning experience. It can therefore be seen that in this model of learning, student students construct knowledge in a process that is mainly social.

Cognitivism delves deeper into the impact of the dialogues taking place in the studio setting. The progress of students relies heavily on their own interpretations of the materials and situations they encounter. Students will have different experiences in the course based on their ability to grasp a

given lesson. Using this understanding, the learnings from a design studio mirrors Schön's reflection-in-action model where the focus is on the individual.

In contrast, behaviourism aligns with the view of education where textbook knowledge is emphasized. This learning theory is at odds with how design learning has been identified. The theory does, however, correspond to the characteristics of current online course offerings where the assumption is that student gain knowledge by reading the content on CMS portals. Without any additional form of participation required, this process of learning could be considered passive.

Distilling the three learning theories into the three factors of 'social', 'individual' and 'passive' and pairing them with their opposites – 'isolated', 'group' and 'active', these six factors of learning, result in a framework for evaluating the alignment of Web 2.0 tools against the three fundamental models of learning. The diagram in Figure 2 summarizes how these six factors were derived.

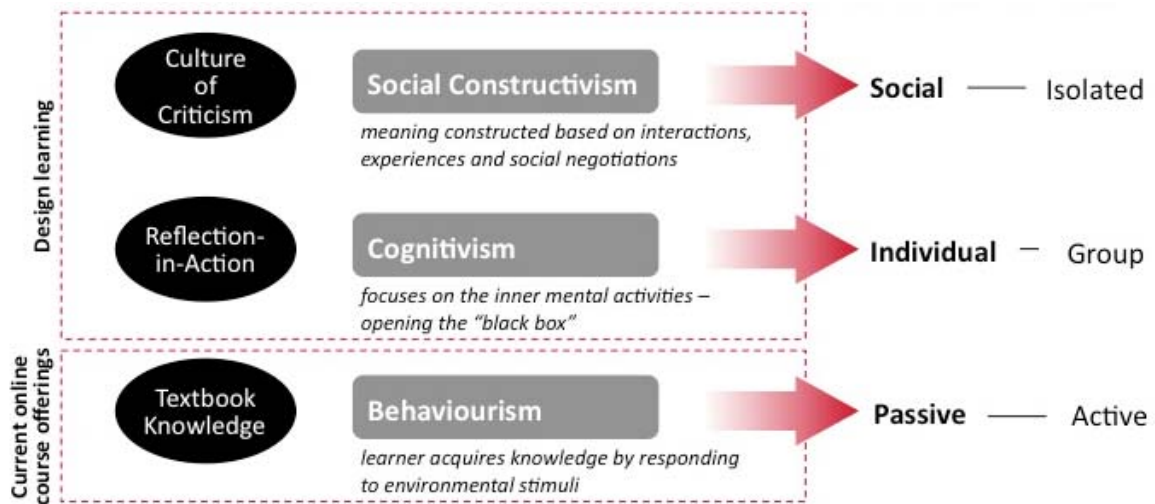


Figure 2: Learning Theories and the Six Factors of Learning

Taking each pair of factors, the 100 web services sampled previously were evaluated on a sliding scale from zero to ten, the higher the number the greater extent the tool displays that characteristic. In each case, the sum of the pair would equal ten. For example, if a particular web service rated 10 for passive, it would automatically receive a zero under the active column. This was done to control for the relative comparison between tools such that applications with multiple capabilities could be compared to a micro tool with only one function. If a site had eight functions and seven functions enabled interaction (bookmarking, commenting, sharing, voting, tagging, ranking, emailing), that web service would receive a nine for social and a one for isolated. Likewise, if a site had only one feature and it enabled interaction, that service would receive a ten for social and a zero for isolated. The result of this mapping is shown in Figure 3.

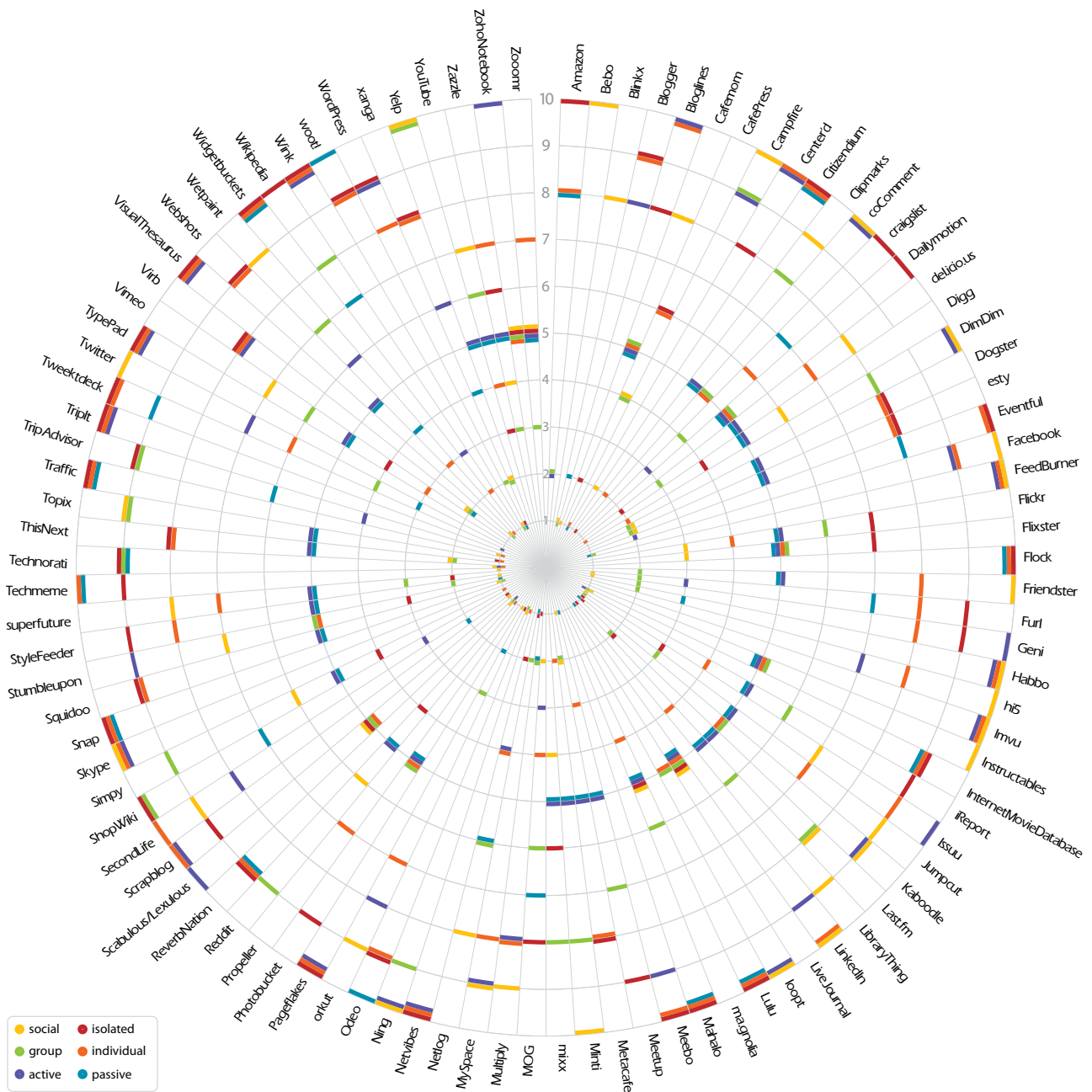


Figure 3: Mapping of Web 2.0 Tools and Factors of Learning

Taken as a whole, this diagramming of web services shows the range and diversity of the tools available in the Web 2.0 universe with its ability to accommodate a variety of learning situations.

To focus on the individual component parts of this visual, the six extractions shown in Figure 4 isolate each factor and represent them as “starbursts.”



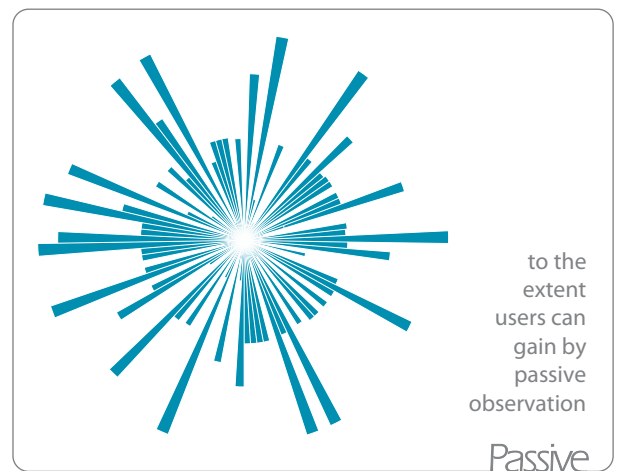
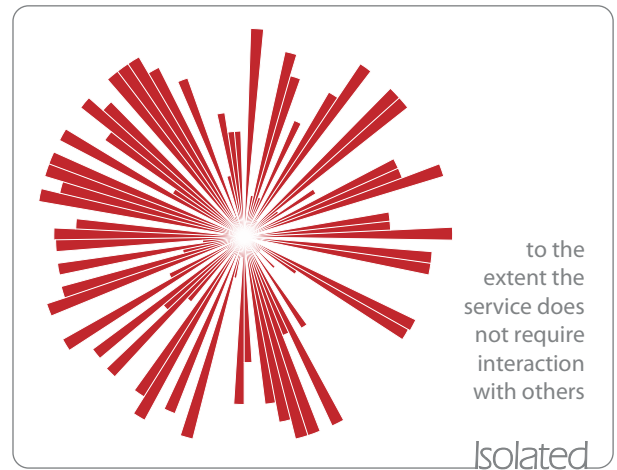
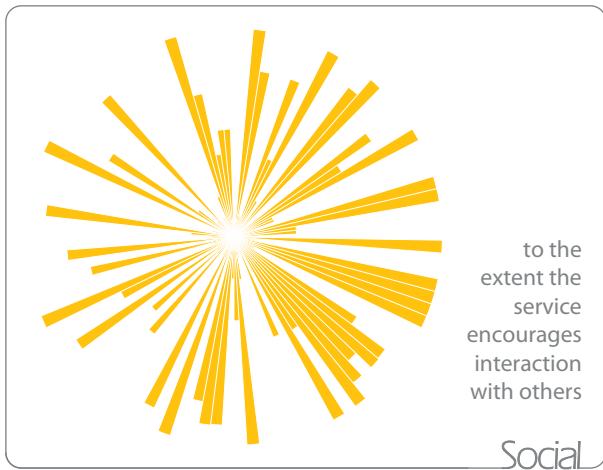


Figure 4: Individual Factors of Learning

Each pair of these “starbursts” represents the extent to which Web 2.0 tools facilitate the given learning theory.

Looking at the social constructivist pairing of “social” and “isolated”, the results indicate that there are a number of tools and services available to mitigate the physical isolation of using a computer. While the comparative sizes of the starbursts show that a slight majority of services do not necessarily require interaction with others, there is a growing trend towards encouraging more interaction.



Turning to the “group”/“individual” pairing that represents cognitivism, it can be seen that this is where online resources could be superior. The results illustrate that the vast majority of web services support an individualistic approach where there is ample space for reflective learning. Services like blogs or personal pages would be an example of these spaces.

Finally, when assessing how the behaviouralistic approach is applied to Web 2.0, the split between its two component factors “active” and “passive”, imply that users now have a choice as to whether they want to be active or passive – a departure from the traditional concept of Internet content which was mainly built on a “read-only” basis.

With this analysis, there is evidence of a close alignment between Web 2.0 capabilities and the principles of design learning. The results also present a plethora of tools available to build online course environments.

## Change in Value Proposition

The advent of Web 2.0 social media tools has slowly changed the value proposition for online courses. Previously, the main advantage of online courses was its ability to transcend time and space. All knowledge was contained in neatly packaged modules that students could access whenever and wherever they pleased. However, since social media tools have created an alternative communication and learning space, the possibility of a fixed time and location for online courses is now available. The advantage of online courses, therefore, can now be expressed as a matter of technological relevance rather than mere freedom from temporal or physical limitations.

This shift in the perceived value of online courses has immense implications for online design courses. As established, the fundamental value of design courses is rooted in the various real-time dialogues that occur in the design studio. The non-location/time specific benefit of LMS-based online courses resulted in a dissociative and isolated experience that had limited applicability for design courses. Web 2.0 social media tools now present the possibility of truly offering virtual design courses that are both meaningful and engaging.

### *Tightly Integrated versus Loosely Coupled*

Pre-packaged learning management systems have tools and resources are bundled and tightly integrated. These proprietary systems have highly developed tools that have been thoroughly tested by dedicated teams and function as stand-alone units. Their ability to interact with other resources on the Internet, however, is limited; most even have their own email repository that can only be accessed through their specific own portal. As visualized in Figure 5, these tools are neatly integrated into a tight package that constitutes an entire system. The tools in these systems are reliable and standardized but there is no option to customize functionality or “plug-in” external resources. By its very nature, the “closed-off” environment proposed by LMS products becomes a barrier in its adoption for studio-based design courses.

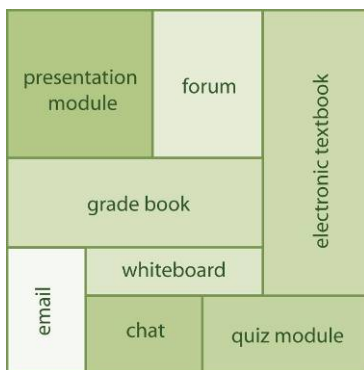


Figure 5: Tightly integrated course environment

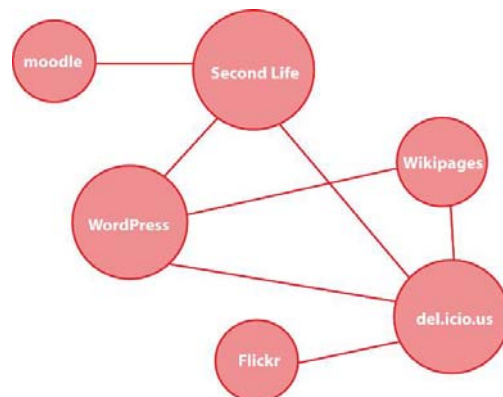


Figure 6: Loosely coupled course environment

In comparison, by looking at the individual tools available, rating their functions, popularity and propensity for educational value, the framework suggests a more flexible and somewhat ad hoc method of deciding which tools to employ for online design courses. Course environments, in this case, are built as networks of resources; they are loosely coupled to enable quick changes and flexibility. As an example, the diagram in Figure 6 shows numerous Web 2.0 tools connecting to one another to form a course environment. As different tools become available they could be incorporated into the network or even replace certain parts of it without disrupting other components.

The adaptability of this course environment model is in close keeping with the long tail development norms of Web 2.0. As rapid advancements in technology increases the variety, functionality and degree to which tools can be integrated, this nimble approach allows courses to be continuously enhanced and remain technologically relevant. In terms of design courses, instructors are at liberty to include or exclude tools as they build their virtual classroom. As the selection of the tools would be based on their usability, the tools themselves would be more natural and familiar, thereby eliminating the technology learning curve for both students and instructors. In addition, as the majority of these tools are independent entities that essentially provide one service, they are simpler to understand and their development is more responsive to user needs.

For the area of design, the growth of these tools has particular significance as the subject matter and the ways in which it is taught do not fit within the established structure of learning management systems. More importantly, these tools have also changed the way online courses are perceived.

## **Opportunities for Online Design Courses**

There is a clear match between the capabilities of Web 2.0 social media tools and the priorities of design learning. While the pedagogy of existing online design courses belie the core principles of design learning, the prudent application of new Web 2.0 technologies can push beyond VLEs and create new opportunities for providing experiences that are as fulfilling as traditional studio-based design courses.

Social media tools provide a space for “show and tell” scenarios and reflective learning. As the previous analysis revealed, these types of tools are closely aligned with the social constructivist and cognitive theories of learning. Social media services enable peer and instructor feedback in a user-friendly graphical interface while the encouragement of individual contributions fosters reflective practices. Moreover, these tools promote the “pin-up” session behaviours that instructors try to create in a physical studio. As a computer network mediates this environment, the perceived risk is lessened allowing for a more productive learning situation. As observed in the studio class, students are inclined towards peer assistance where there is a heightened level of comfort and safety.

Virtual reality/3D services like Second Life and Imvu offer an additional level of interaction. Using a computer persona known as an avatar, these services provide the opportunity for design classes to meet classmates and instructors in a real-time environment. This environment fosters dialogue akin to the intimate conversations that occur in a bricks and mortar studio. While other disciplines like law and medicine have used virtual spaces to train students on required interactions within specialized settings, in design learning there are no special equipment or protocols. Rather, design educators can use the same tool to imitate and build the kind of atmosphere of communication uniquely available in design studios.

## **Conclusion**

If design education is intent on using the Internet as a platform, educators must adapt their applications of technologies or risk becoming irrelevant. Controlled VLEs that are currently being used to house design courses may have their place in the management functions needed to administer a course but as this research as evidenced, there is a need to open up these environments to allow for effective learning conditions.

Unlike many other subject areas, at the centre of design learning is an underlying method of inquiry and dialogue that cannot be objectively transferred to students through typical learning management systems. There is a necessary amount of real-time interaction with instructors and peers in fostering a design “know-how.”

Web 2.0 tools and services have the potential to bring engaging experiences into a virtual classroom. The growth and popularity of social networking services has created a communications space that is distinct from the confines of the physical world. By taking advantage of the rich complement of applications that comprise this alternative communication space, educators can import the reflective learning approach essential to design education.

As Manuel Castells writes in *The Information City*, “[a] technological revolution of historic proportions is transforming a fundamental dimension of human life: time and space.” (1) It is now imperative that its implications be understood and explored.

## **Appendix A: Prototype Course**

To demonstrate how an online course environment comprised of Web 2.0 tools could be conducive to online design learning, a prototype design course that integrates Second Life, Moodle and a variety of media sites was developed to show their potential.

For the course, Second Life, a virtual 3D social space is used as the main platform for interaction while Moodle, an open-source course management system, forms the administrative back-end to provide a secure repository for course-related paperwork. Additional media such as videos, images and web blogs are drawn into Second Life and are used as supporting material when needed.

Second Life was chosen to act as the interface component of the course because as an immersive social environment it can function as a close surrogate to actual face-to-face conversations. As Jim Blascovich describes in his study on social psychology and immersive virtual environments, social presence is a psychological rather than physical state where “the individuals perceives himself or herself as existing within an interpersonal environment.” (130) Therefore, with virtual spaces and avatars the reflective dialogues so ingrained in design learning can be brought online without sacrificing the operational value of studio-based learning.

Moodle, meanwhile, was chosen because of its ability to connect with outside resources and its wide adoption rate. As an open-source program, Moodle can be modified and adjunct services added as required. That it has a high install base is an added advantage, helping to shorten the necessary learning curve.

The technology used to link the Second Life environment and Moodle comes from a UK-based research initiative called Sloodle (simulation linked object oriented dynamic learning environment) funded by Eduserv. Development and updates to their open-source work continues to enhance the collection of tools available across both applications.

### ***Description***

The prototype course environment consists of five key areas:

- Registration and course information area – for course enrolment and disbursement of course tools
- Auditorium – for general whole class meets and presentation-style lessons
- Student breakout rooms – for informal group meetings and peer gatherings
- Gallery – for the display of exemplar student work
- Office space – for one-on-one dialogues between students and instructors

The first two spaces, registration and auditorium, are areas that would be typical of any course regardless of subject matter. The latter three were created based on the needs of design learning as discussed in this research.

### **Registration and Course Information Area**

This will be the initial point of entry for the course environment. As shown in Figure 7, this area consists of a registration booth set up to allow for enrolment, an access checker that verifies enrolments, a vending machine (containing in-world tools) and an information dispenser (containing a folder of note cards with the course description, schedule and project briefs). Each resource is accessible by a simple touch from the avatar.

Similar to the administrative processes needed for physical classes, this area provides the requisite tools for students to enrol in and access the Second Life environment. More importantly, the initial in-world enrolment will link the students' avatars to their real-world identities.

The access checker, functioning much like lab access cards issued to students in the real world, enables an added level of security to ensure that only registered students gain access to course resources.

Finally, the vending machine and course information dispenser serve as convenient repositories for an unlimited supply of courseware. If students loose, corrupt or otherwise destroy their copy of the resource, supplicates can be obtained through these distributors.

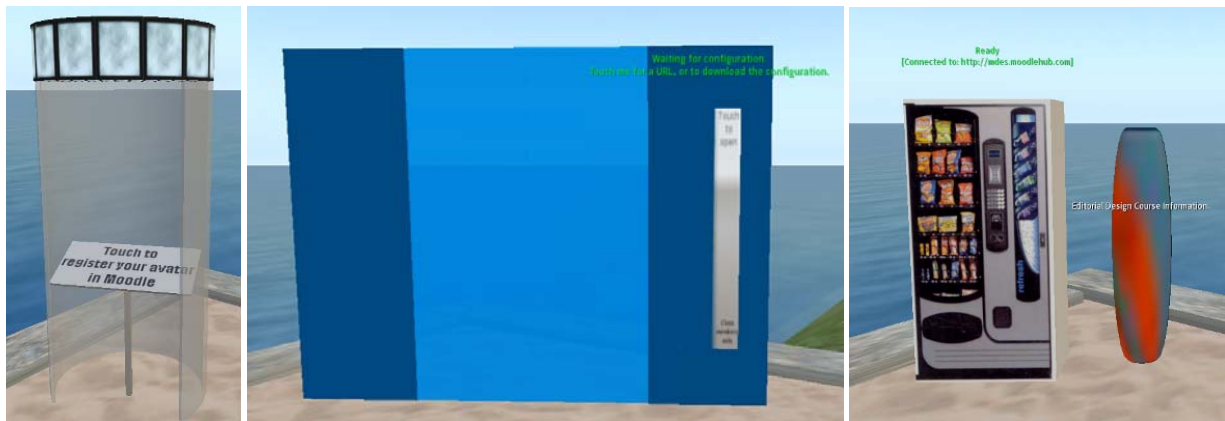


Figure 7: Booth, Access Checker and Courseware Dispensers

### Auditorium

To address the component of learning where reference materials are needed, the course environment will have a lecture or theatre space where presentations, expert examples or pre-recorded movies can be shown to the entire class. As Figure 8 illustrates, this space would take the form of a familiar auditorium-style room. The only difference would be that students could return at any time to replay material.



Figure 8: Auditorium

This area is essential to provide a “home-base” for the course. Physical classes are structured such that there is an initial gathering space for the purpose of general announcements and lectures. Even in studio-based courses like the undergraduate course that was observed, there was an expectation that the instructor would address the class as a whole or give a lecture to mark the beginning of the class.

While this group meeting place defies the conventional “advantage” of online courses – freedom from time constraints – the comfort and psychological familiarity provided by this space would allow students a smoother transition into a virtual classroom.

### Student Breakout Rooms

As a gathering place for students, the breakout rooms will have a number of tools for reference and to facilitate communication. Shown in Figure 9 are the resources students would have access to when visiting the breakout rooms. The flat-screen TV can be configured to stream videos or images from external urls, the “chat logger” box allows conversations to be recorded and stored in Moodle, the laptop is a pre-programmed tool that contains resources to for students to become

more familiar with Second Life and the large book is an interface for accessing a Moodle-based glossary. Figure 10 shows the breakout room in its entirety. Also shown in Figure 10, on the outside of the breakout room, is the Adobe projector where students can load their work and gather around for discussion.



Figure 9: Tools in Student Breakout Room



Figure 10: Student Breakout Room

As a low risk environment to facilitate the social constructivist “culture of criticism” inherent in design learning, the breakout rooms allow students to learn from one another. As seen in the observed editorial class, students were more inclined to give open critiques of each other’s work when not in the presence of the instructor. The breakout rooms provide an informal space for that particular learning opportunity.

### Gallery

In terms of space for displaying student work, the gallery, as shown in Figure 11, incorporates additional chat loggers to record any comments students wish to leave. The gallery space provides a continued arena for interaction as well as a place for individual cognitive development.



Figure 11: Gallery



Visiting the gallery in groups, students have the opportunity to record their comments about the various work displayed using the chat loggers placed throughout the gallery. Using the Moodle interface, students would be able to retrieve the logs for later reflection.

Because instructors are displaying exemplar work in the gallery, students can also view the space as a place of “demonstration.” As Schön describes, one of the roles of a design instructor is to show or demonstrate design know-how until students are able to “imitate” that know-how in their work.

### **Office Space**

The office space (see Figure 12), equipped with a chat logger and reference materials make up the final distinct area in the course environment. Outside of the office, a drop box is available for project submissions using an interactive sketchbook.



Figure 12: Office Space

To emulate the one-on-one critiques observed in the undergraduate design class and the reflective conversation Schön described in his study on studio learning, the office space has a comfortable environment to facilitate communication. Students have space to show the instructor their work and the additional resource room allows instructors to reference external material as appropriate for each student.

This prototype course is one example of the many possibilities available for design education. By actively experimenting with Web 2.0 tools just as other subject areas have already begun doing; virtual design learning can become a viable reality.



## **Appendix B: Course outline and project brief from observed class**

Information pertaining to contact information has been removed to preserve the anonymity of participants.

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## Editorial Design

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Optional Practicum Course Fall Term 2008–2009



### Contact information



### Prerequisites

Communication Design 2 (ysdn 3004) and Typography 4 (ysdn 3003).

Basic working knowledge of InDesign. Intermediate knowledge of Illustrator and Photoshop.

### Course Description

This course will focus on the design of print and electronic editorial documents. Students will investigate the relationship between type, illustration, photo and graphic imagery.

Students will research a range of editorial vehicles as part of an investigation into the nature of current editorial design practice. The projects in the course will give students an opportunity to practice the skills necessary to produce effective editorial print documents.

### Topical outline

- Behavioral effects of visual communication design
- Typography /image relationships
- Print fundamentals & electronic page makeup/imposition
- Editorial style and typesetting
- Documentation of the work process
- Administrative and production positions in editorial design

### Learning Outcomes

Upon successful completion of the course, students will have demonstrated their abilities to:

- Understand and apply the design process in the development of effective print-oriented and electronic design solutions
- Achieve both breadth and depth in concept and image development
- Visualize concepts with clarity and economy
- Perform cross-media research
- Organize and prioritize information and work flow
- Create meaningful and emotive relationships between words and images
- Communicate verbally and in written form about work process and intentions
- Achieve professional standards in the presentation of comps and prototypes

# Editorial Design

YSDN3011

Fall Term 2008

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## Course Brief

### Assignment

Students will be asked to conceive a new magazine, including name, identity, format, size, grid and typeface selection. Students can select from an array of genres such as cooking, politics, lifestyle, sports, music, fashion, the arts, literature, etc.

### Procedure

This process will begin with a sophisticated critical analysis covering content, audience and visual considerations. This study will include both observations as well as a personal analysis and hypothesis report. Following this research study, students will execute and develop a new identity for this chosen publication, thus creating a new visual voice based on their findings from the research study. After completing the logo/identity design, students will begin to develop and create specs for their publication i.e. type styles, leading, grids, gutters, heads and decks and implementing these master grids in Adobe InDesign. The term project will consist of three projects; Project 1 will involve designing a feature story utilizing typography only and using type as a vehicle for self expression, Project 2 will involve utilizing illustration as the main design vehicle and Project 3 will involve utilizing photography as the main design vehicle. Students can use the same manuscript for all three projects.

### Grading

Research study 10%

Project 1: Magazine format and design, contents page, department page(s) 20%

Project 2: 1st Feature story design 20%

Project 3: 2nd Feature story design 20%

Project 4: Cover and logo design 20%

Attendance, participation 10%

### Deadlines

Meeting 4, Research study

Meeting 5, Magazine logo

Meeting 8, Project 1 (Typography)

Meeting 10, Project 2 (Illustration)

Meeting 12, Project 3 (Photography)

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## **Author Biography**

Karen Kwan has several years of experience as a graphic designer in the private sector. She has been the Course Director and Teaching Assistant for an online design course offered by the department of Design at York University. This research was completed in partial fulfilment of the MDes (Master of Design) program at York University.