

DIMINISHING THE DREAD: EXPLORING SERVICE LEARNING AND STUDENT MOTIVATION

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Dread is an unfortunate, yet all too common occurrence in the classroom. It often arises when a student has little motivation toward a class or its content. As an instructor of a traditionally “dreaded” class (Design History I), my goal was to seek ways to increase student motivation for the topic of design history and historic preservation. To do so, I designed a service learning project that incorporated Deci and Ryan’s Self-Determination Theory (1985, 2000), and its constructs of: autonomy, competence, and relatedness. During the project students worked with the local City Planner on designing a series of informational placemats to be used in downtown restaurants during Historic Preservation Month. Students were tasked with searching the town for buildings that merited inclusion, then photographing, and documenting their history. To do this, they worked in groups and applied for specific roles on the project (i.e. Editor-in-Chief, Copy Editor, Graphic Editor, or Information Scout). Following project completion, I collected surveys and student reflections to understand the project’s successes, failures, and any resulting changes in student motivation. This article describes my process of designing the project, its implementation, and my student’s perceptions following its completion. It is hoped that this design case may provide instructors in “dreaded” courses tools to increase long-term student motivation.

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INTRODUCTION

As an educator, I dread a facial expression I simply call “the look.” Although, they may not care to admit it, many college professors have also likely witnessed “the look.” It can take on many forms, listless facial expressions, a downward gaze concentrated on social media, or even a missing face, simply because the student did not care enough to attend class. While the manifestation of “the look” depends on the individual student, collectively these “looks” mark student apathy; and when witnessed, can be disheartening. Ironically, my personal source of dread is likely attributed to fear of students dreading my class.

There are many reasons a student may dread a class. They may not “like” the instructor, see the value in the material, or be motivated to participate in the learning tasks. With a goal of increasing student motivation for the topic, this design case explores how I retooled a traditionally lecture-based course to incorporate an immersive service learning project with underpinnings from Deci and Ryan’s (1985) Self-Determination Theory. This theory suggests that individuals have three central psychological needs (i.e. competence, relatedness, and autonomy), which serve as antecedents to sustained motivation. My thinking was that an understanding of this theory applied in conjunction with a service learning project may support my teaching of a traditionally “dreaded” class.

CONTEXT

Why are design history classes at times a source of dread for design students? First and foremost, they are not studio courses, and within American design education there is a dichotomy between studio and non-studio courses. Within many design disciplines studio courses are the core of the educational experience. These courses often mimic practice-based scenarios, and inspire students to experiment and apply their knowledge. Anecdotally, if a student does not find their studio experience enjoyable, they are likely to change their course of study. In this paradigm, non-studio courses, often lecture-based, support studios by providing knowledge that can be directly applied during design (e.g. building construction systems, building codes). However, history courses are often viewed by students as having little relevance to design studio projects; so much so, that some students even question history's place in a modern design curriculum (Attoe & Moore, 1980). Further, in lecture courses that focus on declarative or procedural knowledge, it may be difficult for students to readily see the value of what they are learning, and how it applies to their chosen careers.

However, architectural history was once a cornerstone in a designer's studies. Architectural students studying in the Beaux Arts tradition surveyed classical works in great detail, going as far as replicating building characteristics in their own designs. This classicism tradition was in large part thwarted with the advent of modernism. After World War II some schools even chose to abandon or delay formal study of design history, placing more emphasis on self-expression than historical context (Swenarton, 1987). Yet, design history is an important and required component within a Council of Interior Design accredited curriculum (CIDA, 2014). An understanding of design history can provide historical and social context, afford students with sources for designs harkening the past, and provoke critical analysis during the design process (Beecher, 1999). As such, an understanding of design history and its context remains critical, and innovative delivery methods are often necessary to obtain relatively high levels of motivation for history coursework (Hadjiyanni & Zollinger, 2010).

Instructor Background and Goals

I personally have enjoyed learning about historic building styles, and more importantly the social and cultural antecedents influencing their designs. Yet, I had to acknowledge that many students might not approach the subject with similar enthusiasm. Moreover, having recently moved into academia following a number of years in commercial design practice, I was familiar with a desire for direct application of information in order to determine its

relevance. Yet, my professional projects were largely located in newer buildings. As such, I had little to offer the students in terms of visual representations illustrating the application of this knowledge on my projects. Nevertheless, sensing the importance of application, my goal became to provide a very different experience from traditional lecture-based history courses where students are "delivered" information and learning outcomes are measured via exam scores.

Writings of others served to reinforce my goals. Beecher (1999) suggested that history is "most valuable when presented as accessible, applicable, and analytical" and that simple rote memorization without application would lead to a less satisfying learning experience (p. 38). Additionally, design students are often pressed for time. They are learning a great deal, and applying that knowledge to increasingly complex and time consuming studio projects. With students learning about a range of subjects from building codes, design process methods, construction techniques, and professional practice standards; the question then became, what was the best way to increase their motivation for the topic I was teaching?

LITERATURE

To recognize what might be appropriate, I first needed to better understand student motivation. After all, the importance of motivation to learning cannot be overstated (Ames, 1990). Motivation influences the intensity, tenacity, and quality of student learning behaviors (Ambrose, Bridges, DiPietro, Lovett, Norman, & Mayer, 2010). Despite this knowledge, educators often struggle with how to spark students' interest. Long entrenched externally-regulated systems such as rewards and letter grades can undermine long-term motivation and subsequently sabotage student learning (Fink, 2003). A student preoccupied by maintaining a high grade point average may not care about the long-term mastery of the material. Further, if students do not find the content of the course interesting or relevant, they may see little value in it and may fail to engage in the tasks required to achieve meaningful learning (Ambrose et al., 2010).

However, educational psychologists and cognitive scientists have gleaned evidence regarding the many complex facets of motivation relative to student learning. Empirical evidence suggest that to attain student efficacy, students need to find both value and possibility of success within their work (Ambrose, et al., 2010).

In terms of finding *value*, research expanding and refining our understanding of human motivation has generated conflicting perspectives (see Figure 1).

Skinner's (1953) research was rooted in operant conditioning systems, where behavior was viewed as being modifiable using environmental reinforcements (e.g. incentive systems or punitive actions). His work and related research is credited for fostering practices aimed at increasing extrinsic motivation. These systems subsequently led to incentivized workers motivated by bonuses and promotions, and similarly incentivized learners primarily motivated by grades. However, later studies suggested that while operant conditioning methods can increase short-term extrinsic motivation, this motivation typically diminishes once the incentive has been obtained (Amabile, 1993; Deci, Koestner, & Ryan, 1999). *This was not my goal.*

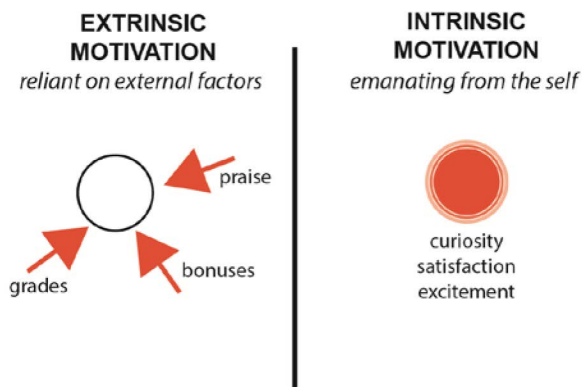


Figure 1. Diagram of dichotomy between extrinsic and intrinsic motivational factors. (Image by author).

Later research focused more specifically on concepts of intrinsic motivation and internalization. In intrinsic motivation, individuals are motivated by their own interest and satisfaction (Amabile, 1993). Deci and Ryan's (1985, 2000) seminal Self-Determination Theory (SDT) assumes that individuals are oriented toward developing their capabilities through interactions with their environments, looking for opportunities of "choice, mastery, and interpersonal connection," seeking integration between personal values and their experience. (Niemiec, Ryan, & Deci (2010, p. 175). SDT constructs have been tested and applied internationally to various fields including sports (Gagné, Ryan, & Bargmann, 2003), business organizations (Baard, Deci, & Ryan, 2004; Ilardi, Leone, Kasser, & Ryan, 1993), education (Black & Deci, 2000; Guay, Ratelle, & Chanal, 2008; Williams & Deci, 1996), and health care settings (Niemiec, Ryan, Deci, & Williams, 2009; Williams, Sharp, Kouides, Levesque, Ryan, & Deci, 2006). Deci and Ryan's body of work led to an understanding of three antecedents (i.e. competence, relatedness, and autonomy), that, when present, lead to long-term motivation.

This was my goal.

Competence

Stone, Deci, and Ryan (2009) define competence as "the belief that one has the ability to influence important outcomes" (p. 77). Competence can be supported by environments that offer an individual opportunity to assess and grow their abilities (e.g., optimal challenges), (Danner & Lonky, 1981). Competence can similarly be diminished when that individual perceives a lack of control over, or an inability to achieve desired outcomes. In other words, if a student or worker feels that a task is insurmountable, they are unlikely to be motivated to complete it. With this understanding, I determined that my students needed to feel as though they could master the material, so presenting it in a relatable and tangible way became one of my objectives.

Relatedness

Having satisfying and supportive social relationships is central to the construct of relatedness (Baumeister & Leary, 1995; Ryan, 1995). Research has suggested that the opportunity to form close and deep connections with a willingness to depend on others is an important motivating factor when taking part in an activity (Ryan, La Guardia, Solky-Butzel, Chirkov, & Kim, 2005). If a student or worker perceives that they can both rely on others, and that they, in turn, are relied upon, they will be more inclined to be intrinsically orientated toward the activity. This understanding led me to incorporate a team-based project in the class.

Autonomy

Deci and Ryan (1985) define autonomy as acting "with a sense of choice, volition and self-determination" (p. 77). Individuals are considered autonomous when they perceive their behavior to emanate from within, and that they are able to act according to their values and beliefs. Conversely, heteronomy is the perception of feeling controlled or pressured to act, think, or feel in specific way, and a heteronomous experience can quickly sabotage intrinsic motivation (Deci, Koestner, & Ryan, 1999; Ryan and Deci, 2006). The construct of autonomy has been studied in the classroom, suggesting that when students perceive autonomous support from their instructor, their levels of self-regulation, perceived competence, and interest in an activity increase, while their anxiety decreases (Black & Deci, 2000). This information led me to determine that it would be important for my students to have some level of self-determination, through selection of material, project parameters, and even self-imposed deadlines.

Learning Environments

I then needed to determine how these underpinnings might appropriately manifest within the learning environment. Often, students do not have choice in their assigned tasks (i.e. heteronomous experiences). That is, socialization agents (e.g. teachers, peers, or in this case myself) may deem a task to be important, but the student may not. Consequently, their process of coming to endorse an extrinsically motivated behavior (i.e. internalization) becomes vital for maintaining work in tasks where they were not initially intrinsically motivated (Ryan, 1993). The breadth of work offered by Deci and Ryan (1985, 2000) suggests internalization can be facilitated with the satisfaction of the aforementioned psychological needs: autonomy, competence, and relatedness. In other words, if a student feels able to complete the work (competence), has a strong sense of connection to the work and others taking part in it (relatedness), and feels a choice in how to enact on the work (autonomy), they will be more inclined to internalize the task and consider it important. Therefore, managers or teachers such as myself, who support satisfaction of these core needs may realize productivity gains by facilitating autonomous motivation (Stone, Deci, & Ryan, 2009).

Service Learning

To increase motivation, I also explored the appropriateness of a service learning project; with the belief that if students felt that their learning could directly better the lives of others, they may be more apt to engage in the required learning tasks. Service learning is generally defined as a credit bearing experience, where student learning results from providing a service to another party (Bringle & Hatcher, 1995). Mintz & Hessner (1996) proposed that service learning involves a “creative tension marked by collaboration, reciprocity, and diversity” (p. 34). Through this exchange, service learning projects have the potential to have positive and lasting impacts for both students and project stakeholders. McEwen (1996) noted that these interventions are “educationally and socially powerful” and hold “potential for enhancing the learning and development

of college students” (p. 86). Learning outcomes from these projects include cognitive and psychosocial developments such as greater complexity in thinking, stronger ethical commitments, greater competence, more autonomy, and increased awareness and empathy (McEwen, 1996).

Service learning has been incorporated in the interior design curriculum, albeit typically in a studio course. Zollinger, Guerin, Hadjiyanni, and Martin (2009) provided a criteria framework on how to appropriately use service learning experiences in a studio project. Their criteria included:

- Relating the project to course objectives,
- Applying course knowledge,
- Connecting to community, and
- Reflecting on learning.

While these criteria were derived from scenarios where students were hypothetically redesigning actual spaces, I felt that they also offered a useful framework for the design of this project.

THE DESIGN PROCESS

Following my review of literature, I then gathered precedent examples from various history courses. See Figure 2 for design process timeline. This examination revealed several admirable precedents which enabled student engagement through project-based learning. Mills, Schechter, Lederer, and Naeher (2011) documented the process of using oral history to inspire historical inquiry and civic engagement in a project entitled *Civic Voices: An International Democracy Memory Bank*. In another case study, Hadjiyanni and Zollinger (2010) presented three pedagogical techniques seeking to answer the question “How can we effectively teach history?” (p. 298). Their instructional developments included technology-based study tools, sketching for engagement and reflection, and creating projects which encouraged students to leverage their historical knowledge while designing for others. Collectively, these projects were aimed at fostering critical thinking and increasing motivation by encouraging active participation.

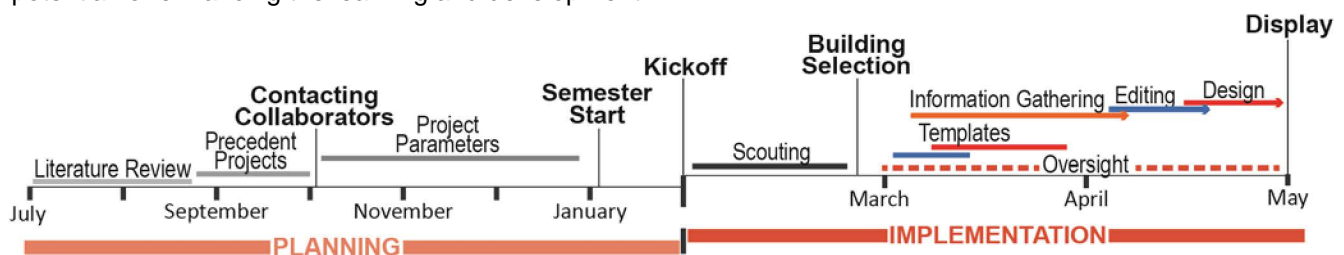


Figure 2. Timeline of project design process. (Image by author).

Project Parameters

After these reviews, I determined the resulting project should have the following goals, which brought forth accompanying questions.

- **Provide tangible examples**
 - *How might students learn about historic precedent beyond passively studying building photography?*
- **Be team-based**
 - *How can students work together while learning about historic precedent?*
- **Allow self-determination**
 - *Where can I incorporate opportunities for self-selection and choice?*
- **Be related to course objectives**
 - *How can the project support the learning of historical styles and cultural context?*
- **Provide application opportunities**
 - *How can students apply their knowledge in meaningful ways?*
- **Provide connection to the community**
 - *How can I use this opportunity to connect students to their current community?*
- **Incorporate reflection activities**
 - *How can I incorporate reflection without adding another deliverable?*

With these goals in hand but not a specific deliverable in mind, I contacted local city administrators seeking potential collaboration. The city planner from the town in which the university was located agreed to participate. The timing for this type of collaboration was fortuitous as the town had recently experienced budgetary-driven attrition and subsequently lost a staff member who had been tasked with marketing Historic Preservation Month. In other words, the students would be providing a service to the local government and to the community at-large.

Community Context

Historic Preservation Month is important to many of the town's residents. Similar to many Midwestern cities in the U.S., much of the metropolitan core (in this case comprised of two small cities) was developed during the 19th century, and its buildings carried the characteristic ornamentation of the day—some of which were known to have hosted Abraham Lincoln and Stephen Douglas. However, a century later, a progressive, yet somewhat destructive paradigm was ushered in. Consequently, several key buildings were razed to make room for newer, yet more austere structures. For some, the impacts were both emotional and economic. Demolished buildings included churches, houses, and the original location of

a now nation-wide restaurant chain. Citing these losses, community leaders have since initiated strategic efforts aimed at sustainable development and historic preservation. These efforts included the organization of historic districts, tax incentives, and educational programs for the public. Previous Historic Preservation Months were celebrated with walking tours, photo calendars, and tourist brochures.

To initiate the collaboration, the town planner and I discussed potential marketing mediums such as designing brochures and walking tours. However, due to the large number of restaurants in the downtown area, it was agreed to focus student efforts on the design and creation of informative placemats to be used in downtown restaurants during the entire month. This would allow restaurant patrons to read the placemats while awaiting their meals.

When planning the project it was important for me to acknowledge background of the incoming students. All were majors of Interior and Environmental Design, all female, and all were traditional students ranging in age from 19-22. However, the seventeen students were at varying levels in the program, (i.e. sophomore, junior, or senior). As such, I felt confident in assuming that as young adults, few would have witnessed long-term historic preservation projects, much less the impacts of these efforts. Additionally, many may not have yet had the opportunity for extensive travel, which can afford immersive learning experiences and firsthand viewing of historic building styles. Due to their varying levels in the program, the students were approaching the course with different background knowledge; some having no exposure to design history, while others had already taken a course. As such, I decided that the students would benefit from having some foreknowledge of architectural history prior to starting the project. This meant that the project would start three weeks into the semester and its duration would be ten weeks. During this time, the students would be asked to select key buildings, document their history, and then design the placemats.

Once the initial project parameters were established, I then needed to define reciprocal relationships between community and University stakeholders. For example, the Town Planner and the historic preservation board provided the students with situational context, while local restaurant owners disseminated student work. In turn, the students informed the community via the sharing of their projects, and in doing so, provided restaurateurs' with a source of patron entertainment (see Figure 3).

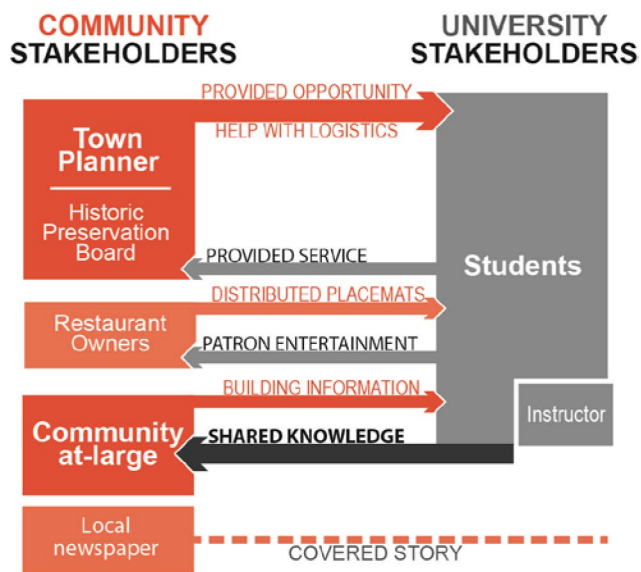


Figure 3. Project Stakeholders. (Image by author).

I determined that due to the class size; two iterations of placemats would be created; thus splitting the class into two distinct, yet cooperative teams. Each team would consist of nine to ten students (a relatively large group), but each team member would have a specific role. The teams would each focus on a historic district of their choice, but would need to work together to create a holistic aesthetic and graphic theme between their iterations. Additionally, having two placemats would add viewing variety for restaurant patrons.

Along with service learning criteria, Self-Determination Theory underpinned the project's design (Deci & Ryan, 2000; Stone, et al., 2009). Consequently, I needed to determine how the Self-Determination constructs might most appropriately manifest in the project. This step was significant, since the students ultimately did not have choice in the overall assigned task (the project needed to be completed), and socialization agents-myself included, may have believed in the project's importance, but the students might not share in that belief. As such, well-placed incorporation of the constructs was crucial to the project's success (see Figure 4).

Competence

To prepare students for the project, I introduced them to historical theory and building characteristics ranging from prehistory into the Industrial Revolution. This was done both before and during the project. Lectures were clustered by topic, covering cultural characteristics and resulting building features from both eastern and western traditions. To increase the student's application skills, I included short undertakings such as identification games, sketch-along activities, and scenarios-based exercises. During the project itself, the goal was for the students to accurately recognize and identify historical characteristics along with their origins. During lectures, I often asked students to identify similar styles in their respective hometowns.

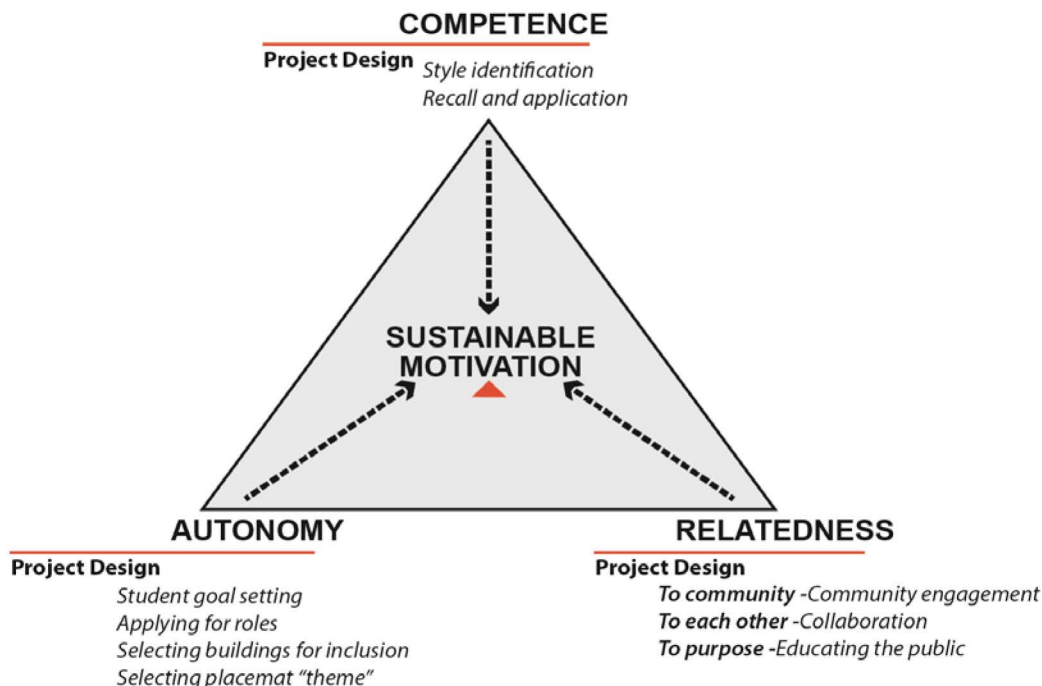


Figure 4. Self-Determination Theory underpinnings as related to project design decisions. (Image by author).

This was done to build confidence in style recognition, critical thinking, and knowledge transfer. I believed that if the students could see the relationship between buildings discussed in class to those in their own hometowns they may better understand the material, and care to learn it. To foster student perceptions of influence over the project, their knowledge together with that of their teammates, drove the content and design of the project. All students *scouted* the town on their own to search for buildings they felt merited inclusion. After which, they presented their findings to the class for voting. This provided each student the opportunity to help shape the final document. Collectively, these tasks increased the student's knowledge base, and their awareness of their personal influence over the final outcome.

Autonomy

Prior to starting the project, I developed roles paralleling those I experienced in architectural practice, (i.e. managerial, design, technical, and production). Students would apply for roles that most closely aligned with their own skills and interests. The process was likened to that of job candidate searching for an appropriate position within a design firm. The students filled out forms based on standard work applications and were asked about their qualifications for the respective position, their commitment to it, and their reasons for pursuing it. I also asked students to declare a second choice in the event of overlapping requests. Figure 5 outlines the relationships between each position and their practice counterparts. Together, the distinction in roles, and the selection process itself, were aimed at promoting a sense of self-determination and choice. The roles and responsibilities are outlined below:

The Editor-in-Chief

One person acted as a project manager, overseeing both teams and serving as a liaison between the two. This role was tasked with ensuring the highest design quality and content accuracy. To do so, they oversaw the development of standards, determined protocol for project reviews, set interim deadlines, maintained contact with the client, and worked with both Graphic and Copy Editors to maintain set standards.

Graphic Editors

Each team had two Graphic Editors. These students could be likened to designers of the project, and were asked to facilitate class discussions regarding graphic precedent and design goals. Using this feedback, Graphic Editors from both teams worked together to design the necessary graphics and placemat compositions. Nearing project completion, they also worked with Copy Editors from their own teams to format and input information into the final design.

Copy Editors

Each team had two Copy Editors. These students provided technical oversight, and were tasked with defining the standard content templates to be used by Information Scouts. The Copy Editors also reviewed draft and final versions of text; ensuring content was consistent in length and format, and free of errors and omissions. These tasks involved working with Information Scouts to obtain required information, and delivering edited text to the Graphic Editors.

Information Scouts

Each team had five Information Scouts who were likened to having production roles on a project (i.e. producing information). They were responsible for photographing and obtaining information about the selected buildings, and uncovering compelling building stories or facts. They worked most closely with the Copy Editors.

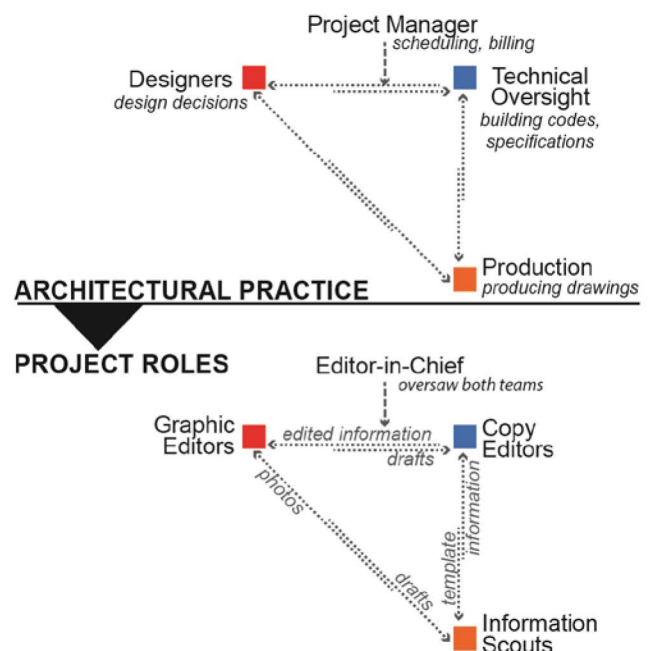


Figure 5. Roles and relationships. (Image by author).

Another project design attribute aimed at increasing autonomy was to ask the teams to determine their own goals. These goals often took the form of internal deadlines, where one role would share the outcomes of their work to the subsequent party. Students also worked in groups to determine which historic district they preferred to research, and develop a "theme" which tied all of their selected buildings together. These measures allowed for some sovereignty in team decision making.

Relatedness

Several facets of the project were aimed at increasing student relatedness to the community, their future

careers, each other, and finally, the topic itself. At times, college students can spend four or more years in a college town and rarely leave the confines of campus or its adjacent neighborhoods. To change this, my goal was to enhance the student's connection to the community and I anticipated that this could be encouraged by a reciprocal exchange. In that, the students would need the community to complete their tasks, and they in-turn, would share what they had learned. To do so, I had the students look to the community to obtain information (i.e. trips to the historical society, local library, and field research). Moreover, meeting the client provided students with a tangible representation of someone who would benefit from their efforts. Another aim was to enrich the connectedness felt amongst the students. To do so, the project's design required intersections between the student roles; one role would be reliant on another to complete their tasks. This was done to mimic practice-based work settings, and was intended to help students foresee how they might work in the future. This was somewhat complicated by the vertical orientation of the class (i.e. sophomore, junior, and senior students were all enrolled). I had to acknowledge that the skill sets and contributions of each student may vary, yet these different perspectives might provide opportunities for knowledge exchange. I often recognized the interconnectivity of roles in class, and directed students to be accountable to each other while working on shared goals. Last, I hoped that the students would feel a sense of relatedness to the purpose of the project itself and to the knowledge gained while working on it. I theorized this sense of purpose would increase the student's motivation to perform well on the project, and thus their motivation to participate in lectures and class activities. Their increased participation would subsequently enhance their performance on the course exams.

Motivation

Of course, the ultimate goal of the project was for the students to be more motivated to learn about design history, potentially extending their learning beyond the scope of the course itself. To understand if this was the case, my plan was to measure student perceptions of motivation for the topic after the project had been completed.

PROJECT IMPLEMENTATION

To start the project, the city's Town Planner was introduced to the students, discussing local buildings that have been lost to development, as well as sharing preservation success stories. From that point on, the class was directed to refer to the Town Planner as the client. This marked an important transition, as it held the students accountable to another party, apart from myself (the instructor) and each other (their potential teammates).

After the project was introduced, the students were given descriptions of project roles and responsibilities. They were then prompted to fill out the aforementioned application based upon their desired roles.

Upon reviewing the applications, I placed the students in roles, and within one of the two teams. Sixteen out of seventeen students were placed within their first choice and the remaining student was placed in their second choice. Team composition was determined based upon assigned roles and the student's class level, such that, each team would have one senior level Graphic and Copy editor. Additionally, the Editor-in-Chief was also a senior. Interestingly, several students approached me about feeling a responsibility to pursue the Editor-in-Chief role, however desiring to perform other roles. These students were placed in their desired roles.

After announcement of teams, one class session was dedicated to team orientation, during which team members were asked to discuss their best and worst group project experiences. From those discussions, each team compiled four to five attributes of both a successful and unsuccessful team. These lists were used as a quasi-contract, helping each team member to understand their personal responsibilities, and their team's expectations. I also addressed the issue of personal accountability, announcing that a component of the project would be for all students to both reflect on their own contributions, and evaluate the contributions of their teammates. These scores would then be factored into their individual grades.

Following the team orientation exercises, each team was asked to establish project goals and a historic district in which to focus. In an effort to increase individual investment in the project, all students were then tasked with surveying the town for buildings they felt merited inclusion. One class session was dedicated to building promotion, where each student shared a photo and indicated why they felt their selected building was unique or demonstrated attributes discussed in class.

Following a class vote, Information Scouts photographed and documented the selected buildings, and were required to visit the local library and historical society. On their own volition, some students even opted to go door-to-door to elicit additional information from building owners. Copy Editors then formatted these materials, while Graphic Editors were concurrently designing placemat compositions. All of which, was under the oversight of the Editor-in-Chief.

Team Interactions

The majority of work on the project was completed outside of class. This allowed us to continue to cover new material. During this time, I purposefully stepped back from project decisions. However, once a week I allocated 10 minutes of class to “touch base” in teams. My stepping back was done to foster autonomy. However, my decision had both positive and negative implications. In hindsight, the students opted to have few meetings, choosing instead to divide, complete, and share information as needed. While seemingly efficient, the students had little awareness of what their teammates were doing unless it directly impacted their own work.

The town planner had few interactions with the students during the course of the project. To keep the client abreast of updates, the students did send their geographic focus (i.e. historic district of choice), placemat themes, and two formative iterations to the client for comment. She was agreeable about the student’s direction, requiring no changes. Thus, allowing the students to have complete control over selected buildings, graphic style, and overall theme. See Figure 6 for placemat development. However, while the client was very open and cooperative, the mere fact that the student outcomes were to be on display to the entire community increased the stakes for all involved.



Figure 6. Placemat development, inspiration (top), graphic template (bottom). (Image courtesy of students).

Apart from an immovable deadline, most hurdles the students encountered came from their own teammates. For a variety of reasons interim deadlines sometimes went unmet. Difficulty in obtaining information about selected buildings, inclement weather, and poor time management all factored into delays. In hindsight, the Graphic Editors were likely most impacted, as their deadline could not change, even if they had to wait for the information. However, their preplanning mitigated the impact, and they were able to incorporate the information shortly after it was delivered.

Project Completion

After the project was completed, the students took anonymous surveys and turned in reflections covering their contributions and what they learned as a result. Also, the town planner’s staff printed and distributed placemats to five downtown restaurants. Finished products were used during the entire Historic Preservation Month (see Figure 7).



Figure 7. Placemats in use at local restaurants (Images by author).

ANALYSIS

Both anonymous surveys and assigned reflections were analyzed to determine the perceived presence of autonomy, relatedness, and competence, as well as understand the impact of the project on students' motivation to learn about design history.

Surveys

Eleven survey items elicited student perceptions regarding the occurrence of the three constructs, and level of motivation. The questions consisted of a 6-point Likert scale (5=strongly agree, 0=strongly disagree); surveys also allowed for open-ended explanation of answers. N=15 students responded to the survey. See Table 1 for student perceptions of competence, relatedness, autonomy, and motivation.

	Mean	SD
Measures of Competence		
The project....		
Helped me to identify historical styles.	4.2	.774
Has increased my teamwork and leadership skills.	3.57	.518
My contribution to the project improved its outcome.	3.46	1.24
Measures of Relatedness		
The project....		
Helped me to connect to my local community.	3.8	1.01
Helped me to relate what I'm learning to my future.	3.42	.646
Measures of Autonomy		
My project role was a good fit for my skills and interest.	3.73	1.22
I had an opportunity to express my opinions/ideas.	3.46	.915
Measures of Motivation		
This project was a good fit for a history class.	4.6	1.02
This project was a good use of my time.	3.86	.833
I've spent a lot of time thinking about the project outside of class.	3.46	.915
I would consider myself passionate about this project.	3.06	.997

Table 1. Student perceptions of competence, relatedness, autonomy, and motivation.

On the open-ended responses, students left both positive comments about the project, and negative comments regarding their team's dynamics, for instance:

"I don't think we worked as a team really [*sic*], it was more like individuals-not much collaboration."

These comments provided insight into their scoring. Last, students were also asked to score their interest in history both before and after the project (1=low, 10=high). Post-project scores rose by 11%.

Reflective Journals

In addition to describing their own contributions, the students also responded to the open-ended prompt...

What did I learn as a result of the project?

These reflections were inductively coded to determine themes by tabulating frequency of keywords from N=14 reflections. Themes illustrated:

- a greater interest in design history (n=8);

Student comment:

"I had an indifferent feeling about history. After this project I find history to be interesting. I now notice different styles when I walk down the street."

- an increased ability to connect lectures to observed buildings (n=7);

Student comment:

"I really didn't think that the homes and buildings in our community were tied to, and inspired by history. They were just houses that were in town. Now when we are out, I see all of these different features and recognize their style and origin better than if I were to just see them on screen in class."

- ability to connect project to future careers (n=3);

Student comment:

"I learned that historic preservation is a market on its own. It [the project] even peaked my interest to look into the historical neighborhoods around my home and to maybe do my future internship working with a historic district."

- an enhanced connection to community (n=7);

Student comment:

The project... "gave me a reason to drive around and see more of the community. I was able to relate architecture around us to the styles we had been learning about."

- perceived growth in leadership and teamwork (n= 6); and

Student comment:

"I learned that collaboration can produce a great outcome, but also can produce stress when a ball is dropped."

- improved style recognition and analysis (n=6).

Student comment:

"The project taught me to [analyze] architectural styles we learned in class and apply them to actual buildings. I am a visual learner, so it was nice to have local buildings to look at and not rely on a textbook image."

ANALYSIS OF THE EFFECTIVENESS OF THE SOLUTION

Generally student scores indicated perceived presence of all three constructs; competence, relatedness, and autonomy at relatively similar levels. Students also indicated a modest increase in motivation.

Competence

Student scores indicated the project did help them to identify historic styles. However, this could also be a limitation as the town did not contain diverse building styles, and the students could not always benefit from this type of immersive exposure. Students indicated modest agreement that the project helped to develop their teamwork and leadership skills, this could be due to team dynamics or my purposeful lack of involvement in day-to-day decision making. Students generally considered their knowledge and skills as a contributing factor to the success of the project. Those indicating lower scores may have felt slighted if their nominated buildings were not selected for inclusion, or if their work had been edited beyond recognition. Both scenarios were given by students on the open-ended responses.

Relatedness

The students agreed that the project helped them to relate to the community. Unfortunately, due to the small overlap between the semester schedule and Historic Preservation Month most students returned home for summer break-leaving town-prior to the distribution of the placemats. Subsequently, the students were not able to see the placemats being used by restaurant patrons. This timing also meant students responded to the questions without having seen the placemats in use. This is unfortunate, since witnessing their designs in use is a rare opportunity for interior design students. Additionally, seeing community members reading the placemats may have

further enhanced the students' sense of connectedness to the community. My students modestly agreed that the project could be related to their future careers. Open-ended responses indicated having a client and an immovable deadline-Historic Preservation Month could not be deferred-was beneficial to illustrating future modes of work. Yet, team dynamics at times hindered decision making and flow of information. As in many team projects, some students were more diligent about promptness and completeness of efforts than others, and these differences were cause for frustration. While, the inner workings of the teams likely provided learning opportunities, many students may still not have been able to envision how historical knowledge might be applied in their future work. However, in terms of relating to the topic of design history itself, some students indicated that the project had caused them to "look everywhere" for historic characteristics in the built environment. One student writing that she never realized the various influences on design impacting her own hometown (a town not included in the project). Another student mentioned a newfound interest in pursuing a career in historic preservation. In summary, while this particular project could not mimic professional projects to the same degree that a studio project might, the students did seem to relate specific aspects of the project to their future careers.

Autonomy

Students generally felt their ideas and opinions were expressed. However, open-ended responses illustrated that some students' work had been edited beyond recognition. This act may have negatively impacted their perception of self-expression. However, most students felt that their project role was a good fit for their skills and interest. This was likely due to their being assigned to their preferred roles. Yet, some mentioned a lack of interest in conducting the research component of the project. Additionally, several students indicated they had little time to work on the project, as they were concurrently enrolled in intensive design studio courses. Yet, students overwhelmingly felt the project was a good fit for a history class; some even adding exclamation points to their open ended responses.

Motivation

Generally, the students indicated a greater level of interest for design history following the project. An 11% increase, while modest, does suggest that the project created a positive learning experience. One student suggested "while taking this course I realized that there is a lot more to the course than what I thought-[sic] interesting information." While it is not

yet known how a project such as this may impact students' sustained motivation for the topic, they did reflect positively on how their work contributed to others. Anecdotally, several graduating students mentioned inviting their parents to restaurants where the placemats were in use. Instances such as this would not be possible in a traditional lecture/exam format.

SUCCESSES AND FAILURES OF THE DESIGN

As with any new project, its design largely depends on the personal choices of the instructional designer. While, existing research can provide insight, an instructor simply cannot anticipate all potential situational influences when initially designing the project. As such, my decisions had intended and unintended consequences, both of which, contributed to successes and failures. While overall, the project contributed to a positive learning environment, it did add complexity to the class. The planning of project itself was time consuming, and connecting the desired learning outcomes to client needs was complex. Additionally, since it was a team project, I had to foreshadow the team roles, relationships, and projected workloads, as well as determine appropriate accountability measures. The project also added complexity for the students, as they were working with others, and in addition to project deliverables they had to reflect on their personal contributions and those of their teammates. For me, having the opportunity to reflect on my role and review the student comments has been invaluable, and I would make changes in the following areas:

Expectations and Deliverables

I may have failed to convey the significance of the final outcomes to the students. While they wanted to contribute within the scope of their roles, some may have lacked the foresight to envision a final deliverable, and their role in achieving it. As such, the roles provided an organizing framework for tasks, yet may have limited the sharing of ideas. Further, having knowledge that the work would be used by others (i.e. handed off to subsequent roles), seemingly left some students to feel as though it would also be corrected by them. This left some errors and omissions to be missed until near the end of the project. This was problematic; the city was paying for printing and distribution costs, so the quality of the end product was important. As such, frequent edits were necessary by me, the Copy Editors, and once even by the Town Planner. This could be due in part to the student's background and interest. Many project deliverables in Interior Design are of a relatively visual

nature, so design students generally receive less exposure to writing. However, a liaison with a university writing center may alleviate editing issues.

Class Dynamics

Diversity is often found in the design workplace, yet interestingly, this student cohort was strikingly similar. As mentioned previously, all were female and of a similar age. The one area of diversity-the vertical orientation of the students- was of great benefit. Their diversity in skills permitted cross pollination of knowledge, allowing students to be mentors and mentees. However, cultural diversity was lacking, and guest speakers with varying backgrounds may have enriched the experience. Also, expanding the collaboration to English and History majors could have brought different viewpoints and skills, thus potentially elevating the learning experience for everyone.

Team Dynamics

While a team project likely enriched the students' experience, facilitating these projects can be challenging. As an instructor, I wanted to strike a balance between motivating the students to perform their best while allowing them to be relatively autonomous. This meant that I was not privy to the team's inner workings and struggles. Interestingly, no one in the class came to me mentioning difficulties, yet these came to light on student reflections. Some students suggested they had a limited role on the project, and consequently felt marginalized by their teammates.

Buildings were selected for the placemat based on how many students nominated a particular building (i.e. buildings that were nominated multiple times were included). Ties were then "broken" by a class vote. Consequently, those who brought forth buildings that were not selected may have felt sidelined. This could be eliminated by more document iterations, however lending support to ideas that were not originally your own can be a valuable learning opportunity. Future projects could potentially leverage smaller teams to nullify potential social loafing and increase the investment required by all team members. To minimize interpersonal team difficulties, a mid-project evaluation may allow each student to assess their teammates based on work completed thus far. If conducted, I would not share issues with the teammates (to avoid any further negative impacts), but these evaluations could be used to help me understand and curtail issues through class wide discussions.

Reevaluating Project Roles

When constructing teams, any educator is somewhat at the mercy of individual student personalities and work ethics, thus team success can be unpredictable. Prior to the start of project I divided roles according to my own personal work experience in an architectural firm. In general, establishing roles was effective for overall accountability and division of work. However, certain roles need further evaluation.

Editor-in-Chief

This role was largely underutilized. The Editor-in-Chief may have personally felt awkward in setting and enforcing deadlines. Having two cooperative Chief Editors could increase overall accountability, and support a division of tasks. In doing so, one could interface with the client and instructor, the other with the teams.

Graphic Editors

Interestingly, liaison between the two groups was enacted primarily by the Graphic Editors. This may be due to the prominent nature of their collaboration. As a result, the Graphic Editors negotiated both inter-team and intra-team work. All four often worked side by side in developing the graphic template; then within their groups, they inputted their team's information. Due to the scope of their work they were most impacted if interim deadlines were missed. Fortunately, these students had planned accordingly. If this were not the case the quality of the end product would have certainly suffered.

Copy Editors

I was shortsighted in estimating importance of this role. During the project, students desiring to be Copy Editors noted previous experience, (i.e. editorships in high school newspapers and similar). However, the succinct requirement of writing-there was only so much room on the placemat-proved to be problematic. Having precedent examples may help students to be more aware of the limitations and opportunities afforded by the writing itself.

Information Scouts

In hindsight, there were too many Information Scouts on each team. Also, students in this role were largely disconnected from the final project outcomes. It may have been beneficial for these students to review and approve the final iteration. While this would have added time, this may have provided an added sense of accountability when compiling their information, and allow these students to see their contributions.

Additional Roles

Each team may have also benefitted from having a dedicated project manager. This person could interface with the Editor-in-Chief as well as their own teams. They could also provide assistance where needed, and help curtail missed deadlines.

Instructor Reflection

Despite its prospective design, I can make no claim that this particular project had a causal relationship to increased scores of student motivation. The students may have simply enjoyed the content and may have developed a newfound interest from the lectures themselves. Students may have also enjoyed the discursive format of the lectures. Anecdotally, I witnessed an increase in student commentary and questions over the course of the semester.

While it is not yet known if working on this particular project has inspired greater levels of sustained motivation in the long-term, this project may lend ideas to other educators-both in history courses and beyond-who are teaching courses where their students may be traditionally less intrinsically motivated or even *dread*.

While improvements could and should be made to the project's design, on a personal note, the project was fulfilling for me as an instructor. This class met at 8am Monday, Wednesday, and Friday-whereas the early start alone could be a potential source of dread for students. In fact, this was their *only* class on Fridays. Yet, even on Fridays, I could see them discussing, collaborating, and constructing knowledge. I generally encountered very little of the "look" that I so dreaded, and feel confident the students did not dread the class itself. While there were certainly issues to be dealt with and numerous obstacles encountered, I feel pleased that the students' knowledge was shared with the community in which they lived. Knowledge demonstrated solely on an exam is of little use to those outside of the class itself.

In the words of one student...

"Our project helped others to learn."

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REFERENCES

Amabile, T. M. (1993). Motivational synergy: Toward new conceptualizations of intrinsic and extrinsic

motivation in the workplace. *Human Resource Management Review*, 3(3), 185–201.

Ambrose, S., Bridges, M., DiPietro, M., Lovett, M., Norman, M., & Mayer, R. (2010). *How learning works: Seven research-based principles for smart teaching*. San Francisco, CA: Jossey-Bass.

Ames, C. A. (1990). Motivation: What teachers need to know. *Teacher's College Record*, 91(3), 409-421.

Attoe, W., & Moore, C. W. (1980). Prologue: On mining history. *Journal of Architectural Education - How Not to Teach Architectural History*, 34(1), 1-2.

Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology*, 34, 2045-2068.

Baumeister, R. & Leary, M. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.

Beecher, M. A. (1999). Alternative models of the past: History/Theory/Criticism Courses. *Journal of Interior Design*, 25, 37–44. doi: 10.1111/j.1939-1668.1999.tb00334.x

Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science Education*, 84, 740-756.

Bringle, R., & Hatcher, J. (1995). A service learning curriculum for faculty. *Michigan Journal of Community Service*, 2, 112 – 122.

Council for Interior Design Accreditation. (2014). *Professional Standards*. Retrieved from <http://accredit-id.org/wp-content/uploads/2010/03/Professional-Standards-20115.pdf>

Danner, F. W. & E. Lonky. (1981). A cognitive-developmental approach to the effects of rewards on intrinsic motivation. *Child Development*, 52, 1043-1052.

Deci, E. L., Koestner, R., & Ryan, R.M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125(6), 627-667.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.

Deci, E. L., & Ryan, R. M. (2000). The "what" and the "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.

Fink, L.D. (2003). *Creating significant learning experiences*. San Francisco: Jossey-Bass.

- Gagné, M., Ryan, R. M., & Bargmann, K. (2003). Autonomy support and need satisfaction in the motivation and well-being of gymnasts. *Journal of Applied Sport Psychology*, 15, 372-390.
- Guay, F., Ratelle, C. F., & Chanal, J. (2008). Optimal learning in optimal contexts: The role of self-determination in education. *Canadian Psychology*, 49, 233-240.
- Hadjiyanni, T., & Zollinger, S. (2010). Stimulating student interest in design history courses. *Design Education: Exploration and Prospects for a Better Built Environment*. 4(2-3), 296-309.
- Ilardi, B. C., Leone, D., Kasser, R., & Ryan, R. M. (1993). Employee and supervisor ratings of motivation: Main effects and discrepancies associated with job satisfaction and adjustment in a factory setting. *Journal of Applied Social Psychology*, 23, 1789-1805.
- McEwen, M. (1996). Enhancing student learning and development through service learning. In Jacoby, B. & Associates. *Service-learning in higher education* (pp. 53-91). San Francisco, CA: Jossey-Bass.
- Mills, A., Schechter, S., Lederer, S., & Naeher, R. (2011). Global stories of citizenship: Oral history as historical inquiry and civic engagement. *The Oral History Review*, 38(1), 34-62.
- Mintz, S., & Hessner, G. (1996). Principles of good practice in service-learning. In Jacoby, B. & Associates. *Service-learning in higher education* (pp. 26-52). San Francisco, CA: Jossey-Bass.
- Niemiec, C. P., Ryan, R. M., & Deci, E. L. (2010). Self-determination theory and the relation of autonomy to self-regulatory processes and personality development. In R. H. Hoyle (Ed.), *Handbook of personality and self-regulation* (pp. 169-191). Malden, MA: Blackwell Publishing.
- Niemiec, C. P., Ryan, R. M., Deci, E. L., & Williams, G. C. (2009). Aspiring to physical health: The role of aspirations for physical health in facilitating long-term tobacco abstinence. *Patient Education and Counseling*, 74, 250-257.
- Ryan, R. M., (1993). Agency and organization: Intrinsic motivation, autonomy and the self in psychological development. In J. Jacobs (Ed), *Nebraska symposium on motivation: Developmental perspectives on motivation*. 40, (pp. 1-56). Lincoln: University of Nebraska Press.
- Ryan, R. M. (1995). Psychological needs and the facilitation of integrative processes. *Journal of Personality*, 63, 397-427.
- Ryan, R. M., & Deci, E. L. (2006). Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of Personality*, 74, 1557-1586.
- Ryan, R. M., La Guardia, J. G., Solky-Butzel, J., Chirkov, V. I., & Kim, Y. (2005). On the interpersonal regulation of emotions: Emotional reliance across gender, relationships, and culture. *Personal Relationships*, 12, 146-163.
- Skinner, B. F. (1953). *Science and human behavior*. New York, NY: Simon and Schuster.
- Stone, D., Deci, E. L., & Ryan, R. M. (2009). Beyond talk: Creating autonomous motivation through self-determination theory. *Journal of General Management*, 34, 75-91.
- Swenarton, M. (1987). The role of history in architectural education. *Architectural History*, 30, 201-215.
- Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology*, 70, 767-779.
- Williams, G. C., Sharp, D., Kouides, R. W., Levesque, C. S., Ryan, R. M., & Deci, E. L. (2006). A self determination multiple risk intervention trial to improve smokers' health. *Journal of General Internal Medicine*, 21, 1288-1294.
- Zollinger, S. W., Guerin, D. A., Hadjiyanni, T. & Martin, C. S. (2009). Deconstructing Service-Learning: A Framework for Interior Design. *Journal of Interior Design*, 34: 31-45. doi: 10.1111/j.1939-1668.2009.01022.x