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Students' Cognitive and Emotional Development during the Transition from High School to Design School

Steven Faerm,¹ Parsons School of Design, USA

Abstract: This qualitative study examines both the cognitive and emotional development of design students as they transition from high school to the first year of design school. The study investigates this through the lenses of multiple constituents, including design school undergraduates, educators, directors, scholars, and current program structures. This study also considers the future of design education and what kind of experience might best prepare students for their transition into design school. Through a literature review, interviews, focus groups, survey, and the evolving industry, the transitional experience is contextualized. This study aims to provide both pre-college and undergraduate programs, educators, and directors with information for how they can improve their students' transition into undergraduate design programs.

Keywords: Design Education, Design Pedagogy, Student Development, Pedagogy, Teaching and Learning, Higher Education

Introduction

I never knew it would be so different, so difficult, and so memorable.

– Anonymous, Design Student Survey

Design school students often feel a disconnection between their high school and undergraduate experiences during their freshman year of college/university as a result of the discordant academic emphases between the two levels of education. The majority of US design schools are developing new academic practices that respond to a new set of knowledge and skillsets demanded by the globalized design industries (Darling-Hammond 2010): design professionals are being sought for their abilities to create innovative products, rethink business systems, and understand broader contexts through interdisciplinary practices (Marshall 2008; Muratovski 2010). To provide students with these skillsets, design schools are increasingly shifting their curricula emphases from technical and tactical skills to those that prioritize the development of students' conceptual and speculative thinking, understanding of research methodologies, design processes, and interdisciplinary practices. Despite this evolution occurring across US design higher education, the nation's pre-college art/design education has remained unchanged for decades; curricula remains focused on honing students' vocational and technical skills—such as drawing perspective, craftsmanship, and digital aptitudes—rather than introducing and developing the aforementioned skillsets prioritized in design schools and sought by design industries.

These discordant academic foci prevent many first-year design students from having a smooth, fluid cognitive and emotional transition from high school to design school because they must leap across the ever-widening chasm between the two contrasting educational environments with little guidance. Additionally, the deeply rooted beliefs and attitudes towards design education and practice these students developed and nurtured throughout their formative years of pre-college studies must now yield to new—and, at times, radically different—beliefs, methodologies, and emphases. The associated cognitive and emotional demands can be

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destabilizing because students' ways of existing within and understanding the world around them are upset by the foisting of new mindsets, creative processes, and assessment criteria for what constitutes "successful" design work. As a result, most first-year design students undergo multiple crises during which they question their personal identities, academic competencies, career choices, and life goals. These challenges and associated struggles can undermine students' potential for academic and personal success.

What challenges do undergraduates experience during their first year of design school? How can high schools better prepare students for the transition from high school to design school? How can design schools provide a smoother emotional and academic transition for undergraduates during their first year of design studies? What pedagogical structures and support systems at both levels will contribute to a more fluid transition into design school?

There is an absence of research literature that examines students' transition from high school into the first year of design school. This study aims to fill that gap by providing secondary and tertiary design programs, school leadership, teachers, and advisors with important information for how they can improve their students' transition into the first year of design school. This study has implications for actions that these critical participants can take to improve students' transitional experiences and potential for academic and personal success. This study contributes to the nascent body of research relating to art/design education, academic program design, students' preparation for college, the learning and teaching of art/design in grades 9 through 16, and young adult development in the context of design education.

Background Literature

Design Practices in the Twenty-first Century

The steady advancements of globalization and technology during the twenty-first century—and their impact on the design industries—is unprecedented. How we conduct business, how we communicate, how we form relationships, and ultimately how we all live has been drastically reshaped by technology (Friedman 2005). These new contexts have enabled business practices to engage in a broader international marketplace through production and distribution processes that were previously inaccessible.

The accelerated technological advances and expanded access to the global marketplace have given designers a seemingly unlimited platform for producing their goods globally. The subsequent search for less expensive production facilities has destabilized traditional centers of production—particularly in apparel manufacturing. For instance, as late as 1965, 95 percent of American clothing was made in the US; however, this dropped to just 5 percent by 2009 (Levin 2009). The exodus of apparel manufacturing from the US to less expensive facilities overseas exemplifies the "outsourcing" of the US economy. For the American apparel industry, globalization eliminated certain kinds of work altogether (Pink 2005), thus requiring designers to shift emphasis in the emergent "knowledge-based economy," where innovation and creativity are critical for sustaining success.

The meteoric attention to and demand for "high design" that began in the early 2000s led to an array of cultural phenomena. For instance, the television show *Project Runway* has aired nearly twenty-five versions globally, and the retrospective of fashion designer Alexander McQueen held at the Metropolitan Museum of Art was one of the top three shows in the museum's 150-year history, attracting 661,409 visitors in just three months (Freeman 2011). These cases highlight mass audiences' increased attention given to "high design"—a disposition that is no longer limited to the elite (Postrel 2003).

The growing cultural obsession with design has contributed to escalating rates of consumption and production. Consumers now demand roughly four-times the number of garments they did in 1980 (Leonard 2010). The sharp incline of consumption is further

evidenced by the household final consumption expenditure—the market value of all goods and services purchased by households—that has grown from \$1.7 trillion U.S. in 1970 to \$43.9 trillion USD in 2016 (Index Mundi n.d.). To meet consumers' insatiable demands, retailers produce massive quantities of apparel. For example, Zara produces 12,000 styles each year while Hennes & Mauritz (H&M) sells more than 500 million items every year from more than 5,000 stores worldwide (Siegel 2011; Leonard 2010; Statista 2019a). These and other “fast-fashion” retailers restock sales floors with new collections every two weeks (Leonard 2010), thus contributing to an overabundant marketplace in which consumers' material needs are not just being met but are being surpassed.

To stand out in this overabundant marketplace, designers must differentiate their goods in ways that surpass mere aesthetic appeal. Consumers' engagement with design is no longer driven by need but rather by the desire for emotional fulfillment gained through obtaining an object of the designer's narrative and design processes (Faerm 2016). The designer's new role is closely aligned with the twenty-first century's knowledge-based economy; designers must maintain technical proficiency *while* mastering social science research methodologies. These combined skills will enable designers to discover consumers' emotional needs, hone their conceptual thinking and brand narratives that strategically provide emotional fulfillment, and advance design thinking that fosters interdisciplinary practices, innovative design processes, and meaningful design. The ideal designer, increasingly sought by industry, is not merely the vocational master who dictates personal taste but a conceptualist who utilizes well-researched methodologies when approaching the design process, thus creating more meaningful and enduring design (Palomo-Lovinski and Faerm 2009; Faerm 2016).

Design Education: The Widening Gap between the College and Pre-College Levels

US design higher education is responding to knowledge-based economies' and industries' demands for college graduates who are able to innovate around existing products and/or outdated systems (Darling-Hammond 2010) by replacing their long-held vocational, skills-oriented undergraduate curricula rooted in Bauhaus ideologies (learning by making) with those that prioritize design thinking over practical skills across all four years of study.

Beginning in the first year of design school, fundamental design skills, such as drawing and prototyping, are co-taught with skills that promote design thinking; these include research methodologies, conceptualization, ethics, empathy, philosophy, sustainability, and global issues. Interdisciplinary practices are also encouraged so that information between traditionally “siloes” design and academic disciplines may merge and stimulate creativity for innovation (Negroponte 2003; Marshall 2008). For instance, design assignments might require students to collect ethnographic research, followed by developing design iteration grounded in an empathic understanding of the user's psychographic profile. Students will also learn to conceptualize systems for eco-friendly production/distribution and/or create multi-purpose apparel for transient communities. College-level design curricula underscore the interconnectivity design plays in the world so that students “understand the socio-cultural, political, and commercial implications that design can have in society” (Muratovski 2010, 385) and become not merely suppliers of aesthetically pleasing, functional artifacts, but innovators and social entrepreneurs.

Despite this shift occurring in US design higher education, the nation's approach to pre-college design education has remained unchanged for decades. Curricula typically prioritize the development of students' vocational and technical skills rather than cultivating the design-thinking skillsets prioritized and required by design schools. Courses such as “Foundations of Art,” “Portraits,” “Digital Design 2,” or “Woodworking” offer rudimentary overviews of composition, perspective, color application, and craft. Consequently, syllabi frequently contain highly prescribed assignments that emphasize drawing from observation, realistic representation, and a uniform approach to interpretation, conceptualization, and innovation

(McKenna 2011). For developing art/design students this narrow, highly directed approach can be alienating since it does not support the dispositions of creative thinkers, such as taking risks, being open and flexible, engaging in exploration and play, and understanding different viewpoints. Because pre-college curricula have been unresponsive to advances in design higher education and industry, it poorly prepares students' transition into the conceptual world of the design school.

Young Adult Development and the Transition into Design School

To understand the transition into the first year of design school experienced by undergraduates, the general characteristics of young adulthood must be examined. What challenges, hopes, beliefs, and needs do young adults have, and how are these influenced by this transitional period?

Despite the fact that a transitional period experienced by many high school graduates as they enter all types of colleges has become normative in today's American culture, there has been relatively little research undertaken investigating the development of the 18- to 25-year old, when "emerging adulthood" is commonly marked (Arnett 2000). The first scholarly conference discussing this age demographic was held in 2003 (Arnett 2004). More recently, there has been a surge of non-scholarly publications that aim to support students during their transition into college; these typically focus on practical considerations such as management strategies for academic workload and personal finances rather than the challenging psychosocial transition into college. Moreover, there is currently no published scholarship that examines this topic in the context of design student development. Thus, the paucity of scholarship that addresses this critical aspect of young adult development—*particularly* in the context of design higher education—prevents a full understanding of, and subsequent support for, students as they transition into their first year of design school.

For emerging adults, the transition from adolescence to adulthood does not simply consist of biological changes but also social and cultural; studies show the top three criteria for adulthood are accepting responsibilities for oneself, making independent decisions, and becoming financially independent (Arnett 2004). This period for students is also a pivotal stage for developing one's identity through exploration, engagement with life offerings, and "free role experimentation" so that more enduring decisions may emerge (Erikson 1968). For most individuals, this period preceding the long-term commitments of adulthood is an exciting opportunity to discover and transform themselves.

To clarify their identities, emerging adults seek autonomy, become more self-reliant, and set aside childhood fantasies by adopting a lifestyle that is more realistic (Marcia 1980). This extended period is also one of instability as these young adults move from a dependent adolescence into the almost entirely self-focused and self-directed lifestyle of adulthood (Arnett 2004; Marcia 1980). To achieve optimal development, the individual must self-construct this identity in a positive way. Marcia (1980, 159) notes:

[I]dentity is a self-structure—an internal self-constructed collection of drives, beliefs and individual history. The better developed the identity is, the more aware one is of their own uniqueness and similarity to others, along with their own strengths and weaknesses. If one's identity is weak or underdeveloped, the more confused the individual is and likely to rely on external sources for self-evaluation.

The process of self-forming one's adult identity can be highly unstable and painful for the individual because it requires changing the way of functioning in the world, questioning values, and altering habits (Evans et al. 2010). Moreover, the independence required during this process poses heightened challenges for today's "Generation Z" (those born between 1995-2012) since

they are prolonging adolescence and entering adulthood more slowly (Twenge 2017) by engaging much later in life activities that commonly mark the entry into adulthood. For example, since the mid-1990s, there has been a steady decline of high school seniors who have a driver's license (down 14%), who go on dates, (down 36%), and who work for pay (down 30%) (Figure 1).

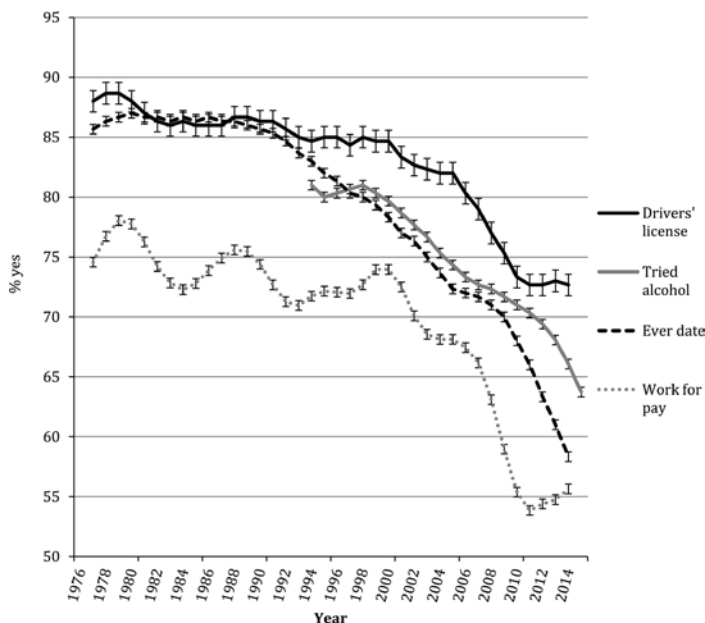


Figure 1: Percentage of 12th Graders Who Have a Drivers' License, Have Ever Tried Alcohol, Who Ever Go on Dates, and Who Worked for Pay at All During the School Year.
 Source: Twenge and Park 2019

For this population, the entire developmental trajectory, from childhood to adolescence to adulthood, has shifted forward.

These formative years can be especially unstable and emotional for students transitioning into the college lifestyle. Common challenges include moving away from home, living among strangers, meeting higher academic expectations, and managing personal finances. These stressors are intensified by factors that were absent just a few decades ago, such as the exorbitant 157 percent increase in tuition fees at private colleges over the past twenty years (Boyington 2018) and the average student loan debt of over \$35,000 USD (Stolba 2019). As a result, 70 to 80 percent of all US undergraduates work while enrolled in college, with 40 percent working at least thirty hours per week (Carnevale et al. 2015). The dramatic spike of students choosing to enroll in college since 2000 (44%) (Statista 2019b) creates greater competition among undergraduates for academic opportunities (such as scholarships). Design schools have experienced *particularly* steep enrollment growth; for example, enrollment in Parsons School of Design's undergraduate Fashion Design Program grew 130 percent in just ten years (2008–2018) (Towers 2019). For these students, peer-to-peer competition for opportunities and job placement is more challenging than ever before.

These and other factors are affecting undergraduates' emotional health nationwide. In the past decade, the American College Health Association's annual surveys (2009, 2018) reveal stark increases in undergraduates reporting "feeling overwhelming anxiety" (27%), depression that made it difficult to function (35%), seriously considering suicide (77%), and attempting

suicide (46%). The report also illuminated the increases of undergraduates being diagnosed or treated by professionals (within the past twelve months) for anxiety (112%), depression (70%), and panic attacks (116%). The ensuing nationwide emotional health crisis is evidenced by the sharp rise of students seeking assistance: those seeking mental health support increased 30 percent between 2009–10 and 2014–15, even though student enrollment grew by only 5 percent during that time (Winerman 2017). In fact, in 2016, for the first time ever, the majority of entering college students described their mental health as “below average” (Twenge 2017; Eagan et al. 2017). For some undergraduates, the transition into the college lifestyle is too difficult: one-third of undergraduates drop out before sophomore year, only 41 percent complete their bachelor’s degree in four years, and just 60 percent who enroll in college will graduate in six years (Stixrud and Johnson 2018; U.S. Department of Education 2019).

Data and Methodology

To research the transitional experience, several qualitative and quantitative research methods were employed. These methods were chosen for their abilities to ascertain both the dominant discourse and the unique personal narratives from a diverse group of design students, alumni, and teachers, thus establishing a more meaningful contextualization and understanding of the transitional experience.

Data were first collected through an online survey that was sent to over 250 undergraduates and alumni of Parsons School of Design. The survey contained multiple-choice and open-response questions that gathered information about the participants’ pre-college and college experiences, including such things as pre-college preparation, academic and emotional transition into freshman year, coursework in both secondary and tertiary art/design education, and the academic and professional experiences that preceded their freshman year.

This data was analyzed, and the findings informed questionnaires used during two subsequent focus groups. The first group contained five professional fashion designers who were Parsons’ alumni (graduating between the years of 2008 and 2014). They were chosen for their diverse enrollment periods, international and ethnic backgrounds, career goals and pursuits, and pre-college experiences. The second focus group contained five senior-year undergraduates in the Apparel Design Program at Rhode Island School of Design (RISD). They were selected for similar reasons. Following these groups, three of the students from RISD were selected for individual ninety-minute interviews, during which they were asked to elaborate on their pre-college, transitional, and freshman-year experiences.

Theoretical Framework

This study draws on the theoretical framework of William Perry’s (1970) Theory of Intellectual and Ethical Development. The developed scheme, based on Perry’s studies of undergraduates, is a sequential continuum that describes how college students view the nature of knowledge and the process of learning. The scheme consists of the four states of students’ experience, namely dualism, multiplicity, relativism, and commitment. These four states include:

1. **Dualism.** Students view knowledge in concrete and dichotomous terms such as good/bad and right/wrong. Learning is an information exchange because knowledge is seen as facts given by authorities (teachers) who possess the “correct” answers. Students view their role as one who must memorize correct answers and deliver them back accurately. They view every problem as solvable, yet often defer to authorities for the solution or answer.
2. **Multiplicity.** Students move into this second stage when cognitive dissonance occurs (e.g., when experts disagree, or the teacher does not have the answers). Students honor diverse views when the right answer is not yet known. All opinions are valid, there are

conflicting answers, and peers become more legitimate sources of knowledge. Students learn how to find the right answer, think more independently, and begin to construct analytical thought processes. Although students still seek the right answers, they put more trust in their "inner voice" rather than automatically deferring to authority for the solution.

3. **Relativism.** The move into this third stage occurs when the student recognizes the need to support opinions through reasoning methods and logical analysis. All opinions no longer appear equally valid, and the use of evidence and argument allows the student to evaluate the validity of different viewpoints. Knowledge and solutions are defined more contextually and qualitatively. In this stage, students question their own viewpoints as well as their teachers', who are valued experts, but whose opinions are open to scrutiny.
4. **Commitment in Relativism.** The final stage involves the integration of knowledge learned from others with personal experiences and reflection to arrive at conclusions. These conclusions (and subsequent commitments) in areas such as politics, careers, and relationships are made by recognizing intrapersonal diversity of goals, interests, and needs. As such, this stage can be viewed as initiating ethical development made from the vantage point of relativism rather than increasing cognitive complexity (Evans et al. 2010). Additionally, there is an acceptance of uncertainty and the tentative nature of life. Students place value on their ongoing development and an openness to new experiences.

Undergraduates typically move through some or all of these positions during the college years, though some may "stall" or "retreat" during the progression if they experience a lack of confidence or feel overwhelmed. In these scenarios, challenging the student's current thinking while offering support that encourages risk-taking and lessens the likelihood of retreating can promote successful advancement from one position to another (King 1978).

Findings and Interpretations

In order to describe best the ways in which the students in this study experienced the transitional experience, I present my findings below in several sections. First, I describe the students' pre-college experiences, highlighting their academic preparation and abilities to overcome adversity. Next, I describe several ways academic experiences differ in secondary and tertiary art/design education, thus creating a curricular gap between secondary and tertiary design education. Significant dissimilarities emerged between the curricula that consequently caused considerable challenges for students. I describe these challenges, highlighting the participants' attitudes towards their transitional experiences, the design school community, support systems, and how their identities evolved during freshman year. In the following section, I pay particular attention to describing the students' cognitive and emotional development through the aforementioned data and theoretical framework. Finally, I offer recommendations that both high schools and design schools can take to better prepare and support their design students.

Pre-College Experiences

Data about the pre-college experience figured prominently in participants' responses. Participants were asked to describe their pre-college art/design studies (if any), the levels and types of mentorship and support received, and aspects of the pre-college experience that were most/least helpful for the transition into design school. Common narratives about the pre-college experience emerged from the data.

Nearly all participants (95%) (n = 84) studied art/design before entering design school. The majority of these (75%) enrolled in coursework offered by their high schools and almost half (42%) participated in external pre-college programs. The quantity and types of high school courses were described as limited and assigned rudimentary “textbook-ish craft projects” that did not expose students to diverse media. Participants widely believed enrollment in external pre-college programs was essential for developing knowledge and skills across the diverse types of media sought by selective design schools. One student summarized this necessity by stating “there is no way you’ll be accepted into [design] school unless you take courses outside of your high school.” The participants’ deep commitment to developing their skillsets for design school was further suggested by the notable percentage (30%) who studied art/design on their own. As one student shared, “I was working a lot on my own, late at night. I’d wait until my parents went to bed and I’d go into my bathroom, and that would become my studio. I’d stay up until 1:00 or 2:00 a.m. painting, just to create something, to train my eye and skills [and] build a twelve-image portfolio to send off to schools.”

The participants’ formidable desire to enter design school was further underscored by their narratives about overcoming adversity; notably, the discouragement and inadequate support from school advisors and parents. School advisors commonly offered little (if any) support and, at times, became impediments for the students’ aspirations. One student asserted her advisor “actively discouraged me from pursuing art in a serious way” because—as routinely described by other participants—art/design was widely considered a “hobby” and not a viable career by both advisors and parents. Instead, these students were encouraged to pursue more conventional professions at traditional colleges: “I was told by a guidance counselor...women choose to major in art to get their ‘Mrs. Degree.’ [He] though because I had good S.A.T. scores, I should choose a ‘normal’ university and a different career/major path.” Similarly, respondents frequently described their advisors’ and parents’ misperceptions about the design professions that further decreased support.

For many students, the lack of emotional and practical support caused them to feel alone and as if they had to “fend for themselves” throughout the pre-college experience—particularly when they applied to design schools, largely because their advisors and parents were befuddled by the unique application process and institution/program types. As one participant stated, “I informed [my advisor] of my interest in design, and the only thing she did for me was pull out a book of universities that I should consider. All of my pre-college preparation was the result of the efforts of myself.” In fact, when asked to choose what aspects of their high school experience were *least* helpful for their transition into freshman year, more than one-third of respondents (38%) cited their advisors, and one in five (20%) cited their parents (Figure 2).

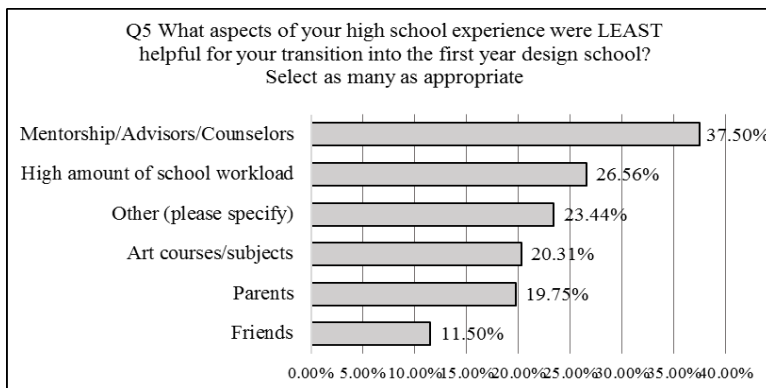


Figure 2: Graph Displaying Those Areas Students Felt Were **Least Helpful** in the Transition Between High School and Design School
 Source: Faerm 2019

In contrast, art/design teachers provided critical support throughout students' pre-college experiences; one wrote, "my art teacher gave me the confidence I needed to know I was talented, driven, and made me realize I could be successful doing something I love." Similarly, peers supplied beneficial practical and emotional support through information about design schools, portfolio development, art/design careers, and more.

Data analysis revealed an interesting dichotomy in students' responses to this type of stress during secondary education. First, for students who needed to overcome challenging circumstances to attend design school (e.g., a lack of parental support), an added stressor developed on top of those commonly experienced by undergraduates: the need to prove themselves and to *over*-succeed, thereby justifying the validity of their academic/professional goals to themselves and others. As one described, "[m]y parents were on the fence about spending so much money on design school, so I felt like it was a decision I had to *truly* want and fight for. This maybe helped me because I knew it was a big choice that I was making for myself, and I had to perform." Second, although discouragement and other impediments were challenging for many respondents, several expressed that these adversities ultimately strengthened their holistic development because, as one student expressed, "it taught me that I had to be independent if I was going to pursue a career in design. And, in design school, you have to be self-motivated [to succeed]!" The students' increased independence boosted their confidence and subsequently their self-directedness.

The Curricular Gap between Secondary and Tertiary Design Education

Data analysis revealed stark contrasts between secondary and tertiary design curricula, including course assignments, learning goals, assessment criteria, and pedagogy. Data also illuminated students' perspectives on their academic experiences, the two distinct curricula, and specific areas that were most challenging for them during their transition. These challenges include the contrasting academic emphases, the shift to extreme focus of study, and the rigorous college-level critique system.

Pre-college art/design curricula were frequently described by participants as "basic," "lacking depth," and containing "rudimentary" assignments that "[do] not seem to follow any logical curriculum or development"; as one student elaborated, "The design classes in high school were very superficial, meaning we drew and learned about [design] but there was no real artistic connection between the subject's art and technique." Others described "straight-forward assignments" that required them to "translate what you CAN see before you" within highly prescribed parameters. Thus, the curricula's learning goal was building students' technical proficiency through accurate/realistic representation rather than through their creativity and/or personal expression.

The consequential artistic uniformity among students led participants to comment on the lack of individual creative processes, as "[the students] all just did the same thing." This caused many to feel grossly underprepared for the advanced expectations of creativity demanded by design schools; one wrote, "my high school did not prepare me to be creative [for design school]. Most if not all assignments were not open ended, and the ones that were still did not encourage out-of-the-box thinking." More specifically, typical pre-college curricula failed to teach and nurture students' conceptual thinking—a primary emphasis in design higher education. When participants were asked if their pre-college art/design courses taught conceptual thinking, a staggeringly low percentage (17%) selected "yes" while half (50%) selected "none at all" or "only a little" (Figure 3).

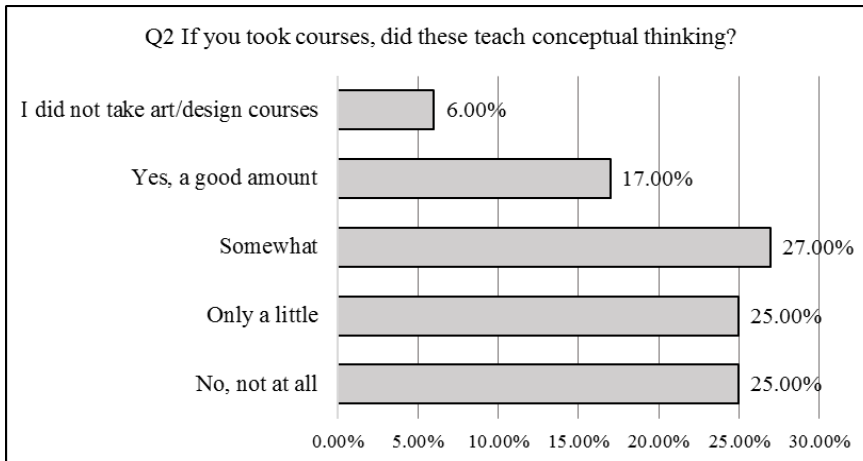


Figure 3: Graph Displaying Number of Students Who Report Being Taught Conceptual Thinking in Pre-College Art/Design Courses
Source: Faerm 2019

The curricular gap was widely criticized by respondents, with one stating, “it really felt like starting this life from scratch. In high school, [art/design] class was all about learning techniques, but [design school] is where I learned what a concept is and how to develop it onward.” This pronounced curricular gap caused many students to feel overwhelmed and frustrated when they were suddenly thrown into “the conceptual deep end” the moment they entered design school. One respondent, reflecting on his first assignment in design school, stated:

[W]e had a class where we had to do a *lot* of conceptual thinking. Really intense theory-thinking and that’s when I felt everything was so overwhelming. [The first assignment] was: “How do you measure time?” I was stumped with that! That was one of the first times I was *really* overwhelmed...and freaked out just because each week I’d go to class and continue hitting a wall, and my teacher would see it and bring it up. They’re just like, “Oh, I see you’re really struggling with this.” But...you get to that point where you’re like, “I have *no* idea where to go with this.” (Anonymous Interview, Faerm 2018)

Another summarized the obstacles as follow: “the greatest challenge [of freshman year] was not knowing what a concept was. I had *no idea* how to approach all of the assignments on a mental level.” In fact, a surprisingly low percentage (60%) of respondents reported their high school art/design courses as “*most* helpful” in preparation for design school. Conversely, 20 percent of respondents reported their high school art/design courses were “*least* helpful” (Figure 2). Furthermore, nearly 50 percent selected “learning new art/design coursework/subjects” as one of the *most* challenging aspects of the transitional experience. These findings underscore the significant curricular gap between the two design curricula and, consequently, the inadequate preparation students receive for design school.

For many design students, their inexperience with conceptual thinking often creates stress that is unique to design students. Unlike typical undergraduates, the design students’ inexperience with conceptual design thinking—and the subsequent need to master the subject rapidly during a condensed amount of time in the first year—means students had to devote additional hours to their already high academic workloads in order to compensate for this inexperience. This accelerated “crunch period” exacerbated their mental, physical, and emotional stress. The data revealed the narrowness of focus in their studies in design—unlike

pre-college coursework that spanned multiple subjects/disciplines—created a difficult period of adjustment and exacerbated any existing psychological or emotional challenges. Participants shed light on the experience by noting, “I realized that creative thinking...could actually be more stressful than working on essays or studying for math tests” and, “It was exhausting being creative 24/7 for five different classes all focused on creating art/design. It took a toll on me emotionally.”

The emphasis on conceptual thinking in design school also disrupted and shifted students' previously established values, mindsets, and practices. Their beliefs about what constitutes “successful” work, instilled throughout their formative years of pre-college art/design studies, were supplemented with—and at times, entirely replaced by—new ways of valuing success that are taught in design school. Similarly, once at design school, students were subject to new grading rubrics and assessment criteria (e.g., contextualized research, conceptualization, etc.) that required them to self-develop new approaches to the design process itself. This typically involved a “trial-and-error” approach that led to significant emotional strain. As one participant stated:

I had no idea how to approach [the assignment] or what to do! So, instead of executing it as well as I could have, instead of taking most of the time to *make* something perfectly, which I would have done before [in high school], I now spent more time *thinking* about it. Most of the time it was 75% thinking. Like, “What do I do? Research? Develop a concept? How do I even apply a concept to design?” And the next 25% was just making it. Before [design school], it would have been the other way around! [It's a] switch and, at first, not a comfortable one. (Anonymous Interview, Faerm 2018)

Additionally, the college-level critique culture, which emphasizes conceptualization, proved to be entirely foreign to many first-year students. While numerous respondents described pre-college-level critiques as lacking depth and meaningful criticism, college-level critiques were said to be a “culture shock,” owing to the new conceptual emphasis, along with their depth and rigor. Respondents reported that a dramatic shift happens when a student is tossed into the design school's “conceptual deep end.” This shift caused significant increase in cognitive and emotional stressors for respondents. For many, the accompanying shock led participants to describe critiques as “intense,” “terrifying,” and “spiteful,” and to note, “[n]othing prepared me for the harsh critiques of freshman year.” Moreover, the expectation that undergraduates defend their work during critiques was especially difficult for those who were inexperienced yet expected to quickly master the skill. In fact, respondents routinely cited studio critiques as one of the *biggest* challenges during freshman year. One expressed, “it's not just about making. You also have to be able to talk about it conceptually. That's what I had the hardest time with.” When asked how pre-college art/design programs could improve, many participants stated pre-college programs should require students to present their work in similarly structured critique formats where they can become comfortable with public speaking well before entering design school studios.

Design Students' Cognitive and Emotional Development during the First Year

Findings revealed a diversity of increased cognitive and emotional development that occurred in participants during (and shortly after) their first year of design school. The common challenges associated with the adjustment to the undergraduate lifestyle—being homesick, making new friends, finding a healthy work-life balance, and simply taking care of oneself—were frequently repeated by participants. For some, additional emotional challenges arose due to the disparity between the widespread assertion that the college years are the best of one's life and the actual college experience; as one student poignantly described:

In television and movies [the college life] is praised. It's supposed to be the best four years of your life. [But] your parents drop you off...and you're like a lost puppy. You have no idea what you got yourself into and every day is [an emotional] struggle. (Anonymous Interview, Faerm 2018)

Others, sharing similar sentiments, questioned why their pre-college preparation focused almost exclusively on practical topics (e.g., “how to overcome procrastination”) rather than addressing the pervasive emotional challenges (e.g., “how to overcome homesickness”).

However, for most respondents, the design school lifestyle—particularly the move away from home—was a welcomed change. Participants who self-described as marginalized “outcasts” coming from homogenous hometowns, suddenly experienced numerous heterogeneous communities full of accepting peers who nurtured each other’s personal growth. In fact, 38 percent felt “making friends” was the least challenging aspect of the transition into design school because they were excited by “meeting other artistically-minded people.” and “finally not being a weirdo! Design school helped me find my tribe I still align with today.” Students’ cognitive development benefited greatly from these friendships and associated events that built trust with others: the resulting increases in support and trust led them to value their peers’ suggestions and thus move beyond dualism (in which the teacher is the sole provider of knowledge) into multiplicity (in which peers become more legitimate sources of knowledge).

Along with support, peers also created competition. For example, the participants who were the “star artists” in their high schools entered prestigious design schools with countless other “star” classmates, all vying for the recognition and success that had come so easily to them in high school. Their abrupt confrontation with the fact that they were now “small fish in big ponds” destabilized many students’ identities during the first year and led them to reconsider their talent, goals, and professional potential.

Compounding this crisis of identity, respondents also frequently described feeling isolated when experiencing “imposter syndrome” throughout their first year. In fact, many noted their freshman year—of *all* their design school years—contained the highest level of self-doubt. In extreme circumstances, students changed majors or quit design school altogether. Yet, for others, the new extreme competition *positively* impacted them; it intensified their desire to prove themselves and to succeed, often resulting in an elevation of their academic performance. At the same time, participants noted the culture of extreme competition was one in which they felt pressured to *over*-perform. As one respondent summarized:

I felt this pressure and this widespread understanding that to be successful and make good [projects] you had to pull all-nighters because it's almost like a rite of passage in a way. It's weird. Freshman year, I would brag to everyone, “I was up ‘til 4:00 last night working on a project.” And you almost want praise, like, “Gosh, you were up so late!” For you, it's a kind of validation. [I]t's interesting that culture [permeates] your first year of college. (Anonymous Interview, Faerm 2018)

The students’ need for extrinsic validation also affected how they perceived their roles as learners. During freshman year, many respondents displayed clear dualistic traits, including focusing on pleasing teachers rather than themselves and avoiding “wrong” answers. However, data strongly suggests numerous participants advanced from this duality stage on to the multiplicity stage immediately following their first year. One student illustrates this shifting mindset when noting:

[Initially,] I worked so hard to please my teachers but not myself. [C]oming from [high school], it's still all about grades. I was still in that zone even though I said I didn't care about grades. But I feel I was on the verge of figuring it out, like, this is really for

me. After freshman year, I was finally in the mindset of “I should do what I want to do whether or not it pleases someone else.” (Anonymous Interview, Faerm 2018)

Another participant, echoing this shift from dualism to multiplicity during freshman year, believed it occurred as a direct result of being told by others to make her *own* decisions, rather than being given answers. While she felt the process was uncomfortable and that missteps occurred, her advancement to multiplicity strengthened her confidence, identity, and purpose as a learner. As she shared, “toward the end of [freshman] year, I finally realized that it is my work, it is my time put into it, and my thoughts, ideas, and dreams. I need to worry about making myself happy and trying new things. There was no way I was going to make some professors happy if I hated the project” (Anonymous Interview, Faerm 2018).

Notably, the students’ prioritization of their own learning goals within the context of a new world of academic freedom strongly correlated with their cognitive and academic growth. By pivoting their student’s role from one who succeeds for others to one who succeeds for one’s self, participants felt more invested in making their self-constructed goals (e.g., design projects) succeed. The risk of failure at something *they* self-constructed led them to devote extra time to coursework, to explore and experiment more, and to ultimately create solutions and projects they felt were optimal representations of themselves. The resulting increase of learning and academic performance also decreased imposter syndrome. One student described this transformation by stating, “By the end of the year, I finally began to think like a designer. Whatever was innate was brought out and set up for further development.”

When participants were asked if their overall transition into design school was easy and fluid, 41 percent agreed/strongly agreed, 29 percent somewhat agreed, and almost 20 percent disagreed/strongly disagreed (Figure 4).

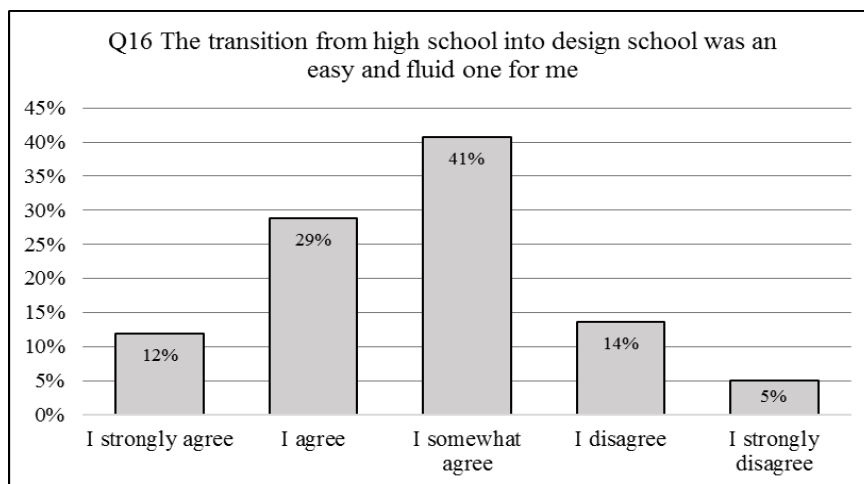


Figure 4: Graph Displaying Students’ Responses About the Transition into Design School
 Source: Faerm 2019

As the majority of students (60%) experienced varying levels of challenges during their transition into design school, it is incumbent upon secondary and tertiary design education to adopt measures that better support students’ cognitive and emotional development during their transitional experience. The need is particularly salient when contextualized by the growing undergraduate population that is simultaneously preparing for adulthood while prolonging its complete arrival.

Recommendations

In Table 1, I propose recommendations that secondary and tertiary design education can implement to support students better during their transition from high school to design school. These recommendations are based on this study’s findings and target the key challenges faced by participants during their transitional experience.

Table 1: Recommendations for Secondary and Tertiary Design Education

Education Level	Recommendations
Secondary Design Education: Junior and Senior levels	<p>Art/Design Career Panels. Artists and designers present autobiographical student-to-practitioner stories to students, parents, and teachers. These aim to counter negative stereotypes, demystify professional opportunities, and alleviate anxieties around design studies and future career options.</p> <p>Panelists provide teachers with valuable insights into the future of design practices and education, which can help them better develop relevant curricula in art/design education. Subsequently, students receive more meaningful guidance on portfolio development and design school applications.</p>
	<p>Introducing Conceptual Thinking. Conceptually focused assignments are incorporated into advanced pre-college coursework to introduce students to diverse research methods, conceptual and speculative thinking, and unorthodox design processes.</p> <p>Advanced coursework may also include interdisciplinary assignments that enable students to cross-over and synthesize disciplines, address global issues, explore systems-thinking, and generate projects that focus exclusively on innovative design process rather than traditional “polished” portfolio pieces.</p> <p>Emphasis is placed on developing a personal, authentic approach rather than meeting strict assignment guidelines for homogenous results across students.</p>
	<p>Build a Solid Critique Culture. Secondary-level art/design teachers should observe critiques at local art/design colleges so they can better understand the new emphases in design education and strengthen their own critique methods and skills. Observing critiques will provide meaningful professional development and pedagogical support for high school art/design teachers. A critically-based presentation and critique cultural environment is designed and implemented throughout the advanced levels of art/design coursework. Students’ cognitive and emotional development will be strengthened and their future transition into design school will be more fluid.</p>
	<p>Course Credit for External Art/Design Coursework. High schools grant course credit for external art/design courses that meet pre-approved requirements (e.g. learning outcomes, contact hours, etc.). Credit may be given for individual courses (such as intensive summer studies offered by art/design schools) or for a cluster of courses that, collectively, fulfill academic requirements.</p> <p>The practice will offer great benefit to those students who attend high schools at which, for whatever reason, suggested changes cannot be implemented. The external coursework will be necessary for students to develop the required skillsets and competitive portfolios for design school applications.</p>

Education Level	Recommendations
Secondary and Tertiary Design Education	<p>Faculty Development Workshops About Young Adult Development. At both levels, institutions provide faculty development workshops that examine the leading theories of young adult development, contemporary research that exists surrounding the generation of incoming students, and the general aspects of emotional and cognitive development that occurs between adolescence and full adulthood.</p> <p>These workshops will provide practical and actionable research-based best teaching practices that respond to the specific attributes, learning styles, and more of the current generation of students.</p>
	<p>Student Development Workshops About Emotional and Cognitive Development. Similar in scope and breadth as those for faculty, these workshops aim to decrease students' sense of feeling the "imposter syndrome," to increase their confidence around independence and autonomy, and to let them know they are sharing common challenges. By understanding their own developmental trajectories, students will be better able to contextualize their identities, goals, and "benchmarks" of young adulthood.</p> <p>Moreover, design school-level workshops will address those issues not commonly discussed by student services, such as overcoming homesickness and other commonly experienced emotional challenges that occur during the transitional experience.</p>
Tertiary Design Education: Freshman Year	<p>Redefining Personal Success. Information is provided for students to redefine "success" in the design school context. Focus is on the tools students may adopt to overcome "imposter syndrome," talent doubt, and feelings of inadequacy. Students are encouraged to self-define personal success, thus moving out of dualism and into higher stages of intellectual and emotional development.</p> <p>The materials will promote greater independence and preparation for "self-authorship," a key trait found in full adulthood. Encouragement of the increase of personal agency will provide students with greater ownership of their academic learning experiences. This will increase feelings of motivation and desire for achievement.</p>
	<p>Peer-to-Peer Mentorship System. Upper classmen are paired with first year students so they may meet regularly and offer support by listening to each the first years' challenges, give advice, propose solutions, and provide general guidance. While students may also meet with professional advisors, faculty, and counselors, the peer-to-peer dynamic affords first year students with the insights from the more tangible, "lived" experience of the upper classmen. This dynamic fosters privacy, trust, and a sense of candidness; students may feel reluctant to share certain challenges with school administration but will share that information with a peer.</p> <p>Moreover, given the surge of students seeking support services, particularly for emotional challenges, this initiative offers more immediate support to students before seeking student support services.</p>

Source: Faerm 2019

Implications and Conclusions

The findings from this study illustrate the cognitive and emotional development of students as they transition from high school to design school. These findings reveal the significant, widening gap between secondary and tertiary design education in the US. The dissimilarities between the two curricular and pedagogic emphases create a disjointed academic experience and this, consequently, engenders undue challenges for many students during their freshman year. These challenges could be alleviated by narrowing the gap between the two dissimilar curricula—namely by implementing conceptually-driven and interdisciplinary-focused assignments during the advanced levels of pre-college art/design studies.

However, while this study sheds insights into how the existing curricula impacts students' transitional experience, more research is needed to understand if such an academic re-alignment would, in fact, decrease design students' cognitive and emotional challenges and thus bolster their holistic development. Furthermore, due to the limited scope of respondents to this study, more research is needed across multiple design schools and regions in the US to better understand the transitional experience. While this was not the focus of this project, further research should explore how the type of high school attended (e.g., population, setting, region, public/private) potentially impacts students' transition into design school.

A second related implication of this research is the importance of providing high school and college students with a greater quantity and variety of support systems. The record-numbers of undergraduates entering college—along with their markedly different attributes compared to those of previous generations—reveal the critical and timely need for educators, administrators, and schools to understand better this growing population. In doing so, they will create new pedagogical practices that target the current generation's distinct learning styles; implement effective curricula and academic programs that better promote students' intellectual and emotional development (the advancement from “dualism” to “commitment in relativism”) as students prepare for full adulthood; develop strategic institutional support systems for enhancing students' well-being; and other initiatives that target the student population.

The need for this knowledge is especially critical in the design school context. However, it must be noted that during the participants' secondary and tertiary experiences, limited (if any) research about these students existed prior to this study. Now that scholarly research about this population is emerging and educators across all levels are better understanding the key attributes and attendant needs of the current generation of students, future research is needed to understand the existing and emerging support systems being implemented in both secondary and tertiary levels. Advanced research may then be performed to understand how current design students are impacted by the new supportive initiatives and experience the transitional experience in ways that are similar or dissimilar from this study's participants.

REFERENCES

- American College Health Association. 2009. *American College Health Association-National College Health Assessment II: Reference Group Executive Summary Fall 2008*. Baltimore, MD: American College Health Association. https://www.acha.org/documents/ncha/ACHA-NCHA_Reference_Group_ExecutiveSummary_Fall2008.pdf.
- . 2018. *American College Health Association-National College Health Assessment II: Undergraduate Student Executive Summary Fall 2018*. Silver Spring, MD: American College Health Association. https://www.acha.org/documents/ncha/NCHA-II_Fall_2018_Undergraduate_Reference_Group_Executive_Summary.pdf.
- Arnett, Jeffrey J. 2000. "Emerging Adulthood: A Theory of Development from the Late Teens Through the Twenties." *American Psychologist* 55 (5): 469–80.
- . 2004. *Emerging Adulthood: The Winding Road from the Late Teens through the Twenties*. New York: Oxford University Press.
- Boyington, Briana. 2018. "See 20 Years of Tuition Growth at National Universities." *U.S. News & World Report*, September 13, 2018. <https://www.usnews.com/education/best-colleges/paying-for-college/articles/2017-09-20/see-20-years-of-tuition-growth-at-national-universities>.
- Carnevale, Anthony P., Nicole Smith, Michelle Melton, and Eric W. Price. 2015. "Learning While Earning: The New Normal." <https://cew.georgetown.edu/wp-content/uploads/Working-Learners-Report.pdf>.
- Darling-Hammond, Linda. 2010. *The Flat World and Education: How America's Commitment to Equity Will Determine Our Future*. New York: Teacher College Press.
- Eagan, Kevin, Ellen Bara Stolzenberg, Hilary B. Zimmerman, Melissa C. Aragon, Hannah Whang Sayson, and Cecilia Rios-Aguilar. 2017. *The American Freshman: National Forms Fall 2016*. Los Angeles: Higher Education Research Institute, UCLA. <https://www.heri.ucla.edu/monographs/TheAmericanFreshman2016.pdf>.
- Erikson, Erik H. 1968. *Identity: Youth and Crisis*. New York: Norton.
- Evans, Nancy J., Deanna S. Forney, and Florence Guido-DiBrito. 2010. *Student Development in College: Theory, Research, and Practice*. San Francisco: Jossey-Bass Publishers.
- Faerm, Steven. 2016. "Developing New Value in Design: Not 'What' but 'How.'" *Cuaderno* 64: 207–24.
- Freeman, Hadley. 2011. "Alexander McQueen Exhibition Becomes New York's Latest Blockbuster." *The Guardian*, August 9, 2011. <http://www.theguardian.com/lifeandstyle/2011/aug/09/alexander-mcqueen-exhibition-new-york>.
- Friedman, Thomas. 2005. *The World is Flat*. New York: Farrar, Straus, and Giroux.
- Index Mundi. n.d. "World—Household Final Consumption Expenditure." *Index Mundi*. Accessed July 21, 2019. <https://www.indexmundi.com/facts/world/household-final-consumption-expenditure>.
- King, Patricia M. 1978. "William Perry's Theory of Intellectual and Ethical Development." *New Directions for Student Services* 1978 (4): 35–51.
- Leonard, Annie. 2010. *The Story of Stuff: How Our Obsession with Stuff is Trashing the Planet, Our Communities, and Our Health—and a Vision for Change*. New York: Free Press.
- Levin, Marc, dir. *Schmatta: Rags to Riches to Rags*. 2009; New York: Home Box Office Documentary Films, 2009. DVD.
- Marcia, James E. 1980. *Handbook of Adolescent Psychology*. New York: Wiley and Sons.
- Marshall, Tim. 2008. "Designing Design Education." *Form* 224: 46–52.
- Maslow, Abraham H. 1943. "A Theory of Human Motivation." *Psychological Review* 50 (4): 370–96. <https://doi.org/10.1037/h0054346>.
- McKenna, Stacey R. 2011. "Art School Consequential: Teaching and Learning in the First Year of Art School." PhD diss., Columbia University.

- Muratovski, Gjoko. 2010. "Design and Design Research: The Conflict between the Principles in Design Education and Practices in Industry." *Design Principles and Practices: An International Journal – Annual Review* 4 (2): 377–86. <https://doi.org/10.18848/1833-1874/CGP/v04i02/37871>.
- Negroponte, Nicholas. 2003. "Creating a Culture of Ideas." *Technology Review*, February 1, 2003. <https://www.technologyreview.com/s/401789/creating-a-culture-of-ideas/>.
- Palomo-Lovinski, Noel, and Steven R. Faerm. 2009. "What is Good Fashion Design?: The Shifts in Fashion Education of the 21st Century." *Design Principles and Practices: An International Journal – Annual Review* 3 (6): 89–98. <https://doi.org/10.18848/1833-1874/CGP/v03i06/37786>
- Perry, William G., Jr. 1970. *Forms of Intellectual and Ethical Development in the College Years*. New York: Holt, Rinehart & Winston.
- Pink, Daniel H. 2005. *A Whole New Mind: Why Right-Brainers Will Rule the Future*. New York: Riverhead Books.
- Postrel, Virginia. 2003. *The Substance of Style*. New York: HarperCollins Publishers.
- Siegel, Lucy. 2011. "Why Fast Fashion is Slow Death for the Planet." *The Guardian*, May 7, 2011. <https://www.theguardian.com/lifeandstyle/2011/may/08/fast-fashion-death-for-planet>.
- Statista. 2019a. "Number of Stores of the H&M Group Worldwide as of 2019, by Selected Country." Accessed August 19, 2019. <https://www.statista.com/statistics/268522/number-of-stores-worldwide-of-the-hundm-group-by-country/>.
- . 2019b. "College Enrollment in the United States from 1965 to 2017 and Projections up to 2028 for Public and Private Colleges (in Millions)." Accessed August 19, 2019. <https://www.statista.com/statistics/183995/us-college-enrollment-and-projections-in-public-and-private-institutions/>.
- Stixrud, William, and Ned Johnson. 2018. "When a College Student Comes Home to Stay." *The New York Times*, November 19, 2018. <https://www.nytimes.com/2018/11/19/well/family/when-a-college-student-comes-home-to-stay.html>.
- Stolba, Stefan L. 2019. "Student Loan Debt Climbs to \$1.4 Trillion in 2019." *Experian Information Solutions*, June 4, 2019. <https://www.experian.com/blogs/ask-experian/state-of-student-loan-debt/>.
- Towers, Joel. 2019. "The New School Data Warehouse Enrollment Analysis, New and Continuing." Data presented at the Bi-Annual Parsons Faculty and Staff Town Hall, New York, NY, June 2019.
- Twenge, Jean M. 2017. *IGen: Why Today's Super-Connected Kids are Growing Up Less Rebellious, More Tolerant, Less Happy—And Completely Unprepared for Adulthood*. New York: Atria Books.
- Twenge, Jean M., and Heejung Park. 2019. "The Decline in Adult Activities among U.S. Adolescents, 1976-2016." *Child Development* 90 (2): 638–54. <https://doi.org/10.1111/cdev.12930>.
- U.S. Department of Education, National Center for Education Statistics. 2019. "Undergraduate Retention and Graduation Rates." https://nces.ed.gov/programs/coe/indicator_ctr.asp.
- Winerman, Lea. 2017. "By the Numbers: Stress on Campus." *Monitor on Psychology* 48 (8): 88.

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