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Namaste: Pedagogical Methods for Designing Yoga & Art Experiences for/with Teen Participants

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NAMASTE: PEDAGOGICAL METHODS FOR

DESIGNING YOGA & ART EXPERIENCES FOR/WITH TEEN PARTICIPANTS

by

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ABSTRACT

NAMASTE: PEDAGOGICAL METHODS FOR DESIGNING YOGA & ART EXPERIENCES FOR/WITH TEEN PARTICIPANTS

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Old Dominion University, 2011
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Within this study, teens are asked to analyze yoga studio homepages in relation to their experiences with the practice of yoga. This dissertation research engages the teen girls as participants responsible for co-designing the learning constructs through which they make meaning out of their experiences. This research is rooted in informational design, experiential design, and design practices for a teen demographic through the artifact of yoga.

Participant observation is used to examine how eight teen girls understand yoga as a practice, internalize their experiences with yoga, and thusly communicate what they have learned about yoga and a sampling of digital texts in which yoga is represented. A heuristic evaluation of 307 yoga studio homepages is conducted to identify how information is presented in relation to the needs expressed by the teens participating in this study. The survey responses of 28 individuals describing themselves as yoga studio owners, yoga practitioners, and information designers are investigated to uncover how these information producers perceive teens as users of yoga studio homepages, practitioners of yoga, and consumers of yoga experiences. The final chapter of this study considers how information about yoga should be designed on studio homepages to support the cognitive, developmental, and experiential needs of teen learners.

Recommendations are made for increasing the effectiveness of these pages for the consumption of teen girl users.

Holistically, this research develops a pedagogical method for designing experiences with teens as co-designers. This research is intended for Instructors, Researchers, and Designers (IRDs) constructing experiential information for teens that seek to inform, edify, and cause teens to not only interact with the world as it exists, but to know that they have a role in the shaping of their experiences.

"You teach through being, through demonstrating the peace of God."
Eckhart Tolle

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

Through experiencing, communicating, and owning, an individual's sense of self

is shaped. In this triad, an individual understands and internalizes experiences through

designed information, social interactions, and individual introspection. In a landscape of

individualized technology, rhetorically crafted texts, and networked relationships,

experiences are realized in communion with information, in the midst of social

interactions, and in relation to an individual's sense of self. Educational philosopher,

Alfred N. Whitehead (1929) writes, the process of creating learning experiences involves,

"doing things that change one's objective environment and internal conditions" (p. 584).

As such, learning experiences should enhance the thoughts, feelings, and actions of

learners (Bloom, 1985; Callier, 2004).

Within this dissertation research[1], teen girls are asked to analyze the design of

yoga studio homepages as users seeking additional information about the practice of yoga

to supplement what they are experiencing in the Yoga & Art Series, a program designed

to teach participants about yoga through the practice of postures, relaxation techniques,

and the making of art. Tina Wells (2006) writes, "the evolution of the Internet and digital

age has irreversibly affected nearly all aspects of teen life, from fashion style to culture in

general" (para. 1). Yoga studios homepages are accessible through the World Wide Web

for teens that possess the ability to connect to the Internet. Online resources can be used

to solidify teen identity and personal views as well as provide teens with a mode of

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[1]The Institutional Review Board of Old Dominion University approved this study on
August 26, 2010, approval numbers 10-135 and 10-146.

socialization to connect with their perceived peers (boyd, 2008; 2010). This analysis explores yoga studio homepages as informational texts that hold the possibility to be interactive tools for more individuals than those that are currently imagined as using them.

Within this study, teens or adolescents are considered to be those between the ages of 13-17 (Ito and colleagues, 2008). Teens are an untapped market of potential consumers of experiences with yoga. Individuals providing yoga experiences could broaden their market greatly by appropriately designing yoga studio homepages specifically for teens and addressing the needs of teen girls in their yoga services in general. Teens possess substantial monetary funds and influence over the spending habits of their families (Magazine Publishers of America, 2004; Chia, 2010) as they identify the experiences in which they wish to participate. This researcher leads teen and adult participants in the practices of yoga on a weekly basis as a yoga teacher registered with the Yoga Alliance[2]. This researcher possesses a cultivated knowledge of yoga philosophy, postural alignment, and anatomy and physiology as it relates to the physical and energetic body resulting from self-study, teacher trainings, and continuing education opportunities. This study presents a pedagogical method for designing experiences with yoga and generating informational resources about yoga with a teen demographic.

The intended audience of this dissertation is individuals, referred to as Instructors[3], Researchers[4], and Designers[5] (IRDs) that design, implement, and facilitate

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[2] The Yoga Alliance is a national education and support organization for yoga teachers and schools in the United States of America.
[3] An instructor is an individual who shows, explains, or teaches students/learners/participants how to participate, perform, and/or do particular activities.

learning experiences for teens in formal and informal learning environments. In researching the profile of IRDs, these individuals are often also the owners of yoga studios. In this capacity, they have the potential and expertise to establish yoga-based knowledge communities for teens. This research also addresses school administrators who might include yoga in existing curriculums as a supplement, which has the potential to increase student achievement in measurable ways.

This research explores how teen girls can be empowered to own and express their identities through the pedagogical approaches IRDs use to design informational experiences for this audience. Within this context, yoga is conceived as a tool that teen girls can use to learn more about themselves as they participate in the co-designing of their experiences with designed constructs. Worldwide, a girl's purpose and worth is often defined for her—for example, necessitating that she become a teen bride, fall victim to sexual abuse and other forms of subjugate violence, suffer malnutrition, and accept the responsibilities of adolescent motherhood (Kristof & WuDunn, 2009; Chowdhury, 2011). In practicing yoga, girls can experience breathing at their own pace, then they can learn to ground their conceptions of themselves and their experiences inwardly, rather than allowing outside forces to define who they are and what they can become. A United Nations research study, *Through Their Eyes, In Their Voices* (2011) states,

> In many parts of the world, it is uncommon for girls to study past primary school. If young women somehow manage to beat the odds and graduate from secondary school, most are still expected to marry, help with household chores, or supplement family income. (p. 6)

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[4] A researcher is an individual who systematically investigates subject matter in order to reach new conclusions.

[5] A designer is an individual who plans the form, look, or structure and possible operation of an object, service, and/or experience before it is made or built.

If a young woman is not able to choose a life outside of the trappings of her circumstances, the hope is that through adopting yoga practices that resonate with her, she will be able to carve out her space within the circumstances of her world. Co-designing what she experiences from a place of her choosing, emanating from her self-acceptance, knowledge of her self-worth, and recognition of her breath as life force.

Within learning environments, girls need to be provided with tools they can use to explore their inner landscapes. Doug Saunders (2010) writes,

> Over and over, studies have found that the level of poverty reduction and economic growth in a country is directly correlated to the levels of education attained by women—more so than any other factor. (para. 12)

Poverty can be reduced and the economy in countries bolstered through educating women (Kristof & WuDunn, 2009; Saunders, 2010; Walker, 2011): teaching them to read and write; to understand their menstrual health, childbirth, and methods of birth control; to identify realistic ways to provide financial support for their family. Imagine how much more effective these women could be if they were encouraged to become comfortable in their own skin through experiences that allow them to learn more about themselves. Angela Walker (2009) writes for The United Nations Children's Fund, "Helping girls to help themselves is a progressive method of change" (para. 12).

Through yoga, this researcher has been able to embrace her inner self, and from that place to know her worth and identify her purpose, with an awareness of how the words, and the actions of others can and have defined her. Through the work of yoga, this researcher has been able to not judge herself as harshly or as inferior in comparison with those featured in popular media, in normalized definitions of beauty, in limited or prescribed routes to success. In other words, this researcher has been empowered to

express herself through being at home in her body—breathing, moving, and creating the space to be who she is in the moments of becoming, with the realization that this evolution is the only constant. Girls need to take part in experiences in which they can come know themselves as young women. In participating in co-designing the environments in which they learn, empowered to help move themselves through those experiences, girls are better able to define who they are, rather than succumbing to the definitions placed upon them by their tribe and culture.

Teen girls make meaning out of their experiences and use that knowledge to solidify their conceptions of self and their places within the world. Thusly, in order to meet their developmental needs as learners, IRDs are obliged to pay attention to the ways in which girls interact with stimuli, considering how they read, and generate information and artifacts within designed learning constructs. In consulting teens about their needs as information users and consumers of experiences, the guesswork of designing for an imagined audience is decreased.

IRDs should consult "practice-informed theories and methodologies that allow [them] to analyze, predict, and effectively intervene in the process of developing media in a more open and collaborative fashion" (Cheliotis & Yew, 2009, p. 166). When experiential information is co-designed by users in the process of experiencing, learning constructs can be developed that users are more likely to buy into because through their participation they have had an active role in identifying and making meaning in that experience. The design of meaningful texts leads to the development of "knowledge, values, and actions" (Rude, 2009, p. 176), within universal and cultural systems of practice. By engaging the movements of the body with the cognitive processes of the

mind, teens in this study are allotted the space to explore their practice of yoga and related information in the midst of co-designing the structure of the series.

Yoga as a practice does not necessarily lead to the formation and development of individual identity; however, within this study its practice is approached as an experience that could aid teen girls in negotiating their identities and sense of self depending upon an individual's investment in the design. By studying teens as a unique segment of society through this model, IRDs can begin to recognize, embrace, and utilize the perceptual distinctions exhibited by the specific audiences for which they design. This researcher provides a prototype, illustrating concrete examples for IRDs to factor into their design practices in consideration of the ways users interpret designed information in relation to themselves and their experiences, enabling IRDs to better design for a particular outcome.

THE LEARNING PROCESS

In the 1940s and 1950s, research considering how individuals learn, experience, and mature as self-actualized beings emerged out of the need to understand how experiences are processed by individuals and in groups. This work addressed the development of the multifaceted processes through which learners can comprehend, apply, analyze, synthesize, and evaluate their learning experiences (Clark, 2010); offering experiences that move "the primary responsibility for learning to the student who has to actively participate in order to achieve the goals" (Schifter, 2010, p. 2373). Within this dissertation, a group of teen girls is provided with foundational knowledge about the practice of yoga through which they develop individual definitions, creative expressions, and needs from their practice, which were immediately incorporated into the Yoga & Art

Series. This allowed the series to evolve with the needs of learners as they co-designed their experience. The girls are asked to participate in the design of their experiences with yoga by personally defining it, immediately applying what they have learned through writing and drawing, and analyzing its representations on yoga studio homepages; synthesizing these experiences through the design of their own homepages. Throughout this process, the girls are observed creating a relationship with yoga, arising from their developing, inwardly based perceptions as they define and evaluate their needs within the flow of their practice of yoga.

Humanistic psychologist Abraham H. Maslow (1943) postulated that educational experiences should focus on the well-being of an individual, meeting their needs in the process of teaching an individual to recognize what she knows, while aiding her in exploring the unknown. When a learner's basic needs are met, they are afforded the learning space to delve deeper into informational experiences and define them in relation to their definitions of self (Maslow, 1943; Callier, 2004). In 1953, behavioral psychologist B. F. Skinner (1953/2011) writes that individuals learn how to behave within social situations, "by taking advice and following rules we acquire a much more extensive repertoire than would be possible through a solitary contact with the environment" (p. 2). Within the context of practicing yoga, a community of girls, with this researcher as an experienced guide, learned how to work with their breath, and move their bodies systematically as techniques for regulating their thoughts. Utilizing this foundation of knowledge as a set of guidelines, the teen girls can build their own organic practice.

Individuals learn through modeling, imitation, and direction within and outside of social situations that require them to act, comprehend those experiences, and communicate that understanding to others. In 1956, educational psychologist Benjamin Bloom focused on educators setting goals and objectives to increase the learning of students, asserting that educational design should convey information in ways that encourage learners to explore the origins, meaning, and possibilities of their knowledge and attitudes. This researcher's goal was to lead teen girls through foundational breathing, focusing, and relaxation techniques as well as a series of yoga postures that would build on what was previously learned each week. The flow of the related activities created the space for the girls to affect the design of each session through questionnaires and discussion. The girls were required to act in order to shape their experiences in the series, which they did after the first week, after they were introduced to the approach of co-design this researcher would utilize.

Maslow, Skinner, and Bloom explored the dynamic between teachers and learners for the purpose of creating a paradigm in which "The teacher is no longer the primary source of information, student ownership of learning is key, and collaborative, socially mediated learning activities are the goals" (Schifter, 2010, p. 2372). Dated by time, rather than effectiveness, these theories still serve as the foundation upon which educators teach. It is through creating an environment conducive to learning (Maslow, 1943), which reinforces what learners already know even as new information is introduced (Skinner, 1953), that learners are equipped to thrive in knowledge-based experiences (Bloom, 1956). Between the learner and the information to be acquired, a space has to be created that supports individuals in formulating, expressing, and negotiating their identities

within their learning experiences. Throughout this dissertation research, the goal is to optimize individual learning within a framework that is co-designed by the learner as they experience the learning construct. Through the artifact of yoga, this study builds on these educational perspectives insisting that learners not only participate in identifying meaning from their experiences, but that they co-create the experiences in which they learn best.

THE BODY

As a physical and mental practice, yoga was chosen as a means of study because it is a practice that can be used to foster an individual's comprehension of her experiences through conscious movement, depth of breath, and focus of mind. Ellen M. Justice (2007) writes,

> It can be said that human beings are made up of body, mind, and spirit and that three needs correspond to these: the physical need for health, the psychological need for knowledge, and the spiritual need for inner peace, when all three [needs] are met, there is harmony, and yoga helps address all three. (p. 82)

This study develops and applies a pedagogical method for co-designing experiences with teens that is conducive to their learning about yoga. This is achieved through illustrating how a curriculum such as the Yoga & Art Series can be designed for teen girls and refined through their participation. Through designing and implementing yoga experiences for teens in ways that necessitate their active engagement, IRDs can empowers teen girls to utilize the practice of yoga as a means through which they can co-author designed information and make sense of their experiences.

Conceiving the essence of an individual as housed in a body which serves as a vehicle of experience moving through the living present, this research explores how individuals understand, communicate, and shape their experiences with designed

information. The teens participating in this study identified approaches to re-conceiving

the design of information on yoga studio homepages to meet their needs as potential users

of these resources. As a teen girl cognitively processes her experiences, develops

experiential perceptions, and learns to communicate her needs as an individual, she needs

tools that aid her in understanding her self in relation to external factors. Paula Thomson

& Hala Khouri (2006) describe teenhood as "a gradual period of transition from

childhood to adulthood where physical, emotional, and psychological changes abound"

(p. i). This protracted phase of development begins around the age of 11 and continues

until an individual is approximately 25. It is within this period that the,

> Experience-dependent brain forms new neural circuits to connect the lower
> emotional limbic centers of the brain with higher prefrontal cortical regions that
> guide planning, decision-making, and regulate emotional and social responses.
> (Thomson & Khouri, 2006, p. ii)

This study focuses on the experiences of teen girls because of their unique and evolving

perceptions as they shift into the role of defining themselves and their experiences,

extracting data that they will then use to determine who they are in relation to those

experiences.

Teens are described as functioning in a vulnerable and at times violent state:

"adolescents struggle to define themselves and need guidance, structure, and

experimentation in order to tolerate the intense emotions that accompany the process of

discovering who they are and who they are not" (Thomson & Khouri, 2006, p. iii). As

teens explore their spaces of experience, "the brain, personality, and character are all

developed in social-emotional interactions with others, not only with other adolescents

but, equally essential, with other adults" (Thomson & Khouri, 2006, p. iii). The teen girls

participating in this study described their experiences with yoga as a time to focus inward

and relax within a community of peers (see discussion of the Yoga & Art Series in

Chapter 3: Participant Observation).

Teen identity fluctuates as they explore who they are, what they like, and who

they will become (Huebner, 2000; Bloustien, 2003; Currie et al., 2009; Forzani, 2009).

Through the practice of yoga, an individual can explore her relationship with her inner

world and the social space she negotiates with others (Sher, 2006; Lark, 2008; Shaw,

2009). The experiences of the teen girls participating in this study are explored "in terms

of personal development, identity, expression, and their social consequences" (Jenkins et

al., 2009, p. 5). Sandra Weber & Claudia Mitchell (2008) describe teens as,

> Poised in the cusp of adulthood, adolescents are believed to be at a key stage of
> identity formation, a time of visible and invisible 'becoming' when the biological
> changes of puberty, emergent sexuality, transition to more adult roles, and the
> formation of significant peer relationships all intersect. (p. 26)

During this time, teens should be encouraged to explore their physical and mental bodies

and unique place in the world as they solidify who they are as individuals. The Yoga &

Art Series was designed to create a space for teens desiring to learn more about

themselves through yoga and art activities. This researcher's hope is that within this

design teens will embrace the responsibility of co-authoring their own learning

experiences.

As teens experience they establish their own boundaries within and outside of

controlled spaces (Huebner, 2000; Johnson et al., 1999). The Magazine Publishers of

America (2004) write,

> Teens today understand the need to be able to turn on a dime because they live
> with short-term change and volatility on a day-to-day basis. Unlike previous eras,
> teens also live with paradox, realizing that their choices are filled with a mix of
> good and bad. Even so, they have a strong sense of empowerment and believe that
> they can conquer any challenge, actively seeking out causes to support. They are

self-assured, with three-quarters or more of them agreeing with the statements "I trust my own judgment a lot" and "I have a very clear idea of my objectives and goals in life." (p. 3)

Angela Huebner (2000) writes, "Teens tend to believe that everyone is as concerned with their thoughts and behaviors as they are. This leads teens to believe that they have an 'imaginary audience' of people who are always watching them" (p. 2).

Moreover, teens are "their own audience," write Weber & Mitchell (2008), "There is a reflexivity to their process, a conscious looking, not only at their production (themselves), but at how others are looking at their production" (p. 27). It is as if teens are looking at their outer selves in a mirror perfecting their production of self, yet teens are also a mirror that reflects and absorbs the remnants of how others envision them at the same time. This inherent awareness of audience leads Weber & Mitchell (2008) to argue: "Instead of referring to an arbitrary age range, adolescence can perhaps more usefully be viewed as a series of questions that youth ask of themselves, the world, and each other, and that others ask of them" (p. 26). Within this study, yoga is presented as a tool for exploration in a social setting through which teen girls can ask these questions of themselves and begin to answer them.

Through social interactions and in the midst of their experiences, "teens begin to integrate the opinions of influential others into their own likes and dislikes," the ideal outcome of which is, "people who have a clear sense of their values and beliefs, occupational goals, and relationship expectations" (Huebner, 2004, p. 3). The way teens interpret their experiences through their developing egos, productions, and personal practices directly effects how they construct their place in the world (Buckingham & Bragg, 2004). As a practice, yoga has been found to "empower teens to embody inner

feelings of safety, connections, and self-control, better equipping them to handle the challenges of adulthood and adult relationships" (Thomson & Khouri, 2006, p. iii). Practicing yoga can help teens in the following areas: "mind-body integrations, greater brain connectivity, and effective techniques for self-regulation as well as social skills" (p. iii). In aiding teens in identifying their learning needs and communicating those needs to shape experiences and texts designed for their usage, this dissertation emphasizes physical challenges and embodied awareness, which, "is particularly appropriate for adolescents who experience much of the world through brain regions more directly connected to the body" (p. v).

THE TECHNOLOGY

The practice of yoga consists of shaping an individual's body in space. Within the context of this study, the goal of teaching teen girls about yoga is to facilitate the process of girls shifting their attention from focusing on the presentation of their outer selves to cultivating their inner understanding of themselves. This can empower teen girls to become confident in their knowledge as they communicate their needs as learners responsible for shaping the experiences in which they learn. In defining the practice of yoga through their experiences, the teen girls were able to identify what yoga was and how it made them feel individually. In so doing, the girls participating in this study were equipped to analyze the representation of yoga on studio homepages in relation to their personal perceptions of their practice.

Writing and drawing, creating in general, can serve as a means through which experiences can be understood and processed. The present moment of experience can be understood through the act of authoring (Ong, 2001). Dennis Barron (1999) writes, "it is

easy to forget that whether it consists of energized particles on a screen or ink embedded in paper or lines gouged into clay tablets, writing itself is always first and foremost a technology, a way of engineering materials in order to accomplish an end" (para. 5). Like writing, the body can serve as a form of technology which when exercised through yoga can aid individuals in processing their personal experiences, because "yoga in its strictest form combines meditation with motion. It's a way to reduce stress and anxiety, which leads to a variety of mental and emotional benefits" (*Harvard Health Letter*, 2008, p. 1). Through exploring the technology of the body through various avenues of self-expression, human beings possess "a toolkit for the self-reliant management of the core issues of human life" (Lee, 2005, p. 19). The co-designing of experiences in the living present empowers individuals to shape, define, and solidify them, which results from the teen participants being able to identify what they need and communicate those needs as meaning makers, which validates them in the design they are living.

This study explores the meaning-making processes through which teen girls define their experiences and themselves in the space of their individual practice of yoga and within peer-to-peer interactions in relation to media and technology. Technologies circulate, change, and possess value as they are articulated in social and cultural contexts through the exchange of experiences of individuals. Knowledge is acquired and meaning is made as an individual understands and embraces her role as an active co-designer of her experiences. In knowledge communities of practice, IRDs are responsible for the identification of meaning within experiences and for the contextualization and cultivation of dynamic interactions between individual users of information and designed artifacts.

To be effective designers of informational experiences, IRDs have to exercise responsibility for creating environments and resources through which users can co-construct meaning that leads to an understanding of the designed experience. For the purpose of meeting the needs of this demographic, a dialogue must occur between IRDs and the teen girls for which they design information. Carolyn R. Miller (2004) refers to information design as a means of creating a "persuasive version of experience" (p. 52). IRDs must design in ways that allow users to find the information they need, understand what they find, and use what they need (Redish, 2004). This user-centered method of design must occur hand in hand with IRDs attempt to persuade users to interact with experiential information in particular ways.

Informational texts function as points of convergence within the contexts in which they are used, wherein, "designers cannot predetermine and prescribe user's actions anymore than users can apply a particular piece of technology exactly as they like" (Bødker & Iversen, 2002, p. 2). Understanding the practices of specific groups of information users is vital to designing experiences that meet their needs. A symbiotic interaction must take place between designers and those for whom they design. Through actual usage, individuals co-define the purposes and applications of information, because it is "the natural ability of human beings to shape and use materials to satisfy all of [their] needs" (Buchanan, 2004, p. 248).

The process of designing experiences and informational resources for usage requires an approach that embodies users' needs as learners in relation to IRD's goals as information providers. The efficacy of this study is to produce "experiences which encompass 'body', 'mind', and 'spirit', seeming to affect the embodied self" (Smith,

2007, p. 31). Through encouraging teen girls to use the movements of their bodies in space as tools through which they can explore their internal worlds (if they choose), this study is designed to empower teens to express their perceptions of yoga through an internally focused lens. In the same way that new media can determine how information is experienced, the technology of the body can determine how experience is written and imprinted within the individual learner.

THE MOVEMENT

Yoga studio homepages are evaluated as informational artifacts about which discussions (through questionnaires, creative writing, and drawing) are generated to identify the informational needs of teen girls. One of the outcomes of this research is a pedagogical methodology for designing information about and experiences with yoga for teen girls. Another important outcome in terms of professional writing is that this research method yields design heuristics by which IRDs can design, implement, and fine-tune information and learning constructs that can be effectively used by teens to meet their needs as evolving individuals learning through their experiences. Within the constructs of this study, teens are responsible for co-designing the learning environment of the Yoga & Art Series.

Tara Guber (founder) and Leah Kalish (director) of Yoga Ed. define yoga as a "methodology for integrating movement and breath to strengthen, align, and balance the body, focus the mind, and soothe and recharge the nervous system" (2006, p. 2). Yoga Ed. implements yoga-centered health and wellness programs, trainings, and products for teachers, parents, and children, as a means of improving the academic achievement, physical fitness, emotional intelligence, and stress management skills of youth within a

school setting. Yoga Ed. is concerned with "the transference of yoga practices to personal awareness and life skills" (p. 2) as a means of enabling youth to cultivate an awareness of their inner selves.

As a practice, yoga can provide a space for teens to explore their external world through their inner perceptions as they develop "a certain quality of attention and awareness, which will enhance [their] well-being and enrich every part of [their] daily experience" (Lark, 2008, p. 9). For this to occur, teens must choose to adopt yogic practices as a method of self-inquiry. In the process of teaching teens yoga and talking to them about their feelings, Helen Purperhart (2008) found that "yoga taught [teens] to look at situations more coolly and then make conscious decisions instead of simply following their first impulse" (p. 18). In other words, as a result of practicing yoga, teens were able to create the inward space in which they could decide how they would react to their outer circumstances, rather being reactive, the teens reported a sense of pro-activeness in choosing their responses to Purperhart's study. Within this dissertation research, the physical practice of yoga is offered for the purpose of creating that same space within which teen girls can discern what yoga is and how they can incorporate it into their lives. As the girls define yoga and use that definition to analyze its representation on studio homepages, the knowledge they seek and the meaning they make from these pages is identified.

Mark Singleton (2010) writes that in the 1920s, the physical practice of yoga came "fully into the public eye only when it was visually represented, most significantly through photography" (p. 163). He states that this resulted from "the representation of Indian bodies in the kind of mass-produced primers and journals that flourished alongside

comparable physical culture material" (p. 165). Central to this research is the question of, "How do texts (print, digital, multimedia, visual, verbal) and related communication practices mediate knowledge, values, and action in a variety of social and professional contexts" (Rude, 2009, p. 176). Through the communication of information about yoga studio offerings and services provided, yoga studio homepages can serve as informational resources for those seeking to discover more about its practice. Much like the photography-based primers discussed by Singelton, yoga studio homepages can serve to define what yoga is and who practices it through the visuals they proffer and proliferate. The girls participating in this study did not think yoga was for teens, because they had not seen teens practicing yoga or come in contact with a yoga program designed specifically for them to choose to participate in as an extracurricular activity.

This study serves many purposes in examining the nature of designed information on yoga studio homepages and in its exploration of how yoga as a practice can be used by teens to support the solidification of their identities as they develop and express their needs as learners. This study explores how teen girls construct and make meaning out of their experiences with yoga in the personal act of defining it as a practice as they co-design their experiences within the Yoga & Art Series. The pedagogical practice presented in this study provides teen girls with foundational knowledge about yoga earned through practice. Teens are asked to assimilate this new learning as they situate studio homepages as informational resources making meaning out of them while identifying points of improvement within the context of their experiences as co-designers of the Yoga & Art Series.

THE APPROACH

This exploration of the meaning making processes of teen girls as they experience the physical practice of yoga, allows this researcher to present their perceptions about yoga and its representation on studio homepages as they express them through activities that encourage them to remix, recode, and co-define what they are experiencing. This investigation is conducted within a framework of participatory design that is socially based and seeks to describe, analyze, and explore the communication practices (Thralls & Blyer, 2004) of the girls. Participatory design as defined within this dissertation allows this researcher to "experience closed systems and to understand the culture and communities that need and want to share information" (Potts, 2009, p. 299). A closed system centered on a group of teen girls who express themselves freely and process their experiences through their evolving productions of their own selves. In this context, each girl is afforded the ability to create personal meaning out of her experiences with the practice of yoga, and to express that meaning through her writings, drawings, and verbal discussions of yoga. As the girls co-design their experiences through their participation in the Yoga & Art Series, "the emerging design, which itself simultaneously constitutes and elicits the research results as co-interpreted by the designer-researcher and the participants who will use the design" (Spinuzzi, 2005, p. 164) reveals a pedagogical approach to designing relevant experiences for teens.

Through this design and research method, a new practice is created that, "changes the practices of everyday work, both to the extent that users participate in design, and because it changes the instruments of work" (Bødker & Iversen, 2002, p. 18). The instruments of work become the ways in which experiences and information are designed

for teens, while teens as the targeted users become partners in the process of creating those experiences. Participatory design approaches necessitate that individuals take active roles in the formation of knowledge in communities of practice (Rutter, 2004; Grabill, 2007). An individual's self-actualization in the knowledge she possesses and the meaning she identifies results from learning and synthesis as information is experienced. Teen girls become "another group, which helps to generate and circulate content" (Jenkins & Deuze, 2008, p. 9). It is the user of information that determines how theoretically designed information is practically applied. Participatory design allows this researcher to interact with teen girls "within the participant's location [their mental and physical space] in an effort to understand the tasks undertaken by the participant" which leads "to improved technologies, such as interfaces, systems, and devices" (Potts & Bartocci, 2009, p. 19).

As individuals, teens co-produce the meaning they make out of their experiences. Within the Yoga & Art Series, teen girls are not just an audience to information as it is designed, but rather they determine how information will be used and how it should be communicated to others. David Gauntlett (2011) writes, "making things for ourselves gives us a sense of wonder, agency, and possibilities in the world" (p. 2). The action of the teen girls writing and drawing about their experiences with yoga serves as a means through which they can define, solidify, and express their experiences with yoga and then compare their self-derived perceptions to its representation on studio homepages. IRDs must acknowledge an individual's ability to express their needs and their innate desire to shape their experiences, both, educational and social. By designing experiences for teen girls in which they participate in identifying meaning side-by-side with IRDs, teens are

more likely to choose to participate in these activities or interact with such texts, as they transcend the traditional role of consumer of information to co-producers of the knowledge experiences in which they will invest time and money.

This kind of participatory design makes it possible for IRDs to co-design yoga experiences for teens that not only teach them about yoga, but that offer this population a means through which to learn more about their physical and mental bodies and roles as meaning makers. Through their experiences, individuals perceive and define their realities, and "people's own understanding of what they are doing constitute part of reality" (Johnstone, 2000, p. 50). IRDs must "embed themselves within the experiences of their users" (Potts, 2009, p. 298) to be able to co-design experiences that will effectively serve the needs of information consumers while meeting the objectives IRDs as information producers identify as important. This can only occur when the hands and feet of IRD's are connected to the yoga mat in *Downward Facing Dog*[6], as they interact and practice regularly with users as "one of their own, gathering information to build a holistic picture of this group from their own perspective" (Potts & Bartocci, 2009, p. 18).

STAGES OF STUDY

This study is composed of three phases of research establishing a triangulated approach for identifying how the teen girls express their perceptions of the practice of yoga, themselves, and informational texts designed about yoga. See *Figure 1*: (1) A participant observation is undertaken with teen girls; (2) a heuristic evaluation of the yoga studio homepages is performed, and (3) a survey of individuals affiliated with yoga studio homepages is conducted.

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[6] See Appendix A: Pose Glossary for a description of the yoga postures mentioned throughout this study.
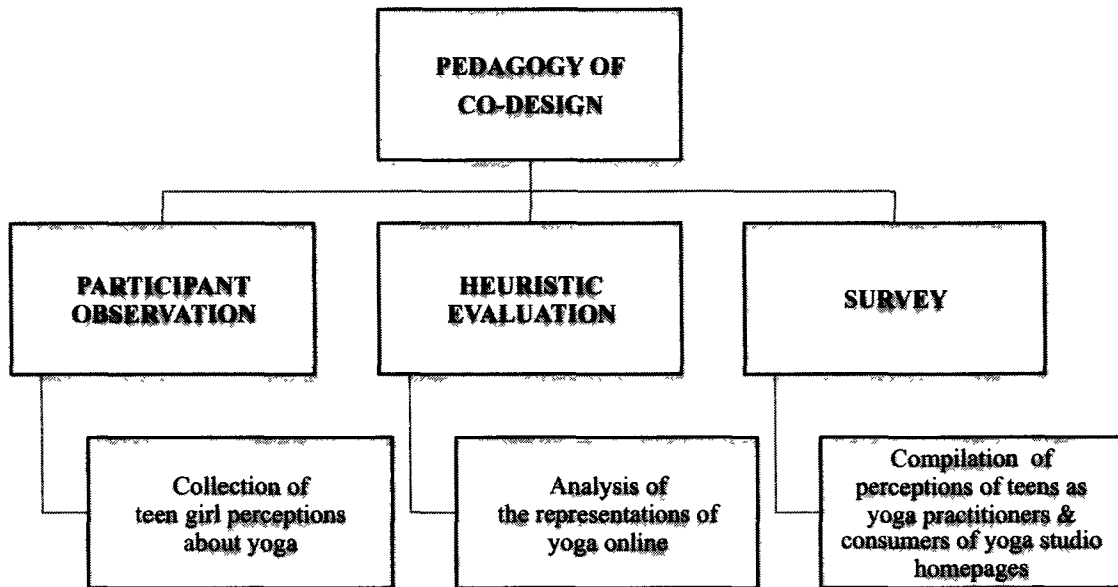
Figure 1. Stages of study constituting this pedagogy for co-designing yoga related experiences & resources with teens

PARTICIPANT OBSERVATION

Participant observation is rooted in ethnographic research, the objective of which is "to discover how the relations we apprehend in nature are used to generate cultural products" (Foley, 2005, p. 100). Traditionally, participant observation requires a researcher to immerse herself into the subject being studied for the purpose of collecting detailed information about a community's habits as a means of more efficiently developing experiences and products that meet the needs of that community (Garson, 2011). This stage is action oriented in that "the goal of all forms of action research is to

produce knowledge that benefits some non-scholarly community (or communities)" (Blythe et al., 2008, p. 273).

A four week participant observation in which teen girls are guided through yoga practices about which they write and draw as a means of defining their practice through their developing, inner perceptions of their experiences. How teen girls use the practice of yoga and informational resources connected to its practice (yoga studio homepages) is considered within this context. This researcher analyzes their writings and drawings as expressions of their developing conceptions of what yoga is, and examines how they might adopt or reject its practices into their lives.

HEURISTIC EVALUATION

Heuristics are a set of guidelines or rules used to examine if information, services, and experiences are designed well in the meeting of the needs and expectations of users (Nielsen, 1993, 2005a; Interaction-Design.org, 2006). Heuristics are used to identify existing flaws in designed objects (Chisnell, 2010). Through their questionnaires, writings, and drawings, teen participants communicate four approaches that would make yoga studio homepages resources they would use to learn more about yoga. The heuristics used within this study results from the needs the teen girls expressed and is applied to 307 yoga studio homepages designed for a general population of Internet users. Through examining the images, the descriptions of yoga, and the interactivity (as defined by the teen girls) of studio homepages, the overall effectiveness of the presentation of information on the studio homepages is evaluated by this researcher using the derived heuristic generated by the observations of the girls. Yoga studio homepages are approached as learning tools that can potentially provide users with information about

yoga, aiding them in defining what yoga is even while encouraging them to purchase experiences with it in the physical space of yoga studios.

SURVEY OF YOGA STUDIOS

The final stage of this study asks yoga studio owners, practitioners, and information designers to share their perceptions of teen as consumers purchasing experiences with yoga. They are asked to view yoga studio homepages as informational resources, marketing tools, and sites of learning. "A well-designed survey can enable [a researcher] to gather a plethora of information that can help [her] to design a product that will meet [her] users' needs" (Courage & Baxter, 2004, p. 313). The purpose of this survey is to identify: the approaches taken, the intended purpose and intent of the messages communicated, and the target users of yoga studio homepages as identified by the information producers who own, use, and design these pages.

THE RESEARCH QUESTIONS

This research facilitates a comparison between how teen girls experience yoga and how they critically read representations about yoga related experiences that originate outside of them. Ultimately this study investigates how teens learn and internalize information as they co-design, own, and personalize their experiences. Henry Jenkins & Mark Deuze (2008) write, "whatever we do with our media—what we read, watch, listen to, participate in, create, or use—pushes well beyond what is predicted, produced, or programmed" (p. 9). IRDs cannot completely predict how the experiential information they produce will be used. Therefore, if the goal is designing phenomena that individuals will embrace, IRDs must involve the targeted consumers in the process of design transcending the confines of traditional information production to include the users who

make information, experiences, and media their own. In putting a pedagogy of co-design

into practice, this study is guided by four questions that are addressed throughout the

chapters of this dissertation (see *Figure 2*).

PARTICIPANT OBSERVATION
What perceptions do teen girls express about yoga?

HEURISTIC EVALUATION
What is the relationship between teen perceptions of yoga & how it is represented in informational texts?

SURVEY
What methodology should be used for designing studio homepages meeting the needs of teens & goals of IRDs?

PEDAGOGY OF CO-DESIGNING YOGA-RELATED EXPERIENCES FOR TEENS

Figure 2. Research questions

Holistically, this study develops and implements a pedagogical method for

designing yoga experiences for teen girls, which empowers them to co-design their

experiences as they occur. This process encourages teens to become self-actualized in their knowledge as meaning makers. Weber & Mitchell (2008) write, "youth often take up or consume popular images, and combine, critique, adapt, or incorporate them in their own media productions" (p. 27). Teen girls are the heart of this study because they are characterized as assembling mosaics of their world, pulling from their experiences with friends, family, and media in its various forms, as they define themselves and attempt to make sense of their present moment. In co-designing experiences with teens, and for the purpose of serving them as a growing population, IRDs have to recognize and utilize the ways in which teens process their experiences. Altruistically, the goal becomes to enhance these consumers live with products and experiences that will contribute to their unique development.

CONCLUSION

Teens co-design their experiences through showing up to participate. IRDs must work to harness the egocentric nature of teen participation and create experiences that require teens to communicate what they need during the moments of active participation when their perceptions are forming. Designing yoga experiences for teen girls is similar to other design tasks, which seek to meet the needs of the market it desires to serve. Yet, teens are overlooked as users of yoga studio homepages, and more widely as consumers of experiences with yoga in the physical space of yoga studios. IRDs are responsible for co-creating with users of experiential information "a space for us, together, to make ourselves and each other and the world" (Johnson-Eilola, 1999, p. 4; Potts, 2009). The most effective way to design information for teen girls is "to meet them and talk to them about their interests, biases, and concerns, or to watch them and observe the challenges

they face" (Kimball & Hawkins, 2008, p. 11). A teen exploring the practice of yoga could potentially seek out additional information about how to and where to practice yoga through studio homepages. If these pages present the information teens need as experiential learners, then teens are more likely to use them and may even be inspired to buy into experiences at yoga studios. However, if these homepages do not address the informational needs of teens, then an opportunity is missed to appeal to teens as potential participants in experiences with yoga.

The following chapter (Literature Review) explores informational design, experiential design, and design practices in terms of teens practicing yoga, using related websites, and forming their identities in relation to these texts. Chapter 3 (Participant Observation) illustrates how teen girls understand yoga as a practice, perceive their experiences, and thusly communicate what they have learned. Chapter 4 (Heuristic Evaluation) evaluates how yoga is represented on a sampling of yoga studio homepages to determine if the design of these homepages meet the needs expressed by the teen girls participating in this study. Chapter 5 (Survey of Yoga Studios) queries yoga studio owners, yoga practitioners, and information designers to paint a collective point of view of how those affiliated with the evaluated homepages perceive teens as potential yoga practitioners and users of studio homepages. The last chapter of this dissertation research (Unification), makes recommendations grounded in this research for how IRDs should approach the co-design of programs and informational texts for teen girls, which support their cognitive, developmental, and experiential needs as learners. Additionally, this researcher offers suggestions for ways in which yoga programs for teens can be implemented within formal and informal educational settings.

Through owning, choosing, and creating their experiences teens identify, solidify, and express who they are. As an overlooked demographic in the practice of yoga design, teens have not been widely afforded the opportunity to influence this market. This study calls for teen girls to be included in the design of experiences for their consumption through participation, in which teen girls are held accountable for the fulfillment of their individual needs as learners, creators, and meaning makers working collaboratively with IRDs who answer the call to provide them with experiences in which they can learn.

CHAPTER 2

LITERATURE REVIEW

This chapter discusses academic research, industry resources, and educational learning theory as a foundation for designing experiences and information about yoga for teen girls. Within this study, teens are involved in the process of designing their experiences and communicating their perceptions about yoga as they articulate their needs as learners and unique consumers of yoga. In three stages (participant observation, heuristic evaluation, and surveys), this dissertation illustrates how teen girls experience the physical practice of yoga while developing and expressing their perceptions of their experiences. The outcome of this approach is a pedagogical methodology for co-creating meaning out of experiences with teens. This occurs in the midst of their physical practice of yoga and in their analysis of yoga studio homepages representing a perspective about the practice of yoga.

This research is grounded in the context of special programs, in the supplementation of classroom instruction, and in the design of digital texts that meet the needs of teens as learners while achieving the goals of Instructors, Researchers, and Designers (IRDs). This method will allow for the refining of user experiences within scenarios in which IRDs are able to author programs and texts in real time with users expressing their needs within and from designed experiences. Through the convergence of the teen girl's and this researcher's perspectives, IRDs will gain a greater understanding of how teen girls as an audience yoga to understand and explore aspects of their inner worlds and the direct relationship these perceptions have to the information

they encounter. Another element in this dynamic process is also elucidated, displaying how teens function as co-designers of their experiences. Henry Jenkins & Mark Deuze (2008) describe information as shaping experiences, "media mediate — between people, communities, organizations, institutions, and industries" (p. 5).

Within this study, the ways in which teens experience the physical practice of yoga in dialogue with how information about the practice is presented on yoga studio homepages is explored. This research is founded on information design, art making, and educational theory, providing an examination of teen girls co-designing their experiences, making their own meaning (Rude, 2009; Gauntlett, 2011) as they co-design their optimal learning environment (Maslow, 1943; Skinner, 1953; Bloom, 1956). This study explores the processes of teen girls learning as they experience, internalizing and illustrating what they have learned, as they redefine the experience of yoga from their personal perspectives through several means of expression: their physical yoga postures, their written works, and their drawn artistic interpretations. Tantamount to this discussion is the exploration of, the negotiation of, and the constitution of teen identity through the articulation of their needs as learners in relation to information they experience.

Patricia Deubel (2003) writes, "As advances in technology offer new opportunities for learning, it is important to use a range of theoretical perspectives to optimize use of new technologies in teaching and learning" (p. 63). Within this study, yoga studio homepages are examined as complementary tools of learning providing teens with information about yoga as they explore how the physical practice of yoga fits into their lives. Concurrently, the teen participants are forming conceptions of themselves as individuals. Since the 1800s, three schools of learning have dominated the process of

designing informational experiences for learners: behaviorism, cognitivism, and the constructivism (Baruque & Melo, 2004; Deubel, 2003). Lucia B. Baruque & Rubens N. Melo (2004) write that each of these schools is founded on learning theory that "encompasses principles which aim at explaining changes in human performance, providing a set of instructional strategies, tactics, and techniques from which to select" (p. 346). These schools "represent major themes in the way learning is conceptualized and provide different practical guidelines for instructional practices" (p. 346). In understanding the intersections and contradictions and strengths inherent in these perspectives, IRDs will be able to design yoga-related experiences for teens that structure the curriculum and related experiences into language and designs, which foster, complement, and support learning.

According to behaviorists, perspective is the primary focus for how external factors shape an individual's ability to internalize stimuli. In this case, "the primary responsibility of the instructional designer is to identify and sequence the contingencies that will help students learn" (Baruque & Melo, 2004, p. 346). The cognitivist perspective is focused on internal learning processes, as learning is characterized as a change in knowledge. Here the responsibility of the instructional designer is to "organize new information for presentation, carefully linking new information to previous knowledge" (Baruque & Melo, 2004, p. 346). Within the constructivist perspective, meaning is made out of experiences, "learning is constructed by the complex interaction among students' existing knowledge, the social context, and the problem to be solved" (Baruque & Melo, 2004, p. 346). It is up to the instructional designer to design informational experiences centered on "posing good problems, creating group-learning

activities, and guiding the process of knowledge construction" (Baruque & Melo, 2004, p. 347). All three of these approaches emphasize "meaningful learning and realistic contexts for the application of knowledge and skills" (Deubel, 2003, p. 86). The purpose of which is to identify the ways learners learn best as they experience information.

On the most basic level, Baruque & Melo (2004) describe the distinctions between the educational points of view,

> Behaviorists view knowledge as an automatic reaction to external factors in the environment, and the cognitivists consider knowledge as abstract representations in one's mind, the constructivist school views knowledge as a meaning built by each learner through a learning process. (p. 348)

The present study draws from these three approaches to identify how individuals learn within their experiences, because as Baruque & Melo (2004) write, "by adopting an eclectic approach, one can benefit from all learning schools and, at the same time, better meet the needs of the target audience" (p. 350). In better meeting the needs of teen girls, IRDs can ensure that teens will participate (cognitively, physically, and developmentally) in and purchase the experiences designed for them. Ultimately, as Deubel (2003) writes, "learners must be assessed for their needs and capabilities so that instruction is appropriate and meaningful" (p. 65). In terms of design, IRDs have to get to know the audiences for which they design, enabling them to actively engage the participation of the intended users. IRDs should revise their role from that of knowledge producers for imagined audiences to that of expert guides creating meaning with users that are participant-producers in the process of formulating, defining, re-coding, and expressing their acquisition of knowledge as they digest experiences.

In terms of designing educational and informational experiences, Albert Bandura (2004) writes, "There are two basic modes of learning. People learn through the direct

experience of rewarding and punishing effects of actions, and through the power of social modeling" (p. 77). In three sections, this chapter reviews works concerned with informational design, experiential design, and design practices as related to teen learners. The teens participating in this study are not only learning about the physical practice of yoga, they are learning about themselves. This study illustrates how IRDs can best design experiences with teens through a yoga and art prototype wherein the teens co-design the program as they participate. Identifying how they need information to be presented to them in order for them to learn. Within this study, teens are directly experiencing yoga as it is modeled through instruction, their peers, and on yoga studio homepages, which qualifies them to see connections in their perceptions and the instructional design and the learning construct.

In addition to exploring how teens can make existing information their own, this study offers a pedagogical approach for designing informational experiences with niche populations of learners. This pedagogy can aid IRDs in the design of information tailored to the specific needs of learners. Donald A. Norman (1998) writes that design should be "based on the needs and interests of the user, with emphasis on making products usable and understandable" (p. 188). IRDs need to design information not only for, but also with the teen learners that are ultimately responsible for creating meaning out of their experiences. As Bandura (2004) writes,

> People enjoy the benefits left by those before them who collectively fought for social reforms that improved their lives. Their own collective efficacy will shape how future generations live their lives. The times call for social initiatives that enable people to play a part through their collective voice in bettering the human condition. (p. 95)

This study is a call to action for those working with teen girls to meet them where they are on the mat of experience, extend a hand, and walk forward to new ground. The purpose of which is to design experiences for teens that aid them in identifying who they are through the practices in which they chose to participate.

INFORMATION DESIGN

As malleable texts, websites are often used by teens as instructional guides and resources that shape and communicate experiences (boyd, 2008). It is on and through websites that individuals "communicate, convince, persuade, and express [their] identity and community" (Kimball & Hawkins, 2008, p. 1). Essentially, websites function as "a practical mechanism for mediating human action within and among communities, nations, and cultures" (Kimball & Hawkins, 2008, p. 1). The design of these pages is defined by its purpose and its functionary goals. The purpose of yoga studio homepages is to communicate information about what a yoga studio is as well as what it has to offer over other studios with a competing and/or similar focus on products and services. The design and objective of these pages encompasses presenting information that is "both sensible and beautiful, in response to human needs" (Antonelli, 2005, p. ix).

It is the responsibility of IRDs to determine what those needs are within small test groups of individuals, niche users, for which the information and experiences are designed. Websites create a convergent space in which, "the relationship among people who create information, people who use information, and people's cultures, societies, and environments" (Kimball & Hawkins, 2008, p. 3) intertwine. The most effective way to achieve an intersection of IRD purposes for designing informational texts and teens' needs from those experiences is to consult this population about their requirements as

users of these designs and/or products. Yoga studio homepages do not exist outside of the physical practice of yoga, anymore than they exist outside of the individual user accessing them as she seeks to find information about the practice of yoga. Jay Bolter & David Grusin (2000) write, "No medium today, and certainly no single media event, seems to do its cultural work in isolation from other media anymore than it works in isolation from other social and economic forces" (p. 15). As digital texts, yoga studio homepages, can effect a teen's perception of yoga as well as her perceived place as a practitioner of yoga.

Information Design is "the art and science of preparing information so that it can be used by human beings with efficiency and effectiveness" (Horn, 1999, p. 15). Rooted in cognitive science and applied research in the fields of interface design, visual communication, and graphic design, information design considers the formulation of spaces in which the exchange of information can occur between individuals and experiences (Horn, 1999; Jacobson, 1999; Kimball & Hawkins, 2008). When information is designed effectively, meaning that it meets the needs of its identified users, its function is to "convey meaning and heighten understanding among all parties involved in an activity or event" (Jacobson, 1999, p. 2). Interaction between designers, information, and audiences is integral to the process of designing yoga studio homepages. Within this frame, the goal of IRDs should be, "to edify more than persuade, to exchange ideas rather than foist them" (Jacobson, 1999, p. 1) on users. When designing informational experiences for users, IRDs have to be "diligent enough in [their] efforts to understand individual needs to ensure that no one [user] is left in the dark, either inadvertently or through ignorance" (Whitehouse, 1999, p. 104). To design experiences for teens, IRDs

need to take the steps to understand how teens learn in the process of becoming self-actualized and more fully realized individuals.

The way in which information is designed shapes how audiences experience that information. Patricia A. Porter & James E. Sullivan (2004) write, "the words on a page are always laid out in certain spatial patterns, and those patterns not only cue the reader as to how the material is to be comprehended, but also attempt to persuade, or argue that the reader should adopt a certain posture toward the material" (p. 292). Information is the mediator between perception and experience. How information about yoga is designed on yoga studio homepages can shape a teen's experience with the physical practice of yoga, while their time spent practicing yoga postures on a yoga mat can determine how they perceive the practice and themselves. In experiencing yoga for themselves, teens can offer sound data and conceptualizations about how information about yoga can most effectively be presented to them as an audience in the act and space of participating in the design process with IRDs. Previous work with teens and how they use media is also explored "using the materials at hand, respecting or finding ways to get around their limitations, working with others or alone" (Weber & Mitchell, 2008, p. 39). The present study allows teens to be decision makers from inception to the conclusion in how information should be designed for them. This increases their roles as active agents responsible in part for creating the experiences in which they learn about themselves and their world.

Donald A. Norman (1998) writes, "Good design exploits constraints so that the user feels as if there is only one possible thing to do—the right thing, of course" (Norman, p. 216). The relationship between individual perception and the personalization

of information is ever-evolving. One of the logical and socially conscious purposes of a yoga studio homepage would be for IRDs to design the information accessed on it as a supplement to an individual's yoga practice outside of the studio it represents. How teens experience the physical practice of yoga determines how they need to see information presented about yoga in supplementation of that practice, and vice versa, as they make meaning out of experiences with yoga. As Susan Bødker (1998) writes, "in design, we need to hold on to something not yet known—the future product, as seen from the point of view of design, and the future instrument of work, as seen from the point of view of use" (p. 111). This study focuses on use; how the use of yoga studio homepages as informational resources by teens positively or negatively reinforce their experiences with yoga depending upon how information about yoga is communicated and understood by a specific group of teen users.

As designers of informational experiences, IRDs need to encourage individuals to participate in the design process as co-designers of the experiences in which they choose to participate within the contexts of the worlds in which they live (Bloom, 1956, 1985; Grabill, 2007; Jenkins et al., 2009). Because, "if citizens cannot access, assemble, and analyze the information they find, they will not be able to produce the necessary knowledge to participate in decision-making processes that affect their lives and communities" (Grabill, 2007, p. 8). Designing texts, working from the vantage point that appropriately designed information can shape experience, should be a collaborative process in consideration of the purposes and needs of IRDs in symbiosis with the ways teen girls learn.

This study engages both designers of information and users of that information as co-designers. In order to design experiences that meet the needs of teens while fulfilling the purposes of IRDs, communication between them has to occur. Yoga, from the Sanskrit word *yuj* means to yoke or join (Johari, 1987). Within this study, yoga is the artifact joining IRDs as producers of informational experiences to teens who not only consume those experiences, but also co-produce them through individual use. In creating a physical and dialogic relationship with yoga, teens participate in designing their own experiences as they define themselves by "filling in the gaps left intentionally and unintentionally by the primary producer" (Dena, 2008, p. 41). Within the context of this study, yoga studio homepages are the primary products representing experiences of yoga while information design is the method of exploration allowing IRDs to identify what teens know, how they comprehend what they need to know, and communicate what they have learned and might make a part of their regular practice.

EXPERIENCE DESIGN

Designing informational experiences with yoga for teens should be a social activity, "produced collaboratively but also influenced by and influencing the context" (Rude, 2009, p. 192). A relationship of co-design should exist between the design of information and the contexts in which that information is used in textual and experiential ways. Neil Fleming & David Baume (2006) describe four modes of learning: visual[7], aural[8], read/write[9], or kinesthetic[10]. Within these modes, these scholars have shown a

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[7] Visual learners comprehend information most effectively through sight.
[8] Aural learners comprehend information most effectively through hearing.
[9] Read/write learners comprehend information most effectively through reading and writing text.

variance among the ways individuals acquire knowledge. In Fleming & Baume's learning framework, responsibility is placed upon an individual to identify their dominant mode of learning through a self-reflective questionnaire. Once an individual knows how she learns best, she is able to dictate how information should be designed and presented to her to increase her understanding of material learned in relation to her current perceptions.

Within this study, the visual presentation of information about yoga on yoga studio homepages appeals to the visual learner. Discussion of yoga philosophy, such as setting a *sankalpa* or intention[11] for one's yoga practice as well as this researcher's guiding cues, addresses the aural learner. Through the writing and drawing of their experiences with yoga, the needs of teens that are read/write learners as well as those who prefer to express themselves through visual representations and creative and multimodal means are met in this study. Additionally, kinesthetic learners are reached through the physical movement of the body into yoga postures. In designing this study to incorporate the four modes of learning (Fleming & Baume, 2006), this dissertation encourages teens to be "physically fit, mentally clear, and emotionally stable," which "are the foundations for self-realization and the outcomes of the yoga process" (Guber & Kalish, 2006b, p. 3). Moreover, the instructional design of this study necessitates that teen participants explore yoga and information about it from a place of inner awareness. This construct increases

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[10] Kinesthetic learners comprehend information most effectively through all five of the senses, sight, hearing, taste, touch, and smell.

[11] In Sanskrit a *sankalpa* or intention is a phrase in the present tense focusing the mind on positive action (Lark, 2008). Kelly McGonigal (2010) writes for *Yoga International*, "A sankalpa practice starts from the radical premise that you already are who you need to be to fulfill your life's *dharma* (the overriding purpose for one's life). All you need to do is focus your mind, connect to your most heartfelt desires, and channel the divine energy within" (p. 44).

the possibility that teens will be able to define their developing perceptions and contribute to the structure of the learning environment and/or design.

Teens should be empowered with the knowledge that "authentic self-knowledge is the key to self-determination" (Guber & Kalish, 2006b, p. 5). The ability to observe oneself without judgment is a large part of the physical practice of yoga as well as in "attaining one's full potential as a human being living in the world, involving the seeking and expression of justice, wisdom, benevolence, and creativity" (Bharati, n.d., p. 2). In knowing where she is situated in terms of how she learns best, cognizant of how she needs information and experiences to be presented in order for her learning to be optimized, each teen girl in this study is allotted the space to take ownership of her learning, as she appropriates information in relation to her lived experiences. In choosing to experience yoga as they encountered designed information about it, the teens manifested a confidence in themselves and their ability to identify those experiences in which to participate based on their personal needs as learners and interests as individuals. The girls then used this new ownership (knowledge and confidence) to communicate their needs from the learning design.

Learning styles overlap, blend, and change over time within educational and instructional contexts. Within this study, the physical practice of yoga serves as a mode of learning, necessitating firsthand experience, cognitive awareness, and full body movement. Visual learners ascertain information through sight, aural learners through hearing, read/write learners through text, and kinesthetic learners through the movement of the body. As an artifact and lens through which to explore teens' experiences with yoga, the participant observation stage of this study (discussed in Chapter 3) targets these

four learning modalities. As Paramahansa Yogananda[12] (1998) writes, "The goal of yoga science is to calm the mind, that without distortion it may hear the infallible counsel of the Inner Voice" (p. 135).

Through their participation in this study, teens are asked to express their perceptions about how information should be designed about yoga to meet their needs as individuals new to and growing within the physical practice of yoga. If yoga studio homepages and yoga programs for teens like the Yoga & Art Series are designed to meet teens needs, these homepages and these programs can positively influence and reinforce the role of teen users in the instructional design process, in their own decision making, and in their creation of individual meaning. The Yoga & Art series is designed to facilitate the development of an empowered knowledge community, which through "connecting with other people through creativity, and therefore feeling more connected with the world—becoming heard and recognized" (Gauntlett, 2011, p. 232). The teen girls can take ownership of their power to define not only their experiences, but also their identities within them, and their relationship to their peers, and their role in communicating and shaping larger environments.

IRDs need to identify methods to support the physical, cognitive, and social development of the teen audiences for which they design information and experiences. It is asserted that if teen girls choose to participate in a complementary yoga practice from a yoga studio homepage designed to meet their needs as learners, they are more likely to establish a regular practice. As Erica Rodefer (2009), a writer, editor, and yoga teacher,

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[12]Paramahansa Yogananda was a yoga practitioner of Indian descent and *guru* or spiritual teacher, who is credited with introducing the teachings of yoga and meditation to America in the 1920s.

writes, "aside from the physical benefits, yoga teaches teens techniques for coping with the unique issues they're faced with everyday—insecurity about their changing bodies, the enormous pressure to fit in, stressful schedules, and uncertainty about their beliefs and their futures" (p. 1). The inward focus that yoga encourages holds the possibility to positively impact the processes through which teens make sense of their worlds.

David Gauntlett (2005), a professor of media and communications, postulates that the processing of individuals "begins in the mind but comes through the body" (p. 155). Stated another way, Gauntlett later writes that "a unity of mind and body—in particular working with the hands as a central part of the process of thinking and making…becomes a process of making personal self-identity and citizenship" (2011, p. 23-24). Within this study, teen girls experience yoga through the technologies of their bodies, while mentally processing their experiences with those physical movements through art making and the rewriting of yoga studio homepages to meet their needs. When teens interact with texts critically, analyzing them for the purpose of deducing what they know of an experience, to make new texts, teens are exercising their muscles as active co-creators of meaning. They are expressing their power not only as consumers of experiences, but as meaning makers; "making things show us that we are powerful, creative agents—people who can really do things, things that other people can see, learn from, and enjoy" (Gauntlett, 2011, p. 244). This process is not only about making something new, it is about "transforming one's own sense of self" (p. 244) in the process.

Through writing and drawing their own conceptions of yoga, teens are communicating their experiences through their personal lenses of identity. Fleming (1995) writes,

It is unfortunate for some students in our formal education system that, apart from the first stages of schooling, we do not always allow or encourage them to use a variety of assessment methods to express their learning, yet much informal learning uses a rich array of modes. (p. 6)

For new knowledge to develop and be expressed, individuals need to be guided through approaches to learning that originate from a place of situated practice (New London Group, 1996). In this place, new information is layered onto existing knowledge in effective instructional design; new learning arises out of the present moment of experience. Within the field of Professional Writing, specifically information design, in which this study is situated, learning is perceived as occurring in the doing (Grabill, 2001; Faber, 2002, 2007; Simmons, 2007; Rude, 2009). This happens through methods that "accommodate the assumption that writing is a social activity, often produced collaboratively but also influenced by and influencing the context" (Rude, 2009, p. 192).

Like writing in this context, designing informational experiences for participants should also be a socially collaborative, co-produced activity, which would create a reciprocal relationship between how information is designed and how it is used. In exploring writing as a form of social action within community systems, Jeffrey T. Grabill (2007) suggests that to be "productive citizens" (p. 7), scholars and practitioners have to address the design of information infrastructures that determine how people create meaning out of their experiences. According to Grabill (2007), designers of learning experiences should "understand that if citizens cannot access, assemble, and analyze the information they find, they will not be able to produce the necessary knowledge to participate in decision-making processes that affect their lives and communities" (p. 8). Designing yoga experiences with teen co-designers has to be a practice that is embedded within teen social practices, while being cognizant of the characteristics of teen culture,

and encouraging to teens in determining the constructs in which they learn best. Programs such as the Yoga & Art Series empowers teens to participate in the public and private, outer and inner, construction of their worlds as they seek to understand, communicate, and own what they are learning.

Teens are characterized as becoming, transitioning, or growing from children into the adults they will become (Huebner, 2000; Johnson et al., 1999). They are "at the formative stage in terms of developing identity and values" (Chia, 2010, p. 402). This study focuses on teen participants in the present moment of their experiences with yoga, with an awareness of the physical and mental changes occurring in their bodies. Within this transitional time, teens should be encouraged to explore their space, preferences, and notions of self (Huebner, 2000; Bloustien, 2003; Currie et al., 2009; Rodefer, 2009). Socially, teens are constantly defining their worlds. Spending time in digital spaces, consuming media texts, and conferring with each other as they "integrate the opinions of influential others into their own likes and dislikes" (Huebner, 2000, p. 3). If yoga studio homepages present the practice of yoga in ways in which teens can envision themselves as participating in that activity as users of digital media, then teen as more likely to seek out experiences with yoga in a studio.

In process of selecting the experiences that complement their self-conceptions teens accept and reject particular practices, becoming self-actualized as they discern the aspects of their worlds that are for them and those that are not. David Buckingham & Sara Bragg (2004) believe that the process through which information is designed for teens must be explored because as beings, teens construct their personal paradigms out of the material of their experiences. Teens are active users of media bricolaging their

worldviews out of their experiences (Niesyto, 1999; Gauntlett & Holzwarth, 2006; Gauntlett, 2007; boyd, 2008; Jenkins et al., 2009). For this reason, IRDs have to consider the outcomes and uses of informational texts designed for them as well as the resulting experiences. Within this study, a method for designing information with teens is set forth, considering how teens would design such information for themselves and their peers.

Depending on personal backgrounds and economic conditions, many teens are characterized as having an income afforded to them with which they can purchase products, services, and experiences. It is estimated that, "$175 billion a year is spent by this age group on products and services" (Chia, 2010, p. 152). Rachel Russell & Melissa Tyler (2005) took a group of teens to visit a United Kingdom based retail store selling clothing and accessories for teen girls and interviewed them about their perceptions of their experience in the store. They determined that, "teenage consumers in particular want to ensure as much as possible that they will fit in and seek external confirmation that this is likely to be the case" (p. 234). To buy into experiences, teens have to be able to visualize themselves as taking part in those experiences, which is achieved by seeing other teens like themselves, or teens they want to be like, participating in the experiences being designed for them.

To date the most effective method of marketing experiences to teens is to show them other teens participating in those experiences. Whether the presentation of yoga on yoga studio homepages is the subject, or businesses selling products to teens, teens typically seek external confirmation from informational texts, peers, and family as they determine the experiences they will take part in as they solidify aspects of their identity. Roshan D. Ahuja, Tara A. Michels, Mary M. Walker & Mike Weissbuch (2007) observe

that, "teens are heavy users of both offline and online media, spending nearly 1.5 hours per day on the computer social networking" (p. 152). Stella C. Chia (2010) writes, "adolescents nowadays appear to rely more on the Internet than other types of media" (p. 413). In their consumption of informational texts, teens want to see other individuals like themselves experiencing the product and/or learning environment. In terms of visibility, images of teens were nonexistent on the yoga studio homepages evaluated within this study (see further discussion in Chapter 3: Participant Observation and Chapter 4: Heuristic Evaluation).

According to Jay David Bolter & David Grusin (2000), the function of mediated texts is to convey threads of meaning that compose experience invisibly. This subtle transference of experience occurs in the conduit between information designers and the users of designed information. Weber & Mitchell (2008), "as technologies become more deeply integrated into ever widening areas of our lives, their roles as mediators of identities and learning are likely to be taken for granted, perhaps becoming almost invisible" (p. 44). Yoga studio homepages not only influence how users perceive yoga as a practice, but they are also used to make the practice of yoga appeal to individuals in general by providing information about that particular studio and ideal representations of how the practice of yoga can be experienced in a particular studio. As such, their design process if extended to consider teens as consumers, cannot be one that regularly subscribes to the invisibility quotient (which now governs their design) described above. In order for experiential texts to be amenable to a user's needs, it has to be designed in a manner that not only predicts how it will be used, but also should be designed in a way that asks users what their needs are.

DESIGN IN PRACTICE

Jenkins & Deuze (2008) discuss "a culture of remix and remixability, where user-generated content exists both within and outside commercial contexts" (p. 6), allowing for audiences to become their own sources of specialized information. Giorgos Cheliotis & Jude Yew (2009) describe remix culture as "furthering the practices of communities that revolve around creating and personalizing content" (p. 165). User participation in the remixing of information has been studied at length, but what has been largely absent from these inquiries is an examination of "the motivations of individuals and why they feel compelled to share and contribute openly in the first place" (Yew, 2010, p. 517). The present study moves beyond teens manipulating existing content to explore how they design information about yoga for themselves, reflecting the personal experiences and individual learning needs the girls expressed within the Yoga & Art Series. By leading teens through the physical practice of yoga and then asking them to communicate their experiences with yoga through writing and drawing and the analysis of related resources, this researcher explores how teens inwardly perceive their experiences with yoga and outwardly communicate them. This dissertation research provides IRDs with a window into how teens (re) write their experiences and (re) code information to meet their needs as learners.

This research is supported by previous research that has employed creative methods of expression to investigate how teens make meaning out of their experiences across media platforms utilizing video cameras (Niesyto, 1999; Bloustien, 2003), collage (Luttrell, 2003), and journaling (Buckingham & Bragg, 2004). It is through their creations, whether written, drawn, or filmed that teens offer access to their internal

worlds, illuminating the ways that they think, process information, and define the worlds that they inhabit. Knowledge is acquired through the process of making (Gauntlett, 2011) it one's own. Wendy Luttrell (2003) explored how teen mothers were depicted in popular media. In a study that featured an examination of how a group of teen mothers saw themselves. Teens were asked to participate in role-play scenarios, assemble a collage that defined them as an individual, and design a collaborative group text that included each one of their stories. Luttrell (2003) writes that their work,

> Shed light on their multiple worlds—worlds of childhood, womanhood, motherhood, heterosexual romance, and consumerism—and highlight their growing awareness of how race, class, and gender inequities shape their participation in and aspirations about these worlds. (p. 45)

In describing their worlds, visually and verbally, the teens participating in her study functioned as active agents utilizing their voices to create meaning in their own multimedia texts. Each of their representations engaged "in a dialogue with the self (Who am I?) and society (Who do others think I am?)" (p. 71). Within the space of the present study, teens are asked to share "personal images, ideals, associations, and feelings that are unique to [them] alone" (Luttrell, 2003, p. 5) about their experiences with yoga.

From seventy-one interviews with teen girls, ages 12-16, Dawn Currie, Deirdre M. Kelly & Shauna Pomerantz (2009), confirmed that "it is between and amongst girls as friends that identities are variously practiced, appropriated, resisted and negotiated" (p. 4). A teen's formation of their identity reflects their perceptions of how they view themselves in relation to the information that surrounds them and the experiences that they live. The construction of experience is primarily social, stemming from individual perception, mingling with cultural and societal negotiations between a teen's internal and external world. As Currie et al. (2009) write, "Our sense of who we are for the moment

shapes our thinking about who we can become" (p. 2). Gerry Bloustien (2003) describes this construction of identity through experience as self-making, a "universal and delicate process that tests possibilities while simultaneously heeding the material and symbolic boundaries that circumscribe the whole of our social and cultural life" (pp. 269-270).

It is within individual perceptions that individuals attempt to determine who they are and what they experience because the "self can never be finally managed, never finally complete" (Bloustien, 2003, p. 270). Through recording themselves for 15 months, a group of teen girls created videos that represented their worlds. While simultaneously establishing the camera's scope of view, the teens were also the subject of its gaze, which allowed them to witness what was and could be defined, internally and externally, through their experiences. Through this experience, teens were offered an opportunity to gain perspective on what was happening to them, remixing the moment as it was occurring. Within the present study, teens are asked to practice yoga, formulate their perceptions of their experiences with yoga, communicate their resulting conceptions of yoga and themselves by identifying the ways they think information should be designed to meet their needs as individuals new to the practice of yoga. Then they were asked to put this information into a direct conversation with the way it exists on yoga studio homepages.

In 2008, Desiré Shepler, Gwen Lupfer-Johnson & Inna Rivkin hired a certified yoga instructor to teach weekly yoga classes to girls ages 9-15, hypothesizing that "participation in yoga could serve to protect adolescent girls from the negative repercussions of self-objectification" (p. 171). Shepler et al. (2008) explored the physical

practice of yoga as an inwardly based method[13] through which teens might interact with their life experiences and selves. Shepler et al. (2008) noticed a shift in how teens communicated their perceptions of themselves after each yoga practice; concluding, "due to the limited nature of mental resources, the emphasis placed on processing bodily sensations during traditional yoga practice may make participation in traditional yoga antithetical to the process of self-objectifying" (p. 171). Teen participants began to perceive inwardly, rather than exhibiting "hypersensitivity" (Forzani, 2009, p. 2) to outside influences. In order to examine how teens learn and internalize the information they encounter as they make it their own, consideration of how teens interact with themselves on a personal level must be explored.

Christina A. Forzani (2009) writes, "developing the ability to witness thoughts and observe the body without immediately reacting through thoughts and emotions is a lesson of yoga that may be particularly advantageous to this developmental group" (p. 3). Teens can use the physical practice of yoga as a means of confronting their emotions, of reinforcing regular exercise habits, of promoting nutritious relationships with food, and in normalizing sleep patterns (Bennett, 2002; Lark, 2009). In the transition from childhood to adulthood, "social considerations are juxtaposed with internal experiences" (Forzani, 2009, p. 133). The teen girls who participated in these previous studies explored how the physical practice of yoga influenced their relationships with themselves and their worlds; they exhibited the ability to process experiences from an inwardly based point of view.

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[13]Osho (2004), a professor of philosophy, mystic, and spiritual teacher, referred to the inner core of an individual's being as their center; he lectured that once an individual has come in contact with her inner core, she can move in the world without being affected by its attempts at shaping her sense of self and identity.

Additionally, these girls were able to move these inner perceptions outward to examine them in the light of their daily lives.

Through learning experiences with yoga, teens were empowered to examine and communicate their perceptions of their worlds. Yoga can aid teen girls in the process of developing their inner selves as they identify and express their personal needs and preferences as learners in relation to and beyond the physical practice of yoga. This dissertation research focuses on how teen girls exploring the practice of yoga need to have experiences with yoga designed and informational resources about yoga structured for their usage. Teens must also serve as co-producers of meaning within these constructs. Appropriately constructed, yoga programs for teens like the Yoga & Art Series and informational resources such as yoga studio homepages possess the potential to positively impact teens' experiences with yoga, dependent upon how the design of these digital texts is communicated and understood. Within this context, yoga programs and informational resources designed with teens in mind can offer them opportunities to co-design their learning experiences by empowering them to participate in knowledge communities even as they continue to develop a sense of their own individuality.

CONCLUSION

This study explores the experiences of teen girls participating in the co-design of their experiences with yoga, each other, and this researcher positioned as an IRD. Within this inquiry, a pedagogical method for co-creating experiences with teens is developed and implemented. The intention of this method is to empower teens to synthesize their experiences (Bloom, 1956; 1985) through self-knowledge (Maslow, 1943) as they participate in making meaning out of their experiences. Within the context of yoga, art,

and various considerations of the development of teen identity, this method is applied to teen girls experiencing yoga as they analyze designed information as their perceptions take shape and their art is made. Gauntlett (2011) writes, "Human beings need to be able to make their mark on the world, and to give shape and character to the environments that they live in" (p. 224); to the experiences that they have. The girls participating in this study made their mark on this design process as is illustrated through their art and their words in Chapter 3: Participant Observation.

Through this review of academic, industry, and educational scholarship as it relates to information design for teen girls, this study presents a pedagogical methodology for co-designing experiences with this demographic through which all involved in the process can identify meaning. In its entirety, this study confronts the challenge of: "how to frame a message for a diverse audience that nonetheless touches each individual" (Hart-Davidson, 2001, p. 151). In addressing how information should be designed for teen girls, teens are introduced to the practice of yoga as a vehicle of self-discovery as they simultaneously design information about yoga. The girls then communicate their perceptions of the practice of yoga and appropriate meaning from the practiced postures, piecing together mosaics of their identities, which enable them to generate representations of yoga for themselves and their peers. It must be acknowledged that while yoga is the artifact of interest in this research, the practice of yoga is conceived as an organized method with many levels of interpretation through which teen girls can explore their developing identities. However, this might not be the case for all teen girls as they negotiate their identities in the face of class, gender, ethnicity, and other personal, cultural, and socially based factors.

Grounded in the academic research, industry resources, and educational theory discussed in this chapter, the following chapter details how the eight girls in the Yoga & Art Series experience the physical practice of yoga, and internalize their experiences with its practice, as they communicate their perceptions about their experience through writing, drawing, and the comparative analysis of yoga studio homepages. The teen aged[14] demographic was selected to participate in this study because they are in the process of determining their preferences, learning to choose their experiences, and developing their sense of self as has been discussed within this chapter. Within this study, teens are approached as mediators of knowledge, consumers of information, and producers of meaning as they co-design their experiences with yoga. To add to this body of knowledge, IRDs need to serve as advocates for teen girls by designing spaces that cultivate teen participation as co-designers of their experiences, honoring their presence as they express their perceptions and communicate their learning needs.

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[14]The teen girl participants ranged in age from just turning 13, to looking forward to being 15 on Valentine's Day 2011.

CHAPTER 3

PARTICIPANT OBSERVATION

This chapter describes the experiences of teen girls with the practice of yoga as explored through a qualitative methodology including participation observation. The previous chapter laid the foundation for this inquiry through learning theories, information design, experience design, and design in practice. Here, teen perceptions of the practice of yoga and themselves are communicated through questionnaire responses, writings, and drawings. Their work represents their perceptions throughout this chapter, as analyzed through the eyes and experiences of this researcher. As Carolyn R. Miller (2004) offers, "to write, to engage in any communication, is to participate in community" (p. 52). Tara Guber & Leah Kalish (2006b) write,

> Participation in discussion, research, journaling, reading, as well as poses, breathing, relaxation and reflection, cultivates and enhances [teens'] ability to mindfully, compassionately, and healthfully move toward independence and personal responsibility. (p. 2)

Within communities, shared experiences are the building blocks on which individual perceptions are formed and solidified. When Instructors, Researchers, and Designers (IRDs) situate themselves within the communities for which they design, they become more adept at identifying how users utilize information to understand themselves and their experiences. As users help to design the information they use, the process of design becomes participatory. In respect to teens' experiences with yoga and their perceptions of it as a practice and themselves as yoga practitioners, "the goal is to get students to see whatever they do in yoga as serving themselves" (Guber & Kalish, 2006b, p. 19).

Participatory design developed as an activist brand of research within the field of technical communications, which later came to be known as professional writing. The purpose of participatory design is to "empower users in making their own decisions" (Spinuzzi, 2005, p. 167; Bødker & Sundblad, 2008). It is about involving users in the creation of the experiences and texts in which they partake. As Jakob Nielsen (1993) writes "it is important to realize that participatory design should not just consist of asking users what they want, since users often do not know what they want or what they need, or even what the possibilities are" (p. 89). For this reason, this study uses multiple methods to encourage the teen girls participating to communicate their needs of informational resources about yoga through writing and drawing and its practice, not just through question and answer.

In showing teens how experiences with yoga have been designed as they relate those abstract artifacts to their own experiences with its practice, teens can determine and express what they need as users. Exploring how implicit, holistic, and systematized knowledge systems work in an effort to bridge the gap between praxis and theory, participatory design engages and then reflects upon the actions of users in relation to information (Spinuzzi, 2005; Bødker & Iversen, 2002). How teens experience the process of representing their perceptions of yoga as they repurpose and (re) code information about it to meet their needs as learners is explored within this study. As IRDs, "our texts are meant to be used to enable people to think well, to make informed decisions, and to take appropriate actions in the best interests of humanity" (Rude, 2009, p. 207).

This stage of this study was conducted during September and October of 2010. During these months, teen participants were asked to represent their experiences with

yoga using various creative methods of expression, "the idea is that going through the thoughtful, physical process of making something, an individual is given the opportunity to reflect, and to make their thoughts, feelings or experiences manifest and tangible" (Gauntlett, 2011, p. 4). The dynamic between the design of information and how the perceptions of teens are shaped through their personal experiences with yoga is investigated. The purpose of which is to illustrate a pedagogical approach to working with teens to design information and experiences with them that support their experiential needs as learners and consumers of information.

This research includes user participation, questionnaires, and the creation of participatory media broadening the scope of a participation observation dependent study. In including participants in the process of effecting a change in a phenomena or experience through self-reflection, this research is action orientated, which Stuart Blythe, Jeffrey T. Grabill & Kirk Riley (2008) describe as "contextual, local, and requir[ing] intervention, not simply description" (p. 273). Action research is associated with learning about an individual's experiences for the purpose of improving upon her conditions through building relationships for the advancement of social justice (Blythe et al., 2008). This study explores a facet of teenhood, it does not seek to change or define the teen experience from the standpoint of social justice, rather it is postulated that IRDs designing experiences for teens should consult teens as co-designers of their experiences, which breeds in a certain amount of social equity. This study facilitates the participatory design of experiences for teen girls with teen girls.

THE YOGA & ART SERIES

The teen girl participants taking part in this study had just begun their last year of middle school (the eighth grade) and their first year of high school (the ninth grade) during the 2010-2011 school year. The teens had not practiced yoga before in a group exercise setting. Maddi had watched her grandmother do yoga in the morning and the evening. Angela tried to do yoga using a video game based system, but gave up because she said it was hard. The other teens said they had no experience with yoga at the start of the series. Throughout the Yoga & Art Series, teens actively discussed yoga, physically practiced yoga, and authored writings and drawings about yoga. Throughout their participation in the series, teens were exploring a practice with yoga that was new to them as they determined if they wanted to incorporate it into their conceptions of self. Additionally, as they explored yoga and themselves, teens were also deciding how what they were experiencing should be represented through their works and those designed by IRDs in the form of yoga studio homepages.

Each week, in 90-minute sessions, participants verbally discussed an intention for the sessions' yoga practice; they answered questions about yoga, themselves, and yoga studio homepages. They physically practiced a series of yoga postures and were led through a guided relaxation. *Table 1* shows an overview of the weekly activities teens were asked to participate in.

Sessions	Week 1	Week 2	Week 3	Week 4
Quote or Intention	The happiness of your life depends upon the quality of your thoughts.	Be who you are and say what you feel, because those who mind don't matter, and those who matter don't mind.	When you change your mind about you, everything and everyone changes with you.	Words have the power to both destroy and heal. When words are both true and kind, they can change our world.
Yoga Practice	Flowing Postures Endurance Postures Balancing Posture Stretching Postures			
Guided Relaxation	Be a corpse	Expanding the light (1)	Expanding the light (2)	Dark cloud
Creative Activity	Writing and/or drawing yoga	Writing a haiku about yoga with a partner	Drawing your favorite yoga pose	Designing a yoga studio homepage

Table 1. Overview of Yoga & Art Series sessions

The first 15 minutes of each session was dedicated to checking in with the teens, discussing their day and feelings, as well as reading aloud and sharing their thoughts about a quote or an intention[15].

Teens were led through a 40-minute physical practice of yoga postures or *asanas* during each session. The poses taught remained the same, although the order in which they were presented varied each week, for the purpose of keeping participants in the

[15]This is a practice Kelly McGonigal (2010) describes as "remembering, by bringing the statement to mind, you strengthen your resolve" (p. 46) to move forward on and off the yoga mat. The intentions used in the Yoga & Art series were selected from Brock & Lightsey (2005).

present moment of each pose by not allowing them to work through a series of

memorized movements, as well as responding to their needs as yoga practitioners. As

IRDs providing experiences with yoga, it is important "to be able to switch from the

lesson planned to the lesson needed" (Guber & Kalish, 2006b, p. 10).

Following the physical practice, teens were asked to focus on being still for 10

minutes in *Relaxation*[16], as they listened to guided visualizations, observed their thoughts,

and focused on their breath as a means of coming into their inner space. Guber & Kalish

(2006b) write, "Self-reflection can empower [teens] to see and then change their minds

about what their feelings mean. They open up more fully to their own experiences, and

can learn to work with their thoughts and feelings rather than pretend, repress, or hide"

(p. 5).

The last 25 minutes of the sessions consisted of participants responding to writing

and drawing prompts about how they perceived themselves within the practice of yoga.

Teens were asked to creatively explore their perceptions because as David Gauntlett

(2011) writes, "this unusual experience gets the brain firing in different ways, and can

generate insights which would most likely not have emerged through directed

conversation" (p. 4).

In its entirety, the Yoga & Art Series was designed to ask teens to synthesize their

perceptions of yoga resulting from their experiences immediately after physically

practicing it as they pieced together their idea of those experiences, creating personal

meaning out of the practice (Bloom, 1956). Moreover, teens were asked to communicate

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[16]See Appendix A: Pose Glossary for a description of the yoga postures mentioned
throughout this study.

their experiences with yoga in comparison to how information about it is represented on a sampling of yoga studio homepages.

As a high school student, Angela's mother registered her for the Yoga & Art Series and she was able to get her friend Maddi to attend, who was a student at a different high school. Savannah a middle school student registered herself for the series. She was an eighth grader in the same homeroom class as Kathleen whose mother registered her. Kathleen asked her friends Lauren C and Emily to attend, also in the eighth grade. Savannah was not included in the peer-to-peer interactions that occurred among Kathleen, Lauren C, and Emily, although they all attended the same middle school. In her own words, Lauren M, also an eighth grader was forced to participate in the series by her mother, as was Hannah, another eighth grader. Hannah only attended the first session. As the youngest participant, Carem's mother also registered her for the series. *Table 2* lists the names and ages of teen participants.

Participant	Age
Angela	14
Maddi	14
Savannah	13
Kathleen	13
Lauren C	13
Emily	13
Lauren M	13
Hannah	13
Carem	12

Table 2. Yoga & Art Series teen girl participants

Teens were asked to share their perceptions of how information about yoga was presented on eight yoga studio homepages selected by this researcher. Throughout this chapter, teens describe how they need information to be presented on yoga studio homepages to deepen their knowledge as learners experiencing its practice for the first time. The homepages for teen analysis were selected from a larger sampling of 307 pages evaluated by this researcher (see *Figure 3*). On these pages, adult aged women are pictured in yoga postures. The text on the pages consisted of studio names and location information. Additionally, the links on the pages connecting to additional content within the site primarily focused on classes offered, general visitor information, and upcoming events. The teen girls were particularly verbal about their interest in the images on the homepages, immediately asking the names of poses pictured, wanting to know if they would be able to do those poses by the end of the Yoga & Art Series. For the teens, the images took precedence over the written text of the pages.

Hannah and Maddi perceived the purpose of these pages as providing information about specific yoga studios, rather than yoga in general, "By showing some pictures of yoga and some information about their studios," writes Hannah. As a group, teens identified the intended purpose of the yoga studio homepages as getting people to do yoga, stating that the homepages made them want to practice yoga. Essentially, the teens perceived the yoga studio homepages as resources showing images of people in yoga postures and providing information about places where yoga could be practiced. Maddi writes, yoga studio homepages show, "Where it is, what it is, how the organizations are run, what yoga is, and the information of the institutes."

After viewing the yoga studio homepages, teens expected to increase their flexibility and attain a sense of inner calm, which they perceived to be communicated through the homepages. When asked what they disliked about the homepages representation of yoga, Lauren C wrote, "Some of the people are showing off what they can do." However, before submitting her questionnaire to this researcher, she crossed that response out, writing, "nothing." In crossing out her initial response, Lauren C exhibited an awareness of the environment in which she was asked to share her perceptions She censored herself through language, an act that is more difficult to do when one expresses herself creatively (Gauntlett, 2007; 2011). If teens are to become co-designers in the process of shaping the experiences in which they participate, in partnership with IRDs, a conduit allowing for the flow of nonjudgmental communication must be created between the two. In later weeks, this veil of control exercised by Lauren C would cease. Other teens wrote that they did not like "the freaky positions" shown on the homepages, calling them "odd," and "advanced."

Overall, the teen girls liked the feeling of calm, the images of women[17] in yoga postures, and the colors used to present information about yoga on the analyzed pages. Teens thought the pages were lacking in what they called: need to know information, which Savannah described as "general information, pictures, links." In examining paper printouts of the homepages, teens observed that the links on the pages did not reveal the information they were most seeking, like Maddi who sought "information depicting yoga and how it can make you feel." Teens were looking for interactive tutorials providing

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[17] As can be observed in Chapter 4: Heuristic Evaluation, more women were pictured in yoga postures than men across the evaluated yoga studio homepages, for this reason, images of men do not appear on the pages selected for teen analysis.

posture names and directions for how to get their bodies into specific yoga poses, they also wanted to know the benefits of the poses, rather than clicking through links showing them class times and studio locations.

In making these pages more useful for teen learners, Kathleen wanted them to show her how to do the poses through video tutorials, and Maddi wanted to see images of teens doing yoga on the pages. The remaining participants thought that the homepages were more or less fine as they were. Resoundingly though, the teen girls did not think that the homepages were designed for them with the exception of two participants. Emily thought the use of bright colors on two homepages (see *Figure 3*, homepages 2 and 8) could appeal to a teen audience and Lauren M perceived the women pictured on the homepages to be similar to her, although the other participants perceived them as older. There could be various explanations as to why Lauren M assumed the women on the pages were like her. She did not engage with the other teens throughout the series, although she talked about spending her free time chatting with people of various ages online. This was the reason why she said her mother, wanting her to interact with people her own age, made her participate in the Yoga & Art Series.

Most of the girls thought the visual presence of older individuals on the yoga studio homepages, who they perceived to be aged 20-25 was understandable, because they perceived older people as needing to relax. Even though, they themselves were seeking a method to practice relaxation in the midst of their school days, sports teams, and interactions with their families and peers. When asked about the methods and modes through which they thought they learned best, four participants said that they did not know. The other five suggested the use of the computer, PowerPoint presentations,

books, pictures, and videos. In their own design of yoga studio homepages, teens

speculated that they would use pictures of teens, bright colors, and define what yoga is,

because their homepages would need to make yoga look appealing to people their age

through "vibrant colors and peaceful images."

Figure 3. Yoga studio homepages analyzed by the teen girls

WEEK 1

Through their writings and drawings, the girls created informational texts that communicated their developing perceptions of the physical practice of yoga. These texts mediated the space between their experiences with yoga and the information they were shown about it, while exhibiting their knowledge of yoga as a practice and their evolving personal definition of yoga. As Angela, moved a marker across the paper on which she was to write or draw her perception of yoga, she said that she could not draw, and that Maddi was a better artist. This notion of not being able to and deferring to her friend Maddi was also present in Angela's physical practice of yoga as well as in her time spent writing or drawing about yoga. As she moved into a yoga pose, she would say "I cannot do this," and in later weeks, when she found herself doing what she formerly doubted, she seemed surprised at her abilities. In the space of the Yoga & Art Series, Angela changed her thoughts about herself through what she was learning, which is the purpose of educational experiences (Bloom, 1985; Callier, 2004).

Figure 4. Angela's writing/drawing of yoga

Maddi wanted to do yoga right from her first few moments on her mat. She approached the physical practice analytically, expressing a desire to know exactly how to do particular postures, she would ask, "Does my hand go here?" and "Is this right?" She seemed to see a connection between moving her body and quieting her mind. Maddi, through a synthesis in which she comprehended the meaning of yoga, applied it as a practice, and embraced the creative activities, was able to make yoga her own (Bloom, 1985; Anderson & Krathwohl, 2001).
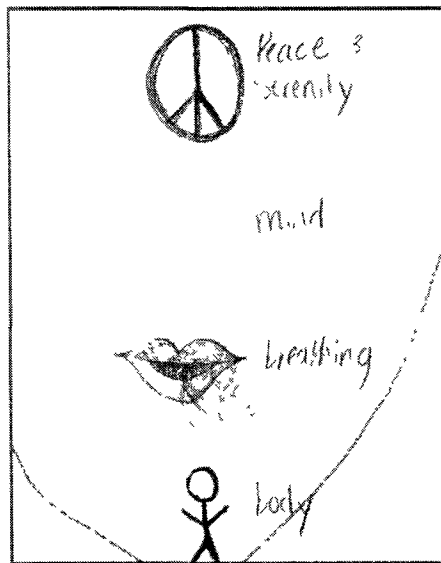
Figure 5. Maddi's writing/drawing of yoga

Savannah was engaged by the practice of yoga and the creative activities each week as she hovered on the fringes of the group. She spent about half the time allotted for the creative activities mentally planning what she was going to write or draw, which resulted in her not always having written or drawn anything. Her lack of measurable outcomes resulted from spending time inwardly processing her perceptions of what she was experiencing. Through this internal exploration of how she perceived her experiences with yoga, Savannah transcended the need to belong to the group as she took the time to explore what yoga meant to her. Within the process, through her questionnaire responses and comments to this researcher, Savannah's drawing, for example, depicts the self-actualization she achieved (Maslow, 1943; Callier, 2004) perceiving herself as someone who found inner calm through practicing yoga.
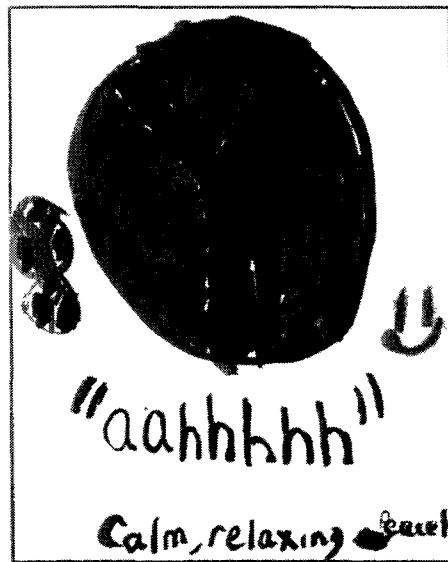
Figure 6. Savannah's writing/drawing of yoga

Kathleen remained quiet, until she had a direct question to ask of this researcher

or a perception of an intention or yoga experience to share. She practiced yoga with an

inward focus (Shepler et al., 2008; Osho, 2004), yet was still able to laugh with Lauren C

and Emily when their hands would accidentally touch during the practice. In drawing

herself into her definition of yoga, Kathleen immediately took ownership of the physical

practice; she saw no separation between herself and the practice, because it is her alone

on the space of the page embodying the pose perfectly, having defined it as relaxing.
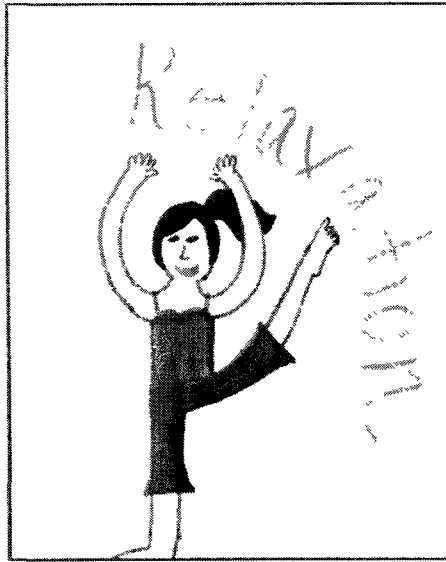
Figure 7. Kathleen's writing/drawing of yoga

Lauren C interacted with herself from a distance, objectifying herself (Shepler et al., 2008); she judged her experiences as right or wrong. During each yoga session, especially when practicing a one legged balancing posture, Lauren C would tell herself, "I should be able to do this, I am supposed to be a perfect ballerina. Get it together Lauren." Rather than evaluating how an experience with yoga fit into her life, Lauren C was consumed with evaluating herself for rightness.
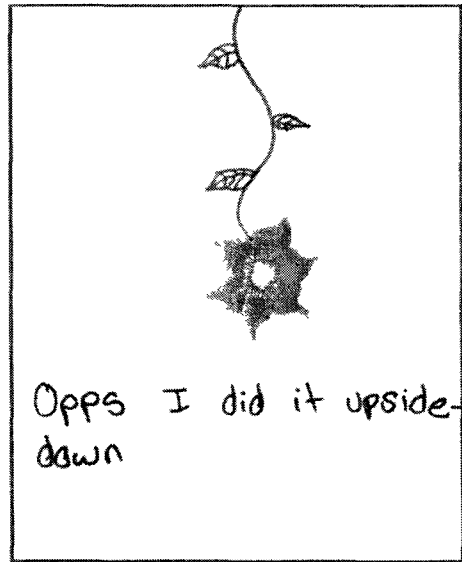
Figure 8. Lauren C's writing/drawing of yoga

Emily exhibited a sense of competition in her approach to the physical practice of

yoga. As she looked at the poses of those around her, her leg had to be higher in a *Three-*

Legged Downward Facing Dog and her spine lower to the floor in *Seated Straddle Splits.*

Emily wrote and drew fast and pushed her body as far as it would go, outwardly an

overachiever, it was difficult to observe how much inward processing of her experiences

with yoga was occurring. Moreover, in terms of analyzing the yoga studio homepages,

she took them at face value, what they showed was good; because that was the way they

were designed. Yet her drawing indicates that she was aware that yoga could help her

connect to her body, her clam space, and her peace.
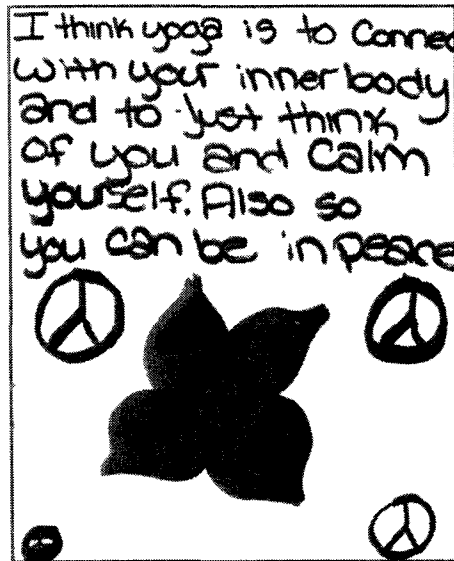
Figure 9. Emily's writing/drawing of yoga

Carem drew an individual, presumably this researcher, telling her the next thing to do when her body was already "bent up like a pretzel." She also acknowledged the presence of a video camera recording the weekly sessions. Through comments to other participants, glances at the camera, and questions asked to this researcher, Carem displayed an awareness that she was being asked to do yoga postures as well as write and draw as part of a research study for a purpose that was unknown to her, but she verbalized knowing that there was a purpose nonetheless. She was interested in the details of how the study was conducted rather than experiencing a personal relationship with the practice of yoga.
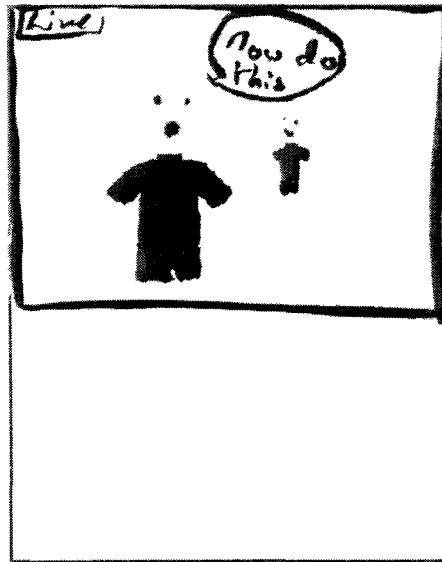
Figure 10. Carem's writing/drawing of yoga

Lauren M physically moved through the yoga postures, but did not dialogue with the other participants. Throughout the weeks Lauren M maintained that she was being forced to attend the sessions by her mother, and in this persona, when she did vocalize an observation for the group, it was generally unrelated to the topics being discussed. From her drawing though, she communicated that she found relaxation, hovering on a line centrally situated between peace, love, and happiness.
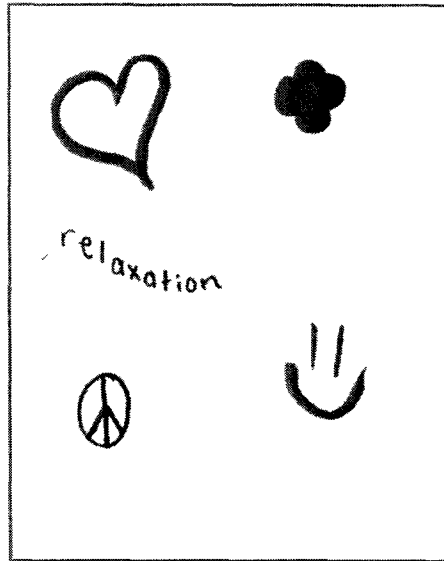
Figure 11. Lauren M's writing/drawing of yoga

Hannah seemed to know that she could choose to participate in the series after trying out the first session. In possessing this awareness of her choice in participating in this study, Hannah 'played' with the moment, exploring her space while deciding the experiences she wanted to have (see Bloustien, 2003 for other examples of such 'play'). Hannah displayed a strong sense of self supported by her mother, she was assured that it was her decision whether she would take part in future sessions; she did not attend the following weeks.
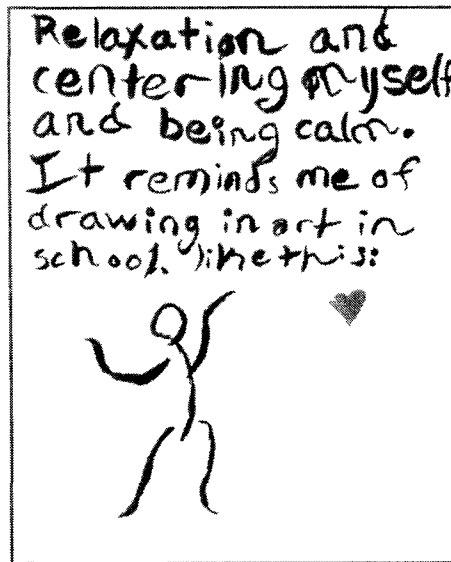
Figure 12. Hannah's writing/drawing of yoga

WEEK 2

When asked about their previous experiences with yoga during week 2, Angela

and Savannah said they had practiced yoga on a video game based system and with a

DVD. Carem reported, "Watching mom watch Jillian [Michaels] do yoga." Additionally,

Lauren C said she took a class with her mom at the YMCA. During the first week,

Savannah, Carem, and Lauren C reported that they did not have any previous experience

with yoga, while Angela's response remained unchanged. During week 1, the girls did

not know how yoga was being defined, which would make it difficult for them to identify

previous experiences. Once they knew how yoga was interpreted within this study, it may

have become easier for them to recollect previous experiences with its practice.

Teens were asked to write linked haikus with a partner about yoga (see *Table 3* for pairings). The purpose of this activity was to promote interaction between teens outside of their preexisting friendship groups as they continued to explore their notions of yoga. Participants were responsible for the construction of meaning and the design of information in conversation with each other. Each teen wrote a three lined, 5-7-5 syllable haiku about an aspect of yoga. Her partner responded with a linked haiku that was related to an aspect addressed in her partner's haiku[18]. The result was a conversation about yoga through poetry.

Haiku Partners
Savannah & Lauren C
Maddi & Kathleen
Emily & Carem
Angela & Lauren M

Table 3. Haiku pairs

During the writing process, Savannah verbalized that she did not know what to write, her partner, Lauren C examined her cuticles and tapped an ink pen on the table as she waited for her turn, when she received the paper from Savannah, she wrote quickly. In her first link Lauren C does not make a direct connection to what Savannah has

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[18] To read the haikus written by teens, see Appendix B: Partner Haikus.

written, but Savannah's subsequent haiku mimics Lauren C's use of "calm" and in the last node, Lauren C continued Savannah's use of "stretching." Together, they talked about forcing themselves to try yoga, feeling some pain and stretch, experiencing calm while having fun, they write, "Laughing calmly; Stretching, reaching, in the dark; Finally, it's finished."

The theme that emerged out of Maddi and Kathleen's writings was one of freedom through the uniting of "body, mind, and soul," which was a theme Maddi began exploring in her drawing of yoga during the first week of the series (see *Figure 5*). Throughout the Yoga & Art Series, the teens adopted each other's phrasing about yoga and how it made them feel. Rather than picking up a word from her partner's haiku, this pairing continued streams of their own thoughts writing about oneness and the connection of freedom to listening to oneself, "seeing inside my soul," is followed by "thinking about yourself," connected to, "listening to your thoughts, unite with your mind."

For Emily and Carem, yoga cleared their mind, as it refreshed and stretched them. Emily's initial focus was on counting syllables, until she found it simpler to just begin writing. Without conversation between them, Emily described the feeling she had when practicing yoga in the first link, Carem wrote about the yoga postures and props used initially, but wove her way from looking at the practice externally to moving to a space of describing how yoga made her feel internally, which she described as "Trancing and refreshing."

Angela and Lauren M were paired together. They took their time writing, conceptualizing two links rather than four, in comparison to the other teens. Working from the perspective of how yoga related to their inner worlds, Angela introduced the

theme of "overstretched nerves" and Lauren M responded with feeling "pressured." Both conceived yoga as a calming force in relation to how they were expected to act within the worlds they inhabited. Yoga, they jointly stated, provided them with "peaceful inspiration" through which they could center themselves.

In authoring joint perspectives reflecting their experiences with yoga, the teen girls created texts that not only communicated their evolving conceptions of the practice, but also illustrated how they could work collaboratively to design texts. This process facilitated a transition from their internal landscapes of experience to the outward communication of their perceptions. Throughout the series, this researcher described yoga as a "mind, body, and spirit" practice, while the teen girls' usage of concepts such as "freedom, calm, and stretching" originated from them. Their haikus communicate an expression of teen identity in relation to how the practice of yoga is internalized and communicated.

WEEK 3

The teen girls were asked to draw themselves in their favorite yoga pose and describe why the posture was their favorite. The room in which the teens practiced yoga did not contain any mirrors, therefore in selecting their favorite poses, the girls were choosing based on how they felt in a posture, not how they looked. Maddi, who was normally quite vocal, focused on her drawing in silence. Angela attempted to talk to her, Maddi only responded briefly, which made Angela quiet as well. The overall mood became contemplative without the ongoing discussions of the "cool older girls," as Carem called them. As noted in previous research with teen girls practicing yoga, their

states of mind and interactions with each other determine their perception of yoga each time the practice it (Guber & Kalish, 2006, 2006b; Purperhart, 2008; Stanet, 2010).

Maddi said *Downward Facing Dog* was her favorite yoga pose because "It is difficult and I can feel my arms and legs working." She liked knowing that she was mastering a pose she found to be hard (Rodefer, 2009).
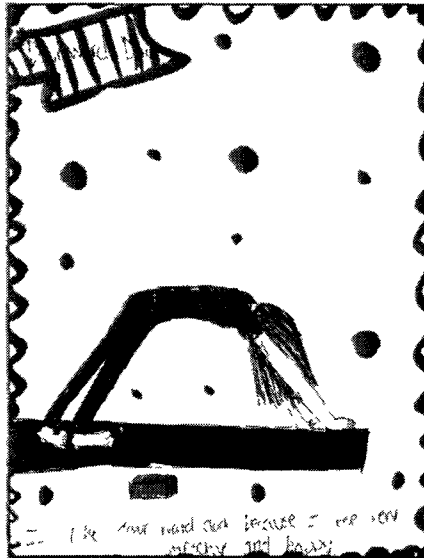
Figure 13. Maddi's favorite yoga pose

Angela began interacting with herself from an internal place (Tolle, 1999; Osho, 2004). She drew herself in *Sunflower* pose, as a sunflower. She described the pose as making her "feel like a sunflower first blooming."
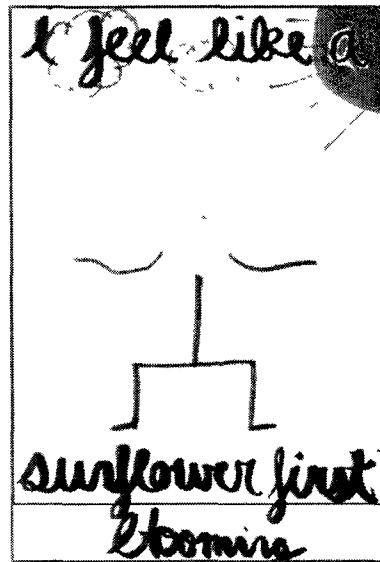
Figure 14. Angela's favorite yoga pose

Lauren C, Emily, and Kathleen's drawings all incorporated the center splits and grass. Consciously or unconsciously, each member of this friendship group drew versions of the same image, illustrating that the relationship teens have with each other often influences the choices they make and the phenomena they identify as important (Currie et

al., 2009). *Hanumanasana,* the splits, was a goal they brought into the experience with

them. Kathleen drew "someone doing the splits" (see *Figure 17*), whereas during the first

week of the series she drew herself in another posture (see *Figure 7*). In previous weeks,

Kathleen seemed to embody the practice of yoga seeing herself within it. It was Kathleen

who encouraged Lauren C and Emily to participate in the Yoga & Art Series, in the first

place, but this week, she chose to go along with the themes emerging from her friends,

rather than those she previously exhibited; personal artifacts which seemed to display

more of an internal awareness.
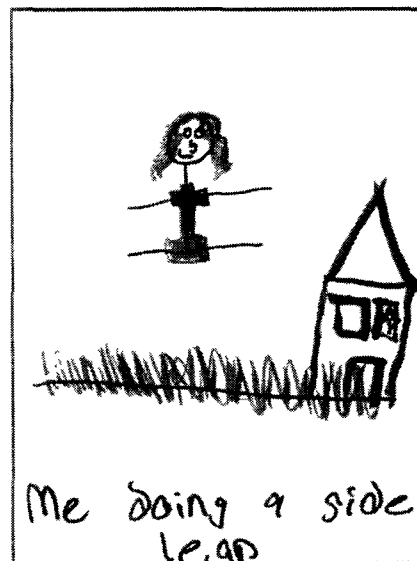
Figure 15. Lauren C's favorite yoga pose

Figure 16. Emily's favorite yoga pose
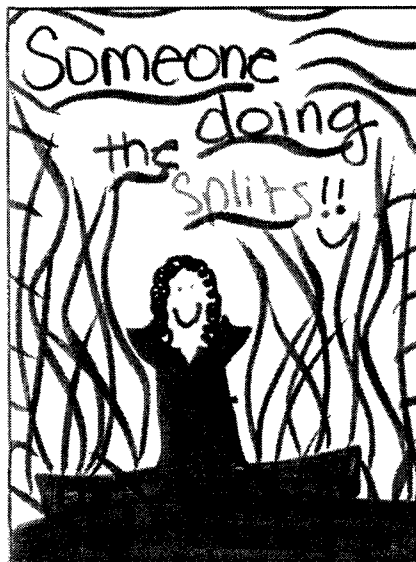
Figures 17. Kathleen's favorite yoga pose

Savannah drew herself in *Triangle* pose after some consternation; she ran out of

time to explain why she liked the pose, saying aloud, "I just like it."
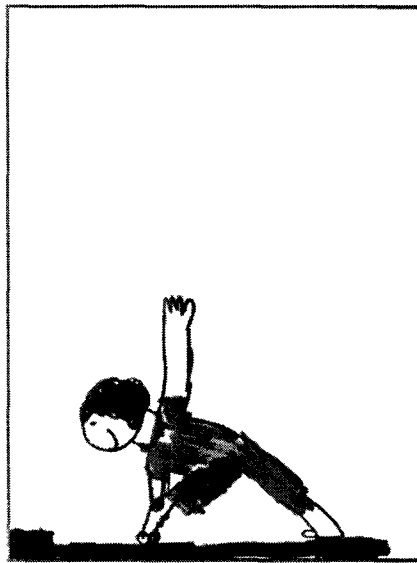
Figure 18. Savannah's favorite yoga pose

Carem stated she was having a hard time focusing, "I meant to write purple

flower, but keep writing rower." There was no mention of a yoga posture verbally or

within her drawing. Carem said she learned best visually, and sometimes had a hard time

concentrating as she took in the other participants, the space of the room, and the noises

of the environment. This week, it was difficult to know what she was communicating. As

previously mentioned, Carem's focus was more externally than internally situated, which

makes her a prime and challenging candidate for IRDs to co-design information with.
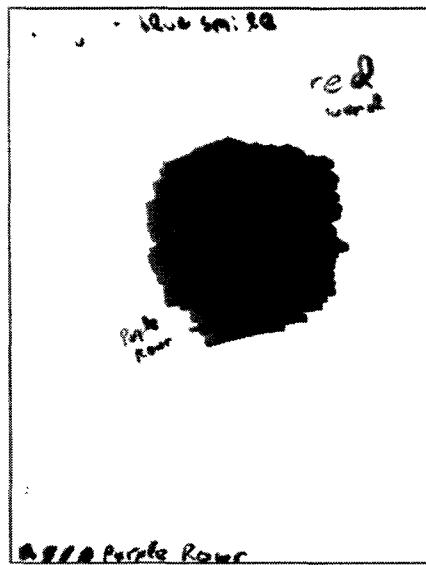
Figure 19. Carem's favorite yoga pose

Lauren M drew a tree, under which she wrote, "I like trees." The teen girls

practiced *Tree* pose each week as their balancing posture, although it is hard to tell if

Lauren M is referencing that posture in her drawing, or if she just likes trees as she stated,

or perhaps she liked the posture because she liked trees.

Figure 20. Lauren M's favorite yoga pose

In drawing themselves in their favorite yoga poses, the teens were asked to

embody the physical practice of yoga, as they continued to create a personal relationship

with it as a practice. Benjamin R. Smith (2007) describes the physical practice of yoga as

an "encounter with the embodied self" leading to a "deepening engagement with one's

selfhood" (p. 40). Embodiment is the tangible expression of an idea, quality, or feeling.

The embodied self is present, as the teen girls perceive and communicate information

about their experiences and is most perceptible in the ways they (re) code their

experiences in the artifacts they created during the series.

WEEK 4

When asked how they needed to have information presented about yoga on yoga studio homepages as learners, the teen girls articulated four approaches to presenting information that would benefit them (see *Table 4*). Teens said they needed to see yoga postures demonstrated, named, and described, preferably through pictures of teens. Maddi needs "images and detailed paragraphs, because I learn better that way and it is more interesting." When using a computer, the teen girls said they would learn best through interactive features that allow them to control and determine how information is displayed through clicking icons, playing media, or accessing links (Nielson, 2005b). For example, Emily, who would have liked to ask a person or avatar what she wanted to know because she states, she learns best "by someone talking to me." Aesthetically, the girls thought the colors on the homepages should be bright, in order to make yoga look fun and invigorating. Lauren C writes that the pages should be "bright and colorful because it makes me look at it." Savannah needs the pages to be "funny, bright" and have "eye-catching colors, and formats."

Angela and Kathleen said they were not sure how they would present information about yoga on a yoga studio homepage, while Carem said she would show, "what yoga is," making it look "cool and website-ish." Lauren C would use "flowers and show poses." For Emily, "It would look colorful, pretty, have pretty pictures." Lauren M's would also be pretty and explain "how to do yoga." Maddi said her page would be "bright/exciting and interactive." Savannah wrote that her page would "look calm, fun, and bright all at the same time."

Design Preferences
Images of teens doing yoga
Names of yoga poses
Interactive content
Bright color schemes

Table 4. Yoga studio homepage design preferences expressed by the teen girls

Teens were asked to design a yoga studio homepage by arranging images and words through a collage method to communicate their understanding of yoga as a practice. Teens were given a kit containing images selected by this researcher from the 307 homepages heuristically evaluated and discussed in chapter 4. This researcher also provided participants with images of teens practicing yoga postures, which were not present on the evaluated homepages, to determine if teens would actually use images of those who appeared to be like them in age in designing their own homepages. Teens were given a printout of a blank Internet page on which they had to give their site a name and address and arrange pictures and text within the frame.

Through designing yoga studio homepages, the teen girls shared how they conceived the practice of yoga as learners and new practitioners. In doing so, they moved beyond learning about yoga, to understanding and defining it as a practice, to applying what they learned by communicating their experiences to others, as they analyzed their personal experiences with yoga in relation to how it is represented on yoga studio homepages compared to how they would represent it to their peers. Ultimately, the teens

were asked to synthesize what they had learned and experienced as they incorporated the

practice of yoga into their conceptions of self.

On her homepage, Angela used images of teens below the title of the page. While

she did not name or describe how to do yoga postures, she used the warm colors pink and

red. In stating, that the design of the yoga studio homepages was sufficient during week

1, Angela did not signal any opportunities for interactivity or add information she thought

was lacking.
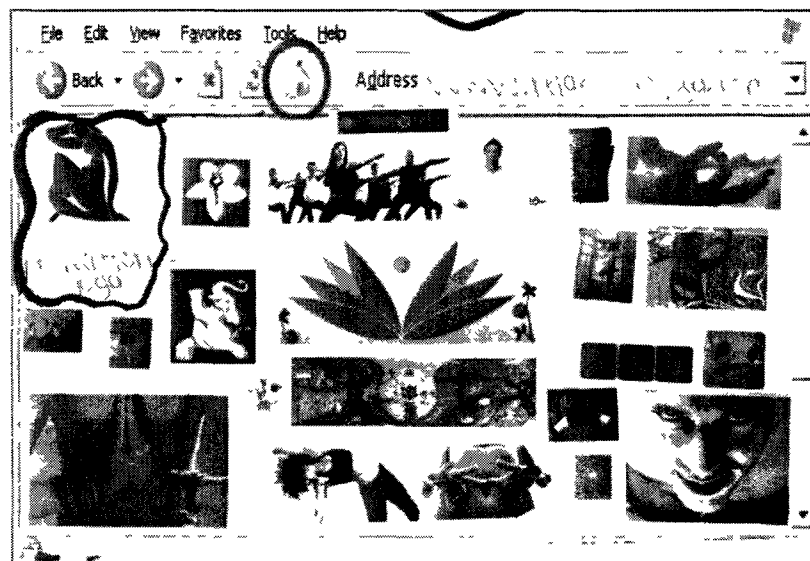
Figure 21. Angela's yoga studio homepage

Maddi wrote that "yoga" would act as an interactive link to a definition of what yoga is, and the words "body," "mind," and "soul" would link to a description of the benefits of practicing yoga. Select images would lead to descriptions of how to do the poses shown. Maddi embedded pose names and descriptions in her page and chose a palette of cold colors, mainly blues and purples, with a few splashes of red. She did not use any images of teens in her design, although she used images of men and women of various ages and ethnicities, reflecting a desire she expressed verbally to see diverse individuals represented practicing on the homepages.
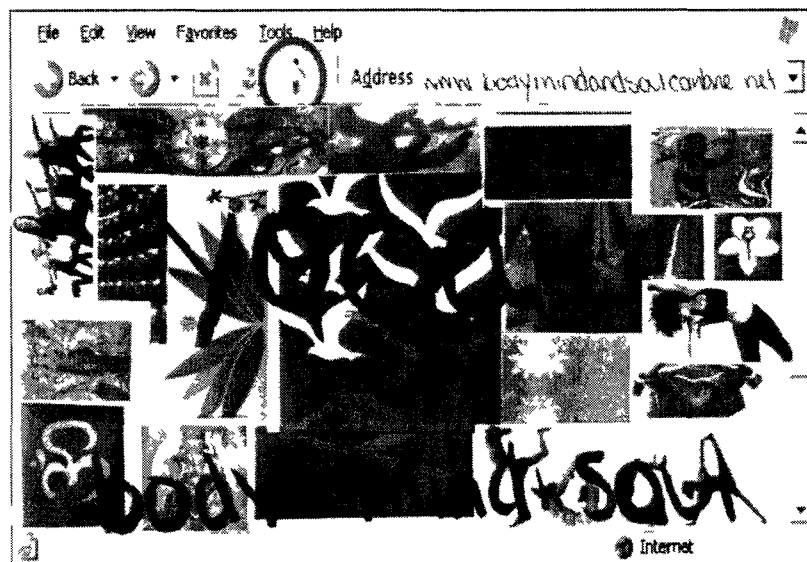
Figure 22. Maddi's yoga studio homepage

Excitedly, Savannah said, "I have never seen pictures of teens doing yoga," as she opened her collage kit, "This is great!" Savannah did not have time to use any images of teens. As she placed images, she moved them, and re-placed them repeatedly without glue, considering the exact meaning she was trying to convey through her page. She used bright colors in text and images, yellow, red, and pink, intermixed with blue and green. Having previously expressed a dislike of reading during week 1 and week 2, Savannah said the images on her homepage would link to brief descriptions about yoga.
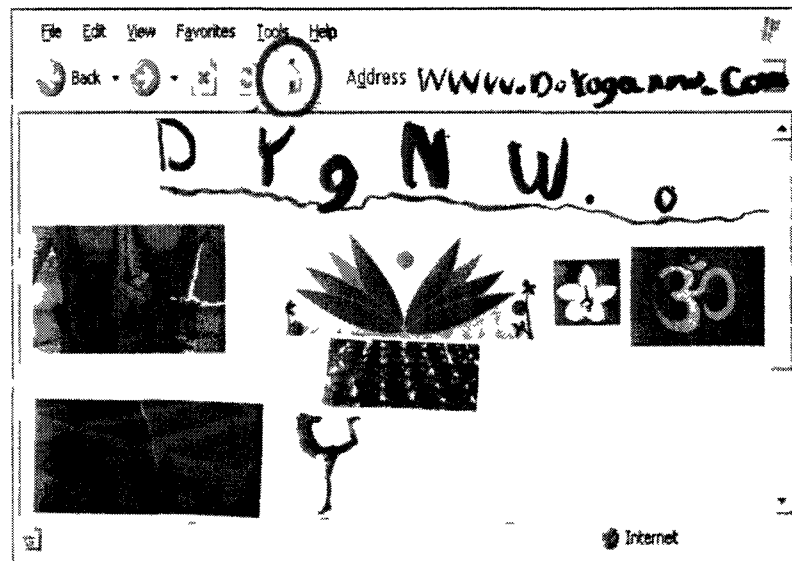
Figure 23. Savannah's yoga studio homepage

Kathleen's design incorporated images of teens practicing yoga. Splashes of red

punctuate the homepage. She said her page would feature video tutorials, showing how to

perform a yoga posture or series of postures, accessed by clicking on an image of specific

pose.
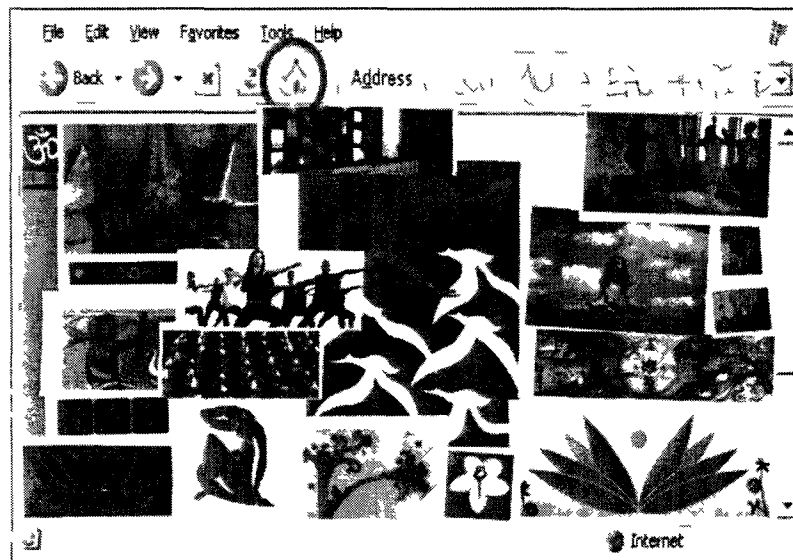
Figure 24. Kathleen's yoga studio homepage

On Lauren C's homepage two links, "fun poses" and "calm breathing" would

connect to descriptions of poses and breathing exercises. She used images of teens. Like

Maddi, Lauren C opted for the cold colors of purple and blue.

Figure 25. Lauren C's yoga studio homepage

Emily placed her images on angles and used blue and green flowing print and red

ellipses to signal movement on her homepage. Her images serve as the background

design of the page. The "yoga," "peaceful," and "calming," links would connect to

textual descriptions of yoga, relaxation techniques, and stretches. The outlined images

would open up instructional videos of Emily talking about yoga. Emily envisioned

herself as a user, teacher, and producer of information.

Figure 26. Emily's yoga studio homepage

Carem drew red tabs on the upper left of her page representing the things she

most needed to see as a teen learning about yoga. The structure of Carem's homepage

mimicked the organization of the Yoga & Art Series as she experience it. The Buddha

face and candles spoke to the spiritual connection she felt to yoga, the women doing *Sun*

Salutations at the bottom of the page represented poses Carem had practiced during each

session, and she said the blooming flower and purple figure reminded her of the creative

activities.
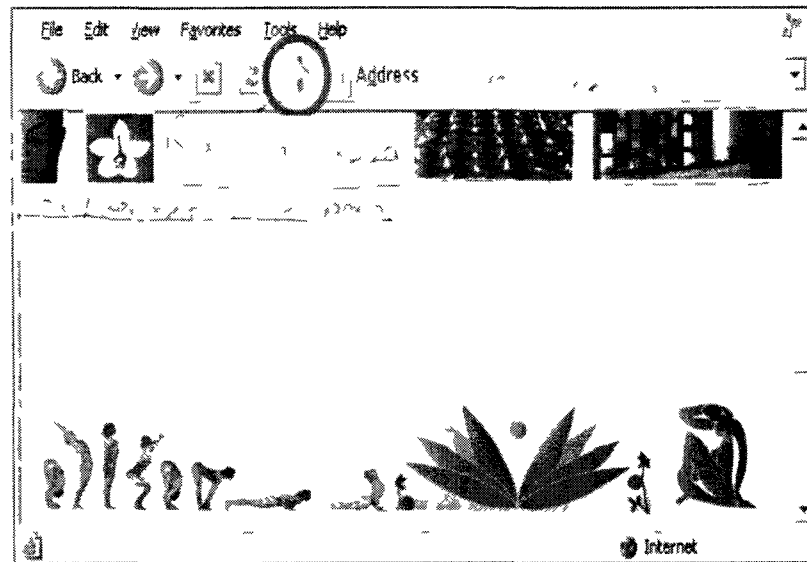
Figure 27. Carem's yoga studio homepage

Lauren M used all of the images in the collage kit. "Look," she said as she glued an elephant on top of an image of candles, "the elephant is on fire." She later glued an image of yoga blocks and yoga mats on top of it concealing her joke. Consciously or subconsciously, Lauren M fore fronted the following images: yoga mat towels, yoga mats and blocks, and the symbol for "Om" and a teen girl sitting in *Comfortable Seat* (the same image Lauren C used at the top of her page). At the bottom of the page, in the postures of a woman, the word "yoga" screams out. Moreover, on the top, middle, bottom, and both sides, images of teens are visible. Lauren M represented yoga as something that teens do, because on her page, they are highly visible in an around the other "stuff" associated with the practice.
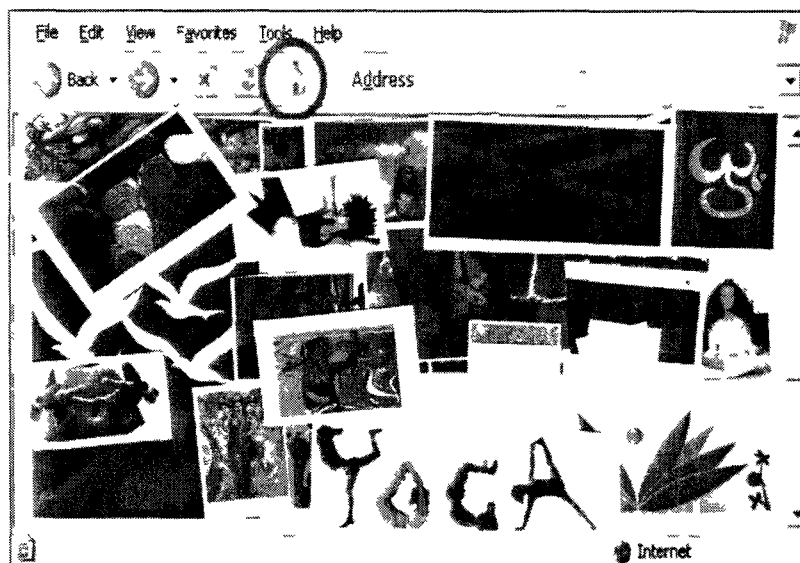
Figure 28. Lauren M's yoga studio homepage

Yoga studio homepages designed by the teen girls, in their words would be, "cool,

pretty, and calming." While providing opportunities for interactive learning to occur, they

expressed a desire or need to control how the page would present information to them.

DISCUSSION

Mary Kaye Chryssicas, a teen yoga instructor, describes yoga as something teens

respond to when they understand how it helps them.

> Initially, girls have no idea how being excluded at lunch or doing poorly on a test
> or walking down a crowded hallway can be stressful. It takes a toll on their body
> and mind. The body tenses up, and the mind acts paranoid or shuts down. Yoga
> breaks down barriers and helps teens cope. (Harzog, 2008, para. 16)

Designing informational experiences in tandem with teen girls, using their discoveries as

they learn through experience while empowering them to voice how information should

be presented to them as learners is necessary to reach teen girls through the engagement

of their interest, increasing the likelihood that they will choose to participate in the designed learning experience. IRDs are not only designing experiences and informational texts to accompany these educational constructs, IRDs are marketing learning experiences. As such, when these experiences are designed for teen learners as users of information, IRDs have to appeal to a teen's sense of choice and best learning style, "because if teens choose it, they tend to be more willing and interested in learning" (Guber & Kalish, 2006b, p. 19).

Throughout this study, a method arises for facilitating and observing the cognitive processes of teen girls in learning environments centered on the practice of yoga. Additionally, an approach for meeting their needs as users of information emerges. In shaping their experiences while they are living them, teens become empowered to use those experiences to make their own decisions about who they are and what they need as learners (Maslow, 1943; Spinuzzi, 2005). They become active agents involved in the process of creating the experiences they participate in as well as co-authoring the texts they consume (Nielson, 1993). Neither teen users of information, nor the IRDs designing informational experiences for them, need to be isolated from each other in knowledge communities revolving around the cultivation of human experience. In order to have a successful impact with this group, IRDs should focus on user participation in the construction of learning experiences and in the production of relevant artifacts that will influence the selfhood, interests, and decision-making abilities of teen girls. Further analysis of the girl's experiences within the Yoga & Art Series occurs throughout the body of this dissertation.

CONCLUSION

The teen girls decided what information was important to them as learners and used it to further define themselves and their worlds as they participated in the practice of yoga, authoring a new knowledge community, "Defined through common intellectual enterprises and emotional investments...held together through the mutual production and reciprocal exchange of knowledge" (Jenkins, 2006, p. 137). The teen girls exercised their muscles as producers of information that met their needs and reflected their experiences as learners. In order for them to participate in authoring communities of knowledge, teens must be encouraged to decode the design of the texts they encounter, recode the artifacts that seek to influence and shape their experiences and perceptions of self. Co-designed informational experiences, then, become a tool in the process of teens creating, expressing, and solidifying their perceptions of experiences and themselves. In the following chapter, heuristic evaluation, 307 yoga studio homepages are evaluated to see if they meet the needs expressed by the teen girls.

CHAPTER 4

HEURISTIC EVALUATION

This chapter explores, through a heuristic evaluation, how yoga is represented on yoga studio homepages as the design of information about the experience of yoga is analyzed. A heuristic evaluation identifies rules of use for educational platforms through the model of users interacting with interfaces as designers observe their actions, question their motives, and determine their needs from technology in the midst of personal experiences (Nielsen, 1993, 2005a; Interaction-Design.org, 2006). The four-element heuristic used within this study emerged from the concentrated study of eight teen girls participating in the Yoga & Art Series. As discussed in the previous chapter, Participant Observation, effectively designed learning experiences for teens necessitates (in terms of yoga studio homepages): images of teens doing yoga, names of featured yoga postures, interactive page content, and bright color schemes. The purpose of this heuristic of yoga studio homepages is to identify instances in which the design of these pages could be more effectively executed to optimize the experiential learning of a teen demographic of users.

Heuristics are used to construct new objects or to identify the flaws in existing objects through which experiences are had, often irrespective of the intended user (Chisnell, 2010). However, within the present study, a heuristic is used to determine how teen girls learning about yoga react to and comprehend its representation on yoga studio homepages. As conceived by this researcher, the yoga studio homepage functions as an interface between Instructors, Researchers, and Designers (IRDs) as creators of

experiences and teens as users of them. The teen girls participating in this study compared how information was presented on eight yoga studio homepages to the experiences they had practicing yoga. The homepages analyzed by participants were representative of the larger sampling of 307 homepages heuristically evaluated by this researcher as discussed throughout this chapter.

In order for IRDs to identify the most effective ways to design meaningful learning experiences for this demographic, teens must be engaged as co-designers of their educational experiences, their phenomena, and the evolution of their selfhood. Within this study, the heuristic is used to judge the effectiveness of yoga studio homepages as tools from which teens can learn about the practice of yoga. In exploring the learning experiences of teens, an ongoing dialogue must occur. IRDs have to approach teens as individuals capable of expressing their needs as they ultimately define their experiences. Within structured settings with yoga, teens want to choose the 'how' and the 'means' in which they learn (Rodefer, 2009). The teen girls participating in this study wanted to determine how information would be revealed to them through yoga studio homepages. They wanted to be active agents helping to create their experiences with the information displayed through these digital texts. A central aspect to this argument is the assertion that when teens co-design, they become invested in the process; the experience becomes their own as it reflects their perceptions of the construct and themselves as individuals. This occurred within the Yoga & Art series as the teen girls found themselves performing yoga postures and personalizing the practice to meet their needs (see Chapter 3: Participant Observation).

The purpose of this inquiry is to explore the existing presentation of information on yoga studio homepages—on websites that teens might encounter if they are seeking information about the practice of yoga and places where they can experience a practice. The question becomes: do these pages address teens, a group that could benefit mentally, physically, and spiritually from experiencing the practice of yoga? As Tara Guber & Leah Kalish (2006) write, "the yoga process of linking or unifying thought, breath, and movement develops focus and awareness of the fundamental interconnectedness of intention, action, and consequence." (p. 2), which directly relates to the chain of events that behavioral theorist postulate bring about changes in lived experiences (Whitehead, 1929; Maslow, 1943; Callier, 2004). With this methodology of inquiry, this researcher, and the teen girls conversed with each other about the experience of yoga through its practice and the analysis of yoga studio homepages as informational texts to be shaped through co-designed experiences.

In 2005, Jakob Nielsen (b) worked with teens, judging if they were proficient in using websites to achieve assigned tasks. His focus was on how teens accessed, read, and wanted to change existing website content, much like the work of Sandra Weber & Claudia Mitchell (2008) two years later that focused on the ways teen made information their own through the remixing and redesigning of texts. The present study, however, asked teens how they would design homepages about yoga from the stage of inception, rather than simply improving upon designs, as they already existed. The teen girls were introduced to the practice of yoga, through which they developed their own perceptions of yoga as they conceived it mentally and experienced it physically. From their personal frames of experience, the teen girls were asked to analyze the representation of yoga on a

selection of yoga studio homepages in the real space of this design module. Transcending teen manipulation of existing texts designed by IRDs, this study explores how yoga studio homepages could be designed more effectively for teens as learners with teens as co-designers of content from the very beginning of the process. The purpose of which is to encourage and empower teens to voice their learning needs as they participate in the creation of experiences where they have a greater possibility of achieving success.

THE MEANING OF THE HOMEPAGE

Through the design of information, the way meaning is constructed and delivered on yoga studio homepages is targeted at particular users for specific purposes. Kimball & Hawkins (2008) describe the page as, "the space where a document comes together in the user's field of vision—everything from content to context, from the visual marks on the page or screen to the material framework that surrounds and delivers them" (p. 114). Through yoga studio homepages, a digital perspective, a virtual point of view, is forwarded about what yoga is and who practices it, where they practice, how they practice, and for what purposes. These pages create touch points defining the experiences individuals can have with yoga and they function as virtual meeting points for those who "know they share a social bond around a branded, mass-produced commodity, and believe it is reasonable to do so" (Muniz & O'Guinn, 2001, p. 418). A *New York Times* article about the business of providing experience with yoga acknowledges that, "anybody who is honest about consumer behavior knows that often what we buy is not simply some *thing* but some idea that is embodied in that thing" (Walker, 2009, p. 2).

As IRDs designing informational experiences with yoga for teen learners, it is necessary to understand how information about yoga already exists in relation to the

needs of the teen population who learn through experiences and define themselves as they live. The teen girls participating in this study zoned in on the images displayed on the homepages they analyzed, which is unsurprising since yoga is essentially a practice which is best instructed through a visual model as it is verbally described. Mark Singleton (2010), a professor and yoga instructor, writes,

> One of the main reasons postural yoga itself gained popularity is the simple fact that it had visual appeal within this society and imparted immediacy to what could otherwise be (when confined to textual exposition) an opaque, perplexing subject. (p. 166)

If a teen can imitate the shapes of yoga postures as they are presented to them on yoga studio homepages, and name what she has done, then she has had an experience which initiates learning, taking a pose from the page and making it her own through the movement of her body and the language of her perceptions.

HOMEPAGES AS LEARNING TOOLS

Within this study, the heuristic is used to investigate whether or not what is embodied in, on, and through yoga studio homepages is inclusionary or exclusionary concerning the needs of eight teen girls learning about yoga as they define how their experiences with the practice of yoga meld into their conceptions of self. In examining yoga studio homepages as learning tools, Deanna C. Pasternak (2010) writes,

> Many of these websites offer basic information on what to expect when coming to your first yoga class but very few, if any, offer an introductory module attached to that website so that beginning students had something to try out before they came to their first class. (p. 1-2)

The teen girls participating in this study expressed a desire to know foundational information about yoga from which they could determine if they were interested in its practice into their lives.

Jakob Nielsen & Marie Tahir (2002) describe the homepage as a "company's face to the world" (p. 1). A face that shapes, determines, and defines the experiences about which the homepages are designed through the presentation of information and representation of experience. Within this study, yoga studio homepages are evaluated as informational infrastructures that socially influence how individuals begin to perceive, appropriate, and internalize their experiences with the practice of yoga. Additionally, at play here, is how a teen girl would also interact with a yoga studio homepage in choosing where she might like to practice yoga if she would be inspired to practice at all. The design of yoga studio homepages is deliberate, for the simple fact that "online, the first step towards existence is the production of discourse, whether in the form of words, graphic images, or sound" (Markham, 2008, p. 249). In and of themselves, yoga studio homepages construct realities that are created to accommodate the needs of imagined users. Yoga studio homepages function as sources of information about the experience of yoga for those who encounter them, as such; within this study, they were analyzed by teens as informational resources and heuristically evaluated by this researcher as tools of learning.

TEEN USERS OF HOMEPAGES

In 2005, Nielsen conducted a series of website usability studies with teens. He asked a sampling of teens to visit 23 websites and perform assigned tasks while describing their thoughts about what they were experiencing aloud to the researcher observing their actions. Teens were then interviewed about their favorite sites with particular attention paid to how and when they imagined themselves using them in their day-to-day life. Nielsen tested specialized sites that specifically targeted teens as well as

those designed for a general population of Internet users in several categories including:
health, news and entertainment, and school resources. From his perspective, that of
testing the teens as competent or incompetent users of designated websites, Nielsen found
teens to be incompetent users of the sites they were asked to explore, rather than
recognizing that the sites themselves might not be designed effectively for teens as users
of them.

He describes the 38 teens in his sample as performing poorly in achieving
particular tasks,

> When using websites, teenagers have a lower success rate than adults and they're
> easily bored. To work for teens, websites must be simple—but not childish—and
> supply plenty of interactive features. (Nielsen, 2005b, para. 1)

Though he noted the need for interactive features through which teens can manipulate the
content of websites, Nielsen neglected to mention that the teens within his study might
have performed poorly using the sampled websites because they were not designed
expressly for or in consultation with them as users. Nielsen described teens as possessing,
"insufficient reading levels, less sophisticated research strategies, and a dramatically
lower patience level" (para. 13) than adult users. He reported that teens like sites that are
designed simply and allow them to "do stuff" (para. 14). Overall, he writes, "teens like
cool-looking graphics and they pay more attention to a website's visual appearance"
(para. 14) than its text.

Nielsen's findings coincide with the data acquired from the teen girls participating
in this study. However, Nielsen approached websites as designed in such a way that if
teens did not use them effectively to complete a task, then the teens themselves were
deficient. Within the present study, the perspective is that if teens cannot use websites as

effective tools from which to learn more about the phenomena they seek; then the flaw might exist in the design of the sites, rather than in the teen users. What is unique about this study is that the teen girls identified the aspects of website design that worked for them as users and the elements that did not.

HOMEPAGE SAMPLE

The homepages this researcher evaluated in compliance with the needs expressed by teen learners were selected from a 30-page "Yoga Teachers & Studios" special section of *Yoga Journal*. Individuals and companies providing yoga related services purchased space in the February 2010 edition of the journal in order to advertise their businesses and services related to the experience of yoga. In print since 1975, *Yoga Journal* provides informational and experiential content about yoga in terms of nutrition, fitness, and wellness practices. While expansive in size, the special section did not provide an exhaustive or unbiased listing of yoga studios. Rather, it consisted of yoga studios and teachers with the financial means and business vision to place their services in a journal published for a community of yoga practitioners. Within the directory the physical address, website URL, and phone number of 382 yoga studios were provided within the United States, Canada, Costa Rica, Greece, Indonesia, Ireland, Singapore, Sweden, Taiwan, and the United Kingdom. In order to eliminate duplicate entries within the data set of evaluated homepages, studios with multiple listings and/or locations were only evaluated once, which yielded a data set of 289 homepages.

For the purpose of diversifying the sample of yoga studio homepages, and to include individuals who chose to advertise their services through a free database, this researcher selected 18 additional yoga studio homepages from *International Yoga*

Centers, which provided free listings for yoga studios around the world. This web-based directory is a compendium of more than 1000 yoga instructors, studios, wellness centers, and ashrams in North America, Central America, South America, Europe, Africa, the Middle East, Asia, and Oceania. In total, 307 yoga studio homepages were heuristically evaluated within this study to determine how they met teens' needs as learners. The pages were evaluated for the inclusion of: images of teens doing yoga, naming the yoga postures shown, interactive page tools, and bright color schemes. These categories emerged out the teen girls' questionnaire responses, writings, and drawings about yoga and are reflective of the elements of page design that attracted the attention of the teens and thusly would increase their potential usage of yoga studio homepages.

BRIEF DESCRIPTION OF HEURISTICS

According to the Pew Research Center (2011), "93% of teens ages 12-17 go online" (para. 1). In exploring how teen girls learn best through websites, Denise E. Agosto (2002) found that they favor the use of: large type, bright colors, animated graphics, and a limited amount of text. Likewise, in his study of teens as users of websites, Nielsen (2005b) observed that if a teen's attention was not captured by the homepage of a website, they would not spend time exploring the rest of site. The teens participating in the present study, told this researcher that they needed to be interested in the yoga studio homepages from their initial glances. The images needed to show individuals they perceived to be like themselves; text needed to be brief as it defined yoga and its poses; content needed to be interactive; and the colors on the pages needed to be bright. The teen girls said that the pages should engage them cognitively (providing information that defined yoga), physically (requiring them to act through interactive page

tools), and personally (showing images of teens and using the colors they were attracted to). In describing how she likes to see information presented on the Internet, Maddi wrote, "I need to see images and detailed paragraphs about the subject being presented, because I learn better that way, it is more interesting if I have to interact with pages to find what I want to know." *Table 5* displays the heuristic, the actions that should be taken by IRDs to meet the heuristic, and the outcome yielded for teen users if the heuristics are met.

Heuristic	Action	Outcome
Images of teens	• Use images of teens	• Teens want to do yoga because individuals like them are shown doing yoga
Pose names	• Provide names of poses and descriptions of how to do them	• Teens understand what yoga is and how to do it
Interactive page content	• Provide opportunities for teens to effect page content	• Teens control the display of the information they need to access
Bright colors	• Use of bright colors	• Teens perceive yoga is fun and exciting, making them want to practice it

Table 5. Heuristic, IRD action, and teen outcome

IMAGES

The image, or photograph, is the most basic form of visual communication (Handa, 2004). Photographs capture what is inside the lens of a camera at the moment the shutter opens and closes (Hill, 2004). The photograph "is both true and constructed" (Harper, 2008, p. 188); a construction of what is, from a particular point of view, at a specific point in time. The images that permeate yoga studio homepages represent yoga and its practitioners in a particular light. The teen girls participating in this study noticed that on the yoga studio homepages they analyzed there were not any images of people they perceived to be their age. Within the scope of this study, teens were "prepared to analyze and critique these images in order to make informed decisions about them" (Hill, 2004, p. 108; Crovitz, 2007) in relation to their conceptions of yoga and themselves as individuals learning about its practice. Typically, if teens do not see people like them partaking in experiences that they themselves are deciding to participate in or not, teens will perceive those experiences as not for them (Russell & Taylor, 2005; Chia, 2010). Images substantiate experience, making them true as they are presented, because at least for a moment a phenomenon existed exactly the way it was captured and displayed. Although, images are simply "a flexible system of symbols, marks, and spatial variations that operate on several levels within and outside of a text" (Kostelnick, 2003, p. 271), they can influence teens' perceptions of what is possible, this is achieved by showing teens doing represented activities or neglecting their existence all together.

The age of individuals on yoga studio homepages was approximated based on facial features and the maturity of body development. There were not any images of those appearing to be teens on the 307 homepages this researcher evaluated. Teens were not

shown practicing yoga, or in a yoga studio, or even holding a yoga mat. However, there were five images of children in yoga postures visible within the sample. Children are defined as those appearing to be or presented as age 10 or younger. The five children presented on the pages were pictured in the following yoga postures[19].

- Boy in *Crow*
- Boy in *Comfortable Seat*
- Girl in *Handstand*
- Girl in *Triangle*
- Girl in *Pigeon*

Girls outnumber boys, which is reflective of the overall pattern of images: women dominating the yoga studio homepages over male, children, and teen practitioners (see *Figure 29*).
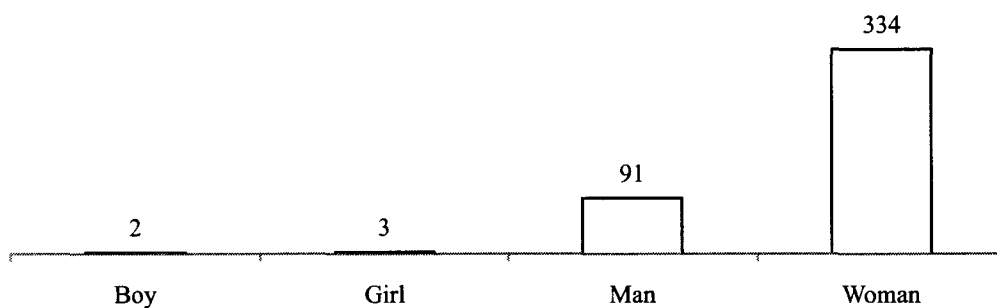
Figure 29. Images of boys, girls, men, and women in yoga postures

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[19] See Appendix A: Pose Glossary for descriptions of the yoga postures mentioned throughout this study.

Figure 30 displays the five poses that children were shown practicing in comparison to the number of adults displayed in the same postures throughout the evaluated sample of yoga studio homepages.
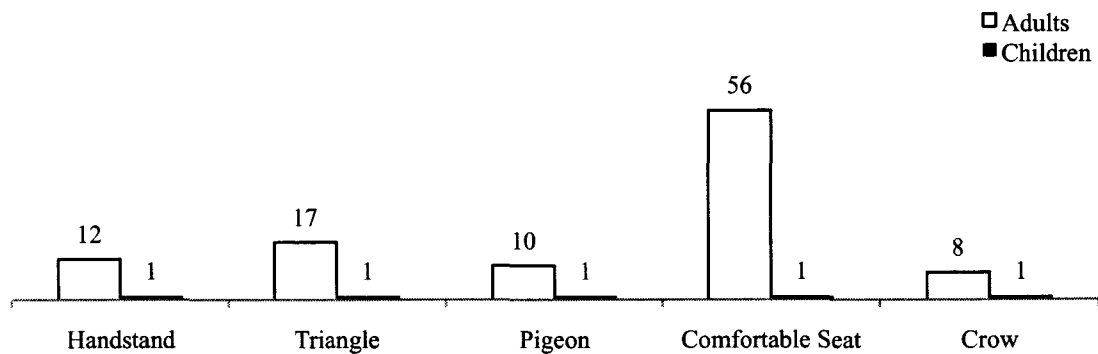
Figure 30. Images of adults and children in yoga postures

Images of teens were nonexistent. From this observation, it can be concluded that teens are not the intended users of designed information on these websites, nor are teen learners a clientele that yoga studios seek to serve because they are not shown among the idealized participants experiencing yoga in the space of the studios. Insofar as teens are not shown practicing yoga postures on these pages, the assumption can be made that teens do not participate in experiences with yoga, for reasons that will become abundantly clear in the following chapter, Survey of Yoga Studios. When yoga studio

owners, practitioners, and information designers were asked to share their conceptions of

teens as potential yoga practitioners, those surveyed did not perceive teens as a

population interested in or capable of practicing yoga in the context of their studios.

Moreover, survey respondents reported that they would not even know where to begin in

presenting information about yoga to teens (as if they were aliens from another planet

speaking incomprehensible languages).

As a population, teen girls are maturing into a sense of self, forming, and

solidifying their preferences, while trying out varied and evolving personas within the

experiences they live and in relation to and in disregard of family and peer associations

(Johnson et al., 1999; Huebner, 2000; Bloustein, 2003; Mizuko et al, 2008; Currie et al.,

2009; Forzani, 2009). As individuals, teen girls need to see people they perceive as peers,

or people they in turn want to be like, participating in experiences through which they can

learn more about themselves and their world (Guber & Kalish, 2006). Illustrating this

point, as discussed in Chapter 3: Participant Observation, Angela perceived yoga as a

sophisticated activity because of the way people responded to her when she said she was

going to practice it. Yoga became an activity that Angela wanted to participate in because

it made her feel good, but also because she liked the way she perceived others to perceive

her as someone who does yoga.

Images used to present information about yoga on yoga studio homepages

displayed adults and a handful of children who already practiced yoga at those studios for

the purpose of maintaining existing students, and attracting more students like them. The

evaluated yoga studio homepages failed to recognize teens as a population that does,

should, and can learn within experiences with yoga. An individual's perception of

encountered images is dependent on her social and cultural conditioning as it shapes what she believes is possible (Barthes, 1982). If images of teens are not present on yoga studio homepages, they have been elided from the experience and without the confirmation of others recognizing them as potential yoga practitioners; they are less likely to participate in the experience.

INTERACTIVITY

On their questionnaires, the teen girls participating in the Yoga & Art Series wrote that they not only needed to see images of teens practicing yoga postures on yoga studio homepages, but as learners, they needed to know the names of the postures they viewed on the homepages as well. Additionally, they believed that their understanding of yoga would be increased through their interaction with the page content. For example, if teens selected a particular image through clicking or rolling a selection tool over that image, they would have liked a brief description of the postures and directions for how to do the pose to be revealed. In this way, participants desired that yoga studio homepages be interactive. *Interactivity* is defined as users taking or making an action to access information from a designed text (Burgoon et al., 2000). None of the homepages the teen girls analyzed or the homepages this researcher evaluated required users to take an action to display additional information meeting the heuristics established in this study.

The pattern of design observed on the evaluated homepages presented general information about yoga studios, including studio name and location, while providing links—such as "classes," "instructors," "events," and "workshops"—to additional information embedded within the pages that compose the entire studio's website. However, interactive features did not exist on the homepages in and of themselves. The

teen girls expressly stated that they wanted to determine how supplementary information was accessed on yoga studio homepages in a way that required them to interact with the page as they clicked, highlighted, or rolled over images. As individuals learning about yoga, the teen girls wanted to be able to access and display information about its practice on the main page of a site, rather than being required to search an entire website for the information they deemed as "need to know." The teens defined interactivity as manually extracting information from a homepage, by selecting images that revealed descriptive information, accessing video and audio content in response to their specific questions, and determining the color schemes of the pages (such as being able to change the background color).

Based on the 2009 percentages of Internet users as collected by the Pew Research Center, 38 percent of teens share content on the Internet and 21 percent remix the content of others (Lenhart, 2009). Addie Kaye (2010) writes, teens, "Enjoy performing tasks on websites such as playing games, filling out polls, taking quizzes and solving riddles" (para. 1). To design an interactive page feature, she writes, "If you are writing a column teaching teenagers about hair care, start the segment off with a poll asking the teenagers how often they wash their hair. End the segment with a quiz about famous celebrity hairstyles" (para. 1). She also suggests, "Collect testimonials from teenagers and display them on your website to build your credibility. Create message boards and forums where teenagers can interact in order to turn your site into a popular teenage hangout" (para. 4).

The teen girls were not asked to analyze any of the homepages discussed in this section, although this researcher heuristically evaluated them. Each was selected for this discussion because, though missing elements the teens identified as important, they

contain examples, which could be expanded to meet the information needs expressed by

this group of learners. *Namaste Yoga Center* (*Figure 31*) incorporated a tool that allowed

users to look at the inside of the studio space by controlling the view of the image from

left to right. This was the only page in the sample of evaluated homepages to include this

type of feature. If the teen girls would have been shown this page, while there are no

images of teens, or information about yoga poses or any information they communicated

a desire to know, this feature does allow them to manipulate a portion of the page, which

is an ability they expressed needing as users of yoga studio homepages.
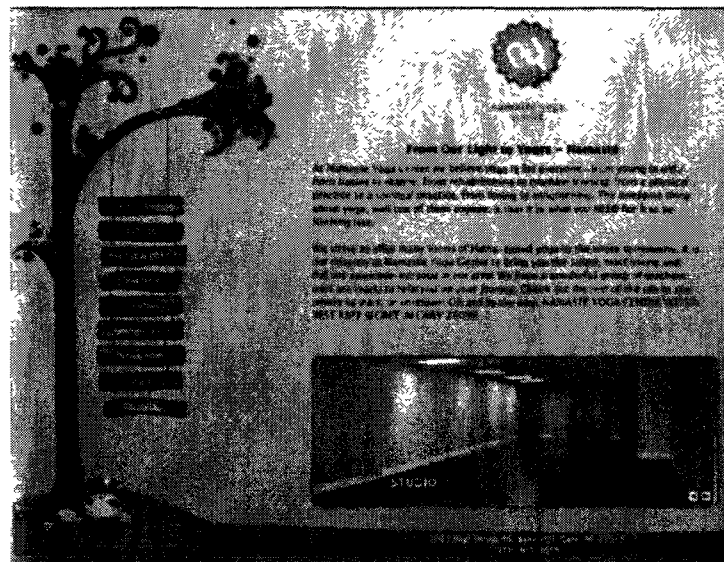
Figure 31. Namaste Yoga Center homepage[20]

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[20] This homepage can be accessed at www.namasteyogacenter.com.

Darshana Yoga (see *Figure 32*) does not name or describe how to do the posture

shown. However, if it had allowed users to access this information by rolling a selection

tool over the space the women occupied or by clicking her image, then the teen girls

participating in this study would have found it to be interactive (see the information

displayed in the callout). The teens defined interactivity as requiring their action to reveal

the foundational information they sought about posture names and descriptions.
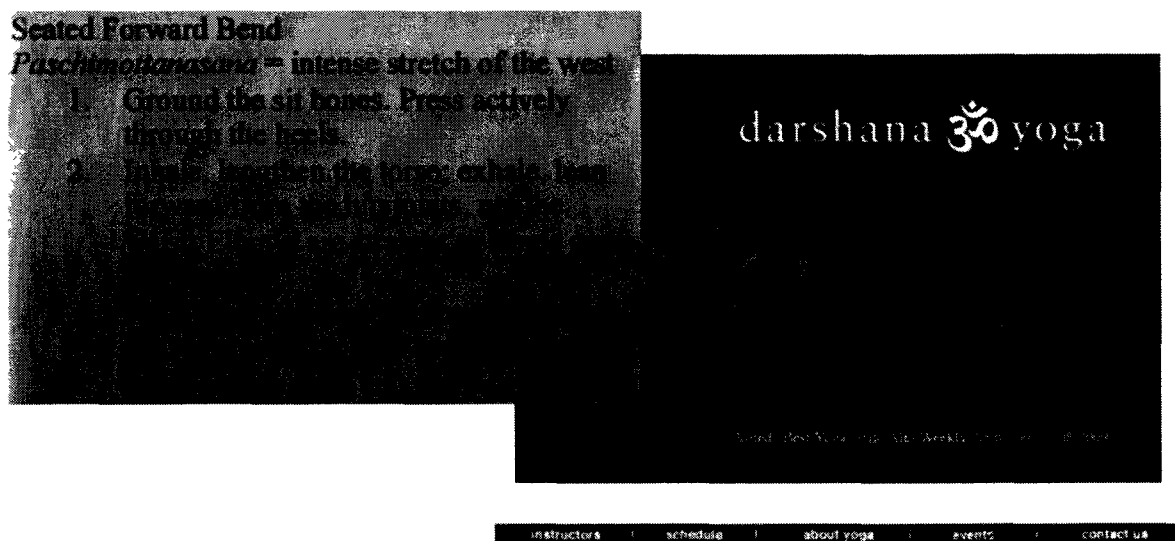
Figure 32. Darshana Yoga homepage[21] altered to include interactivity

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[21] The original homepage can be accessed at www.darshanayoga.com.

The teen girls suggested that the homepages should allow them to effect and manipulate, and quite possibly own the presentation of information on the pages. On the homepage of *Elemental Yoga* (see *Figure 33*), teens would consider the page interactive if it included a video or audio tutorial showing or describing how teens could do the posture shown.
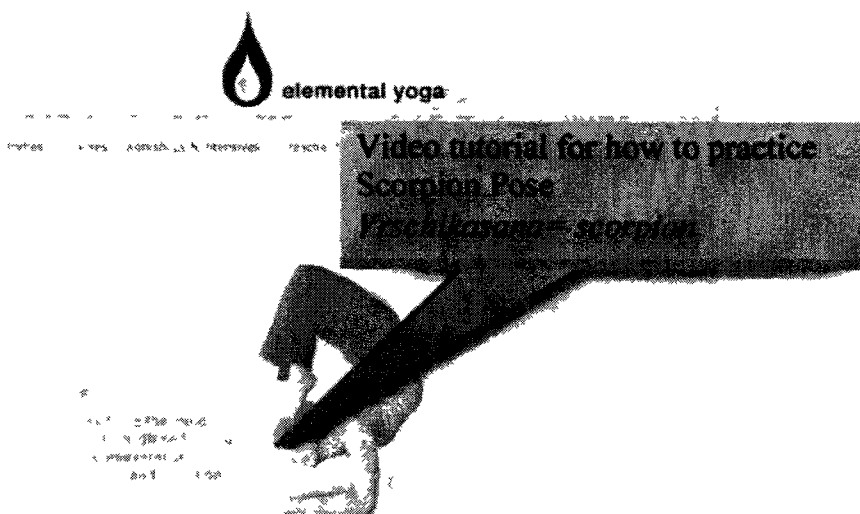
Figure 33. Elemental Yoga homepage[22] altered to include interactivity

The teen girls would have considered the homepage of *Joy Center Yoga* interactive if the illustration responded to their questions (see callout in *Figure 34*).

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[22] The original homepage can be accessed at www.elementalyoga.com.
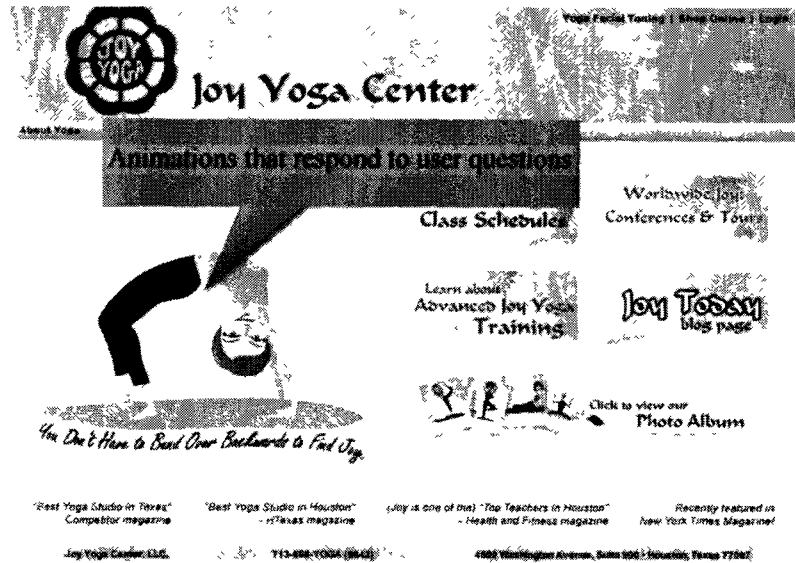
Figure 34. Joy Yoga Center homepage[23] altered to include interactivity

Additionally, the teen girls would have considered the homepage of *Yoga Hanalei*

to be interactive if they would have been able to select from a series of templates through

which the same information could be displayed, but in various background color schemes

(see callout in *Figure 35*).

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[23] The original homepage can be accessed at www.joyyogacenter.com.
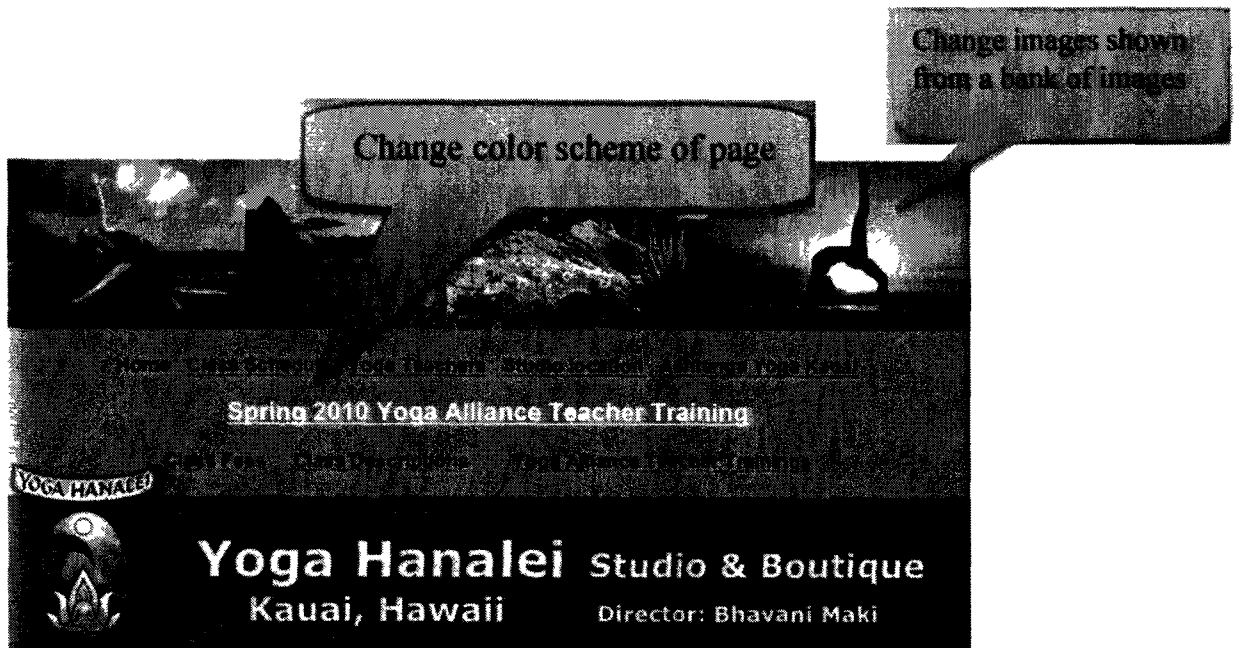
Figure 35. Yoga Hanalei homepage[24] altered to include interactivity

Through the incorporation of interactive page features such as those mentioned in *Table 6* teens can become empowered as they co-author the texts designed for their consumption by interacting with the content of the page. In using yoga studio homepages to learn more about the practice of yoga, the teen girls communicated a need to co-design the texts they encountered in relation to their personal experiences with yoga.

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[24] The original homepage can be accessed at www.yogahanalei.com.

Teen suggestions for interactivity	
Feature	Action
• Selection tool	• Rolling over an image of a yoga pose to reveal the name of the posture, or provide a brief summary of how to do the posture
• Video tutorials and audio content	• Playing tutorials that provide additional information
• Person or avatar or entity	• Answering questions that users pose through writing, speaking, and/or a video-to-video chats
• Ability to alter the appearance of color scheme	• Manipulating predesigned templates through which information can be displayed

Table 6. Teen suggestions for interactive features of yoga studio homepages

COLOR

Within this section, the meaning communicated through the use of color on yoga

studio homepages is considered from an American cultural perspective. Color

preferences vary depending upon an individual's age, gender, personal aesthetics, as well

as their lived experiences. As is evidenced from the teen girls participating in this study

who expressed an affinity for the usage of bright colors to communicate how they

perceive yoga. Generally speaking, from an adult perspective, green, blue, and violet are

cold colors, and are often preferred in the design of information for this age demographic

over the usage of the warm colors of red, orange, and yellow (Crowley, 1993). *Figure 34*

shows cold and warm colors as well as their complements on the color wheel. Teens

wanted bright colors, which to them signaled energy and fun, while survey respondents

discussed using cold colors to communicate a sense of calm and relaxation (see

discussion in Chapter 5: Survey of Yoga Studios).
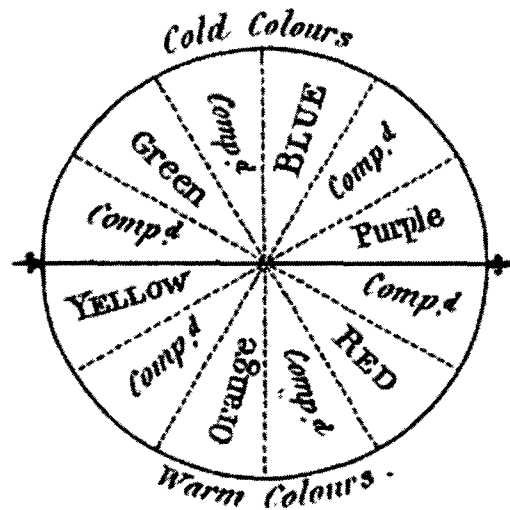
Figure 36. Color wheel[25]

Color connotations are tenuous in nature. They are determined by the context

within which they are used (Crowley, 1993; Gage, 1999; Kimball & Hawkins, 2008).

Culturally, in America red is most often associated with love, passion, or danger; black

with negativity or sleekness; yellow with positivity; green with nature and growth or

jealousy; gray with the unknown; and white with purity (Crowley, 1993; Gage, 1999;

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[25] Figure appears in MacEvoy (2009).

Kimball & Hawkins, 2008). *Table 7* displays common color associations[26] within North

American based cultures.

Color	Association
Black	Negativity
Blue	Depression/Conservation
Brown	Stability/Reliability
Gray	Ambiguity
Green	Nature
Orange/Saffron	Creativity
Pink	Love/Acceptance
Purple	Spirituality/Royalty
Red	Love/Danger
White	Purity
Yellow	Positivity/Hope

Table 7. North American based color associations

The teen girls participating in this study expressed an affinity for bright colors on

yoga studio homepages, because while they said that they found yoga relaxing on their

questionnaires, they also perceived the practice as fun and energizing, and desired to see

that energy communicated within the design of information about yoga. In evaluating the

pattern of color usage on yoga studio homepages, the color of the page border, header,

background, and footer were recorded (See *Figure 37* for schematic of homepage parts).

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[26] North American based color associations were compiled from Kymin (2011) and
Smith (2007).

This portion of the heuristic evaluation disregarded page content, typography, and the hierarchy of how information was presented, in order to focus solely on color usage. The header is the horizontal space at the top of the homepage; the background is the space that unifies the relationship between the top and bottom of the page; the footer is the horizontal space at the bottom; and the border is the space that encloses the header, background, and footer. It should be noted that not all of the evaluated homepages contained each of these elements.
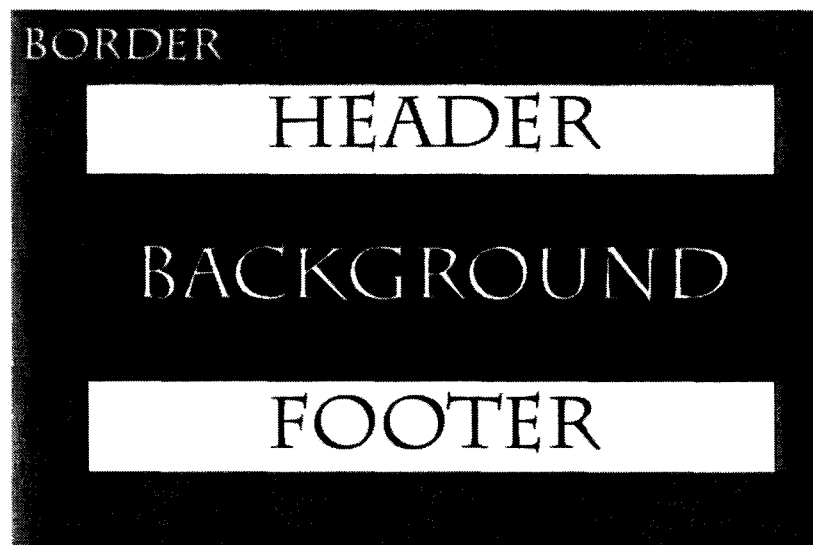
Figure 37. Homepage border, header, background, and footer

This researcher evaluated the homepage of *Main Street Yoga* (see *Figure 38*) as white—the header, footer, background, and border—despite the usage of black, pink, and yellow text on the page. Although they were asked to analyze this homepage, the teen girls did not find its design engaging or particularly interesting as expressed through their questionnaire responses.
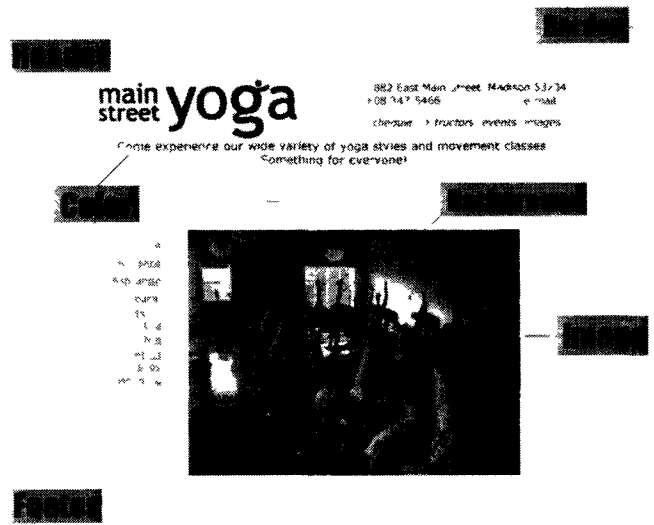
Figure 38. Page elements of the homepage of Main Street Yoga[27]

White was used the most on the evaluated yoga studio homepages followed by blue, green, yellow, brown, and orange (See *Figure 39*). Bright colors, or warms colors

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[27] The original homepage can be accessed at www.mainstreetyoga.org.

were used much less on the pages than their counterparts. Orange and yellow provided

the bright splashes of color that the teen girls expressed would enhance such pages, while

red and pink were used somewhat infrequently. The cold colors of blue and green

dominated the homepages (see *Table 8* for breakdown of color usage), which are

preferred in designs for adults (Crowley, 1993) and are thought to communicate the calm

and relaxing sensation that survey respondents intended to present about the experience

of yoga to potential customers (as discussed in Chapter 5: Survey of Yoga Studios).

441

153

116

64   60   60   50

36   33   26   19

White   Blue   Green   Yellow   Orange   Brown   Purple   Red   Gray   Black   Pink
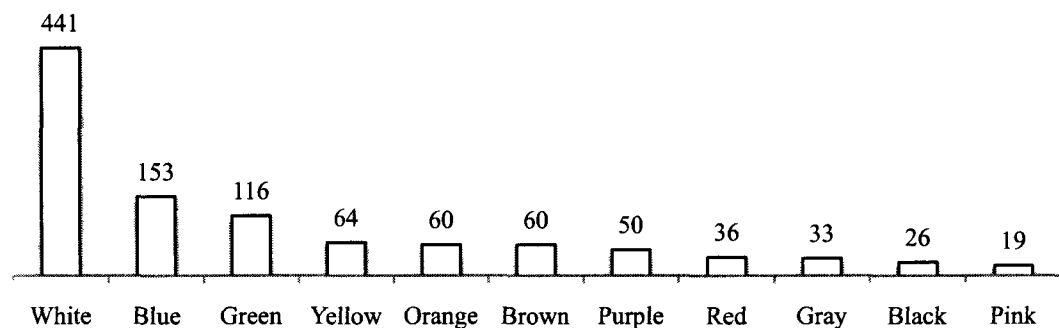
Figure 39. The colors used on yoga studio homepages

Table 8 further breaks down where each color appeared on the evaluated

homepages—header, footer, background, border—and how frequently.

	White	Blue	Black	Green	Orange	Red	Yellow	Purple	Gray	Brown	Pink
Header	89	55	7	40	21	14	15	22	12	14	8
Footer	40	33	7	37	11	12	18	10	8	17	5
Background	191	24	4	14	10	1	14	6	0	16	2
Border	121	41	8	25	18	9	17	12	13	13	4

Table 8. Color usage on yoga studio homepages

Six out of eight of the girls participating in the Yoga & Art Series, said they preferred the homepages that incorporated red, orange, and pink to represent yoga experiences (Angela, Savannah, Lauren C, Emily, Carem, and Lauren M). Two participants liked blue and green color schemes (Kathleen and Maddi). Patricia Deubel (2003) writes, "Color should enhance communication" (p. 78). The teen girls said the use of bright colors increased their learning about yoga because these colors commanded their attention, encouraging them to spend more time with the homepages they perceived as "vividly" designed.

When they designed their own yoga studio homepages, the teen girls used the cold color blue and the warm color red the most (see *Table 9*, an "X" indicates that the teen used the color marked prominently on her self-designed yoga studio homepage). Yellow, a warm color was present on four of the girls' pages in comparison to three girls using the cold color violet. Two girls used the warm color orange, and two girls used the cold color green. Yet, in their questionnaire responses, they said they would use more bright colors than cold to represent their experiences with yoga. This could have occurred for a multitude of reasons including preconditioning as the girls recreated aspects of the

pages they analyzed during the first week of the Yoga & Art Series and prior exposure to
mainstream representations of yoga.

TEEN GIRLS	COLD COLORS			WARM COLORS		
	Green	Blue	Violet	Red	Orange	Yellow
Angela		X		X		X
Maddi		X		X	X	X
Savannah		X		X		X
Kathleen		X	X	X		X
Lauren C	X	X				
Emily	X	X	X	X		
Carem			X	X		
Lauren M		X		X	X	

Table 9. Teen usage of color on the yoga studio homepages they designed

DISCUSSION

Overall, the homepages evaluated by this researcher and analyzed by the teens
participating in this study fail to meet the learning needs communicated by eight teen
girls through their questionnaire responses, writings, and drawings of their experiences
with the practice of yoga. In developing an interest in yoga, the teens wanted to be able to
access particular information including pose names and descriptions through interactive
tools. Additionally, they were interested in how colors were used to communicate how
the practice of yoga could make you feel. The heuristic this researcher used to evaluate

the representation of yoga on studio homepages emerged from the aspects of the

homepages that teen participants focused on. The heuristic consisted of four elements:

Images of teens—This heuristic was not met within the evaluated sample of yoga

studio homepages, while there were a plethora of images of adults and five images of

children, images of teens were nonexistent on the homepages.

Pose names—This heuristic was not met within the evaluated sample of yoga

studio homepages, while individuals were shown in an array of yoga postures; the

postures were not named or described on any of the homepages.

Interactive page features—This heuristic was not met within the evaluated sample

of yoga studio homepages, as users teens were not provided with opportunities to alter or

control the display of information about yoga on the homepages.

Bright colors—This heuristic was not met within the evaluated sample of yoga

studio homepages; the usage of cold colors outnumbered the usage of warm or bright

colors on the homepages.

The new knowledge emerging out this study is manifested into guidelines for

designing informational experiences about yoga for teen girls. The images, page features,

and color schemes of yoga studio homepages provided common ground for eight teen

girls to communicate their experiences with yoga, their expectations as learners from

digital texts about yoga, and their perceptions of how the practice of yoga fit into their

developing conceptions of themselves.

Teens possess an acumen for learning through living experiences which helps

them to shape their identities and develop perceptions of their worlds, and equips them to

not only accept these experiences as they are dictated, but to co-design those experiences

as they would like them or need them to be. Through this process, their success as independent learners who will cultivate life-long learning opportunities is increased. During the first week of the Yoga & Art Series, all nine of the participants were asked to list their favorite yoga studio homepage out of the eight homepages this researcher selected for them to analyze (including Hannah who did not return after the first week of the series). The teens defined their own conception of favorite and made their selections from full-page printouts of the selected yoga studio homepages (see *Chapter 3: Participant Observation, Figure 1*).

Angela, Lauren C, Emily, and Lauren M ranked *Laughing Lotus Yoga* (see *Figure 40*) as their favorite homepage because of the use of the color orange, writing that it drew their attention into the page. They also liked the images of flowers. The color of the page initially grabbed their attention, while the possibility that the teens could do the pose pictured maintained their interest. Right away teens communicated a need to know what the posture pictured was called and how they could do it. Rather than merely looking at the pose, the teens wanted to learn from the image presented on the homepage. This page fulfills the heuristic of using bright colors on a homepage, but fails to use images of teens, name the postures, or to be interactive.
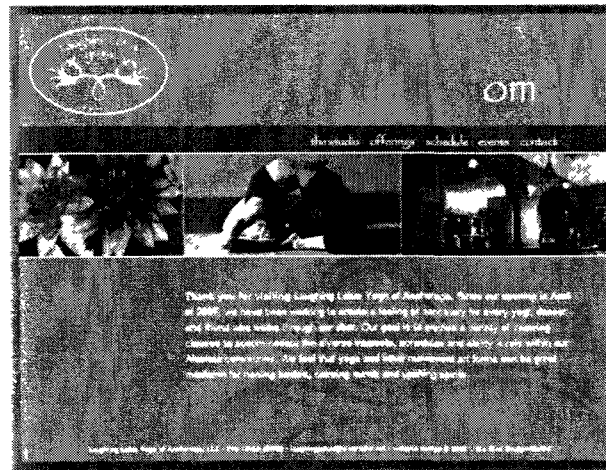
Figure 40. Laughing Lotus Yoga homepage[28]

Carem and Savannah described *Yoga Center of Minneapolis* (see *Figure 41*) as their favorite homepage because of the diversity of the women shown. As a group, the teen participants were Caucasian and between the ages of 12 and 14. Carem and Savannah defined diversity as one woman having curly hair (the left image) and the other woman having straight hair (the right image). Both Carem and Savannah said they wanted to do as little reading as possible and appreciated that this page had a limited amount of text. Carem and Savannah also liked that the women on this page appeared to be closer to their age than those pictured on the other homepages. This page again incorporated the bright color orange while picturing younger looking yoga pracitioners. However, this page did not meet the heuristics of providing pose names and interactive opportunities.

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[28] This homepage can be accessed at www.laughinglotusanchorage.com.

Figure 41. Yoga Center of Minneapolis homepage[29]

Kathleen and Maddi who found themselves writing about yoga from

complementary points of view as they partnered to write haikus during week 3 of the

Yoga & Art Series favored the blue and green color scheme of *Studio Bamboo* and

Yogani Studios. Kathleen's favorite homepage was *Studio Bamboo* (*Figure 42*). She liked

the variation of the poses and ages of the women shown across the top half of the page,

which she said she would incorporate into the design of her own yoga studio homepage

writing, "It would be colorful and have a lot of pictures of poses." She vocalized to this

researcher; "I wish I knew the names of these poses," pointing to the first image on the

left, she said, "What is this called?" While an array of postures was shown, ideally, these

images would have allowed teen users to display the name of the posture and a brief

description of the pose by selecting them. This page failed to meet any of the heuristics

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[29] This homepage can be accessed at www.yogacentermpls.com.

identified by the teen girls, yet it was still Kathleen's favorite. Illustrating that users

possess unique preferences and needs from the information they use, which makes the

task of designing experiences for them one that must incorporate teen users as co-

designers in shaping information that will be used by a diverse population increasing the

possibilities that these artifacts will meet the needs of targeted audiences.
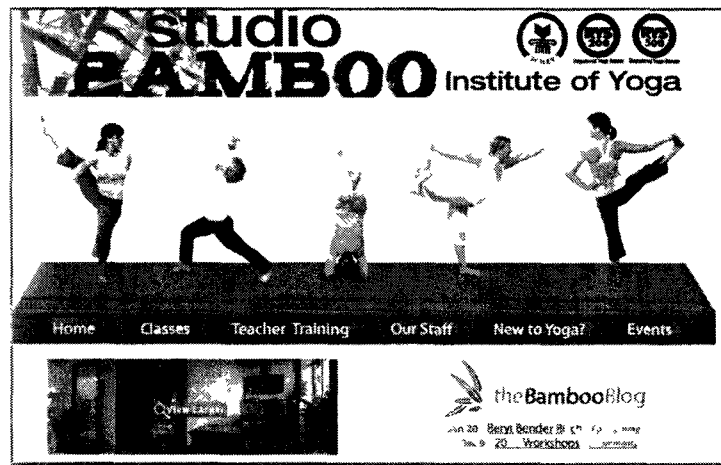
Figure 42. Studio Bamboo Institute of Yoga Homepage[30]

Yogani Studios (*Figure 43*) was Maddi's favorite homepage. She liked the feeling

of serenity and calm she perceived as being communicated through the use of blue and

green. She was also intrigued by the posture the female yoga practitioner is shown

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[30] This homepage can be accessed at www.studiobambooyoga.com.

modeling, again the name of the pose and information about it would have been useful for her as a teen user of the page. This page also fails to meet any of the heuristics, but visually appealed to Maddi's perception of yoga that she described as "relaxation, focus, stretching, building strength, centering yourself."
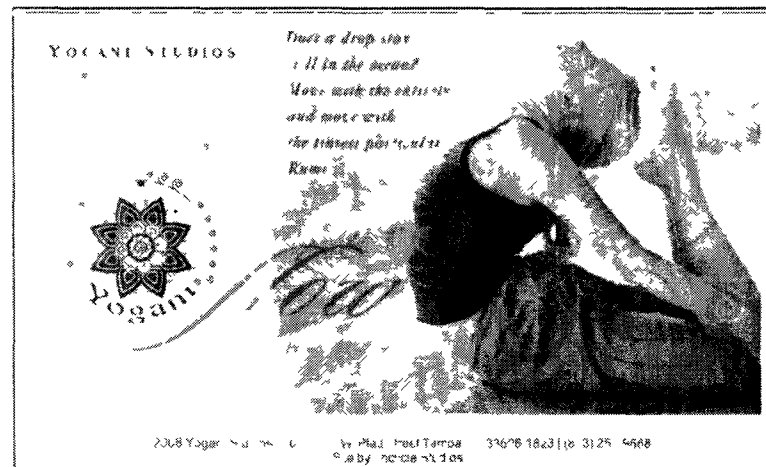
Figure 43. Yogani Studios homepage[31]

In designing information for teens, IRDs have to co-design experiences and informational texts with them as users of those artifacts. This is a process that will yield informational experiences that recognize where teens are situated as learners, while conceptualizing approaches to further their inner and outer growth for the purpose of increasing their success as learners on the metaphorical and literal mat of experience.

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[31] This homepage can be accessed at www.yogani.com.

There is not a fail proof formula for designing informational experiences for teen girls. Nevertheless, when they consulted and engaged in the process of appropriating their experiences and given the freedom to incorporate the opinions of influential others into their conceptions of self, teens emerge as powerful contributors who are qualified to communicate their needs as learners and individuals. In allowing them to voice their needs, IRDs allot teen girl users the space to become producers of their worlds rather than simply consumers of experiences that involve them, yet exist outside of them. Developmentally, this encourages teen girls who are already in the process of creating productions of themselves for imaginary audiences (Huebner, 2000; Weber & Mitchell, 2008) to cultivate the ability to observe themselves without immediately reacting through thoughts and emotions (Forzani, 2009). As a teen's sense of self-awareness is increased, she becomes more able to transcend limiting perceptions that originate within and outside of her (Bennett, 2002; Forzani, 2009; Lark, 2009) as she encouraged to process experiences meta-cognitively, or from a place of inner awareness (Tolle, 1999; Osho, 2004). In expressing how she learns best, communicating how she needs information and experiences to be presented in order for her cognition to be optimized, each girl participating in this study took ownership of and responsibility for how information about yoga could be designed effectively for her.

CONCLUSION

When the teen girls participating in this study designed their own yoga studio homepages, they used images of individuals of diverse ages, genders, and ethnicities to represent yoga; they chose to use women, men, and teens to reflect their notions of yoga as an inclusionary practice. The teen girls represented yoga in a way that included

themselves within its practice without excluding other groups visually, and with the addition of interactive instructional features they attempted to provide foundational information about what yoga is and how to do its postures. Throughout this study, teens have acted "as both senders and receivers of verbal and nonverbal messages and feedback, rather than senders transmitting one-way messages or receivers passively accepting them" (Chou, 2003, p. 267). The teen girls wanted to know what they wanted to know as individuals interested in optimizing their learning about an experience that was new to them. In voicing their needs as learners cognizant of how they learned best, the teens became co-designers of information and experiences that would meet their needs. In the following chapter, Survey of Yoga Studios, individuals describing themselves as yoga studio owners, yoga practitioners, and information designers discuss their perceptions of the users they imagine as an audience of yoga studio homepages, as well as their purpose as they conceive them. Additionally, those surveyed share their perceptions of teens as learners in general, users of yoga studio homepages specifically, and practitioners of yoga holistically.

CHAPTER 5

SURVEY OF YOGA STUDIOS

Within this chapter, this researcher analyzes the results of the survey (discussed in Chapter 1 under the subheading Survey of Yoga Studios; see survey in Appendix C) where yoga studio owners, yoga practitioners, and information designers were asked to share their perspectives about the way yoga is represented on yoga studio homepages, considering them as learning tools and marketing devices. Respondents described the presentation of information about yoga on their respective websites, as it existed at the time of this study. The purpose of this inquiry was to identify how those who are defining the practice of yoga for users encountering studio homepages collectively conceive its practice is communicated through the design of information on these digital pages. If teens are motivated by the information on yoga studio homepages they will potentially convince their parents and/or guardians to help them practice at the studios they identify as providing what they need to further their experiences with yoga.

In the previous chapters, eight teen girls communicating their experiences with the practice of yoga were asked to analyze the design of information about yoga on a sampling of studio homepages. Four heuristics for designing these homepages to meet the needs of teen learners emerged from the teen girls' analysis (as discussed in Chapter 4: Heuristic Evaluation). Throughout this chapter, the intended purposes of yoga studio homepages are identified through the perspectives of survey respondents in relation to the needs from these homepages as expressed by the teen girls participating in this study. According to the 2009 United States Census Bureau, it is estimated that 21,542,504

Americans are teens. Teens represent an exceptionally large base of potential customers for yoga studios as they are in the process of defining themselves and adapting practices that benefit their growth. Within this inquiry, it must be acknowledged that the design of websites involves a range of specialties, perspectives, and considerations that factor into the ways in which these yoga studio homepages are designed among these the relationships of yoga studio owners, their information designers, and their conceptions and philosophy of the practice of yoga. Though, it will not be easy to involve teens in this complex interplay of characters and motives, this researcher believes it would be worth the effort, benefitting the IRDs, yoga studio owners, and the teenage demographic.

RESPONDENTS

Through web-based surveys, the information design aesthetics and approaches of individuals positioned as Instructors, Researchers, and Designers (IRDs) of homepages related to yoga were explored. Query emails were sent to the general information and contact email addresses provided on the homepages. The email introduced this researcher and asked for the participation of individuals, studios, and affiliates designated as studio owners and as site designers (see Appendix C for query letter and distributed survey). Twenty-eight individuals responded to the survey out of the 307 query emails sent, less than 10 percent. The survey consisted of open-ended, yes/no, and true/false questions about the representation of yoga on studio homepages. Survey respondents are identified in the order in which they responded to this survey.

Respondents were able to select more than one category in describing how they perceived themselves. Of those surveyed, 22 out of 28 respondents (78.6 percent) said they were yoga studio owners (see *Figure 44*). For these individuals, yoga studio

homepages function as an online presence through which information about the practice

of yoga within the setting of studios is communicated. Out of the population surveyed,

yoga studio owners could potentially benefit the most from the results of this study in

increasing the customer base. If as IRDs yoga studio owners begin to design and provide

programs meeting the needs of teens, a completely new demographic of yoga

practitioners will be encouraged to purchase experiences with yoga in the space of

studios.
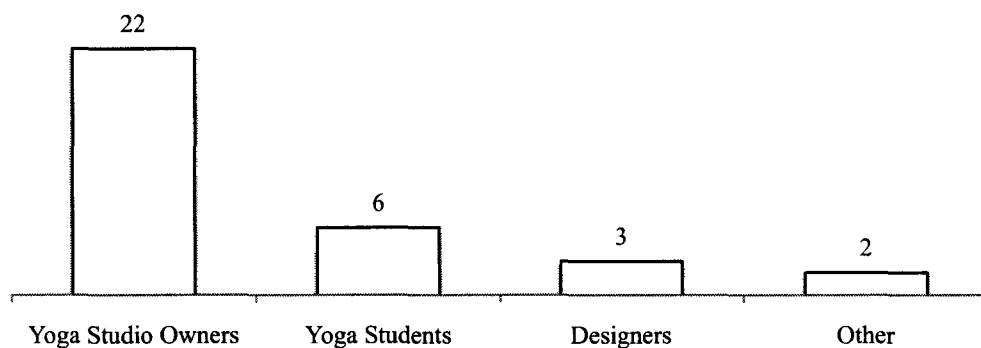
Figure 44. The survey respondents

English professor, Darren Crovitz (2007) writes that websites "allow companies

to embed their product pitch within an interactive cyberreality, allowing a particular

target consumer to be represented, defined, and influenced" (p. 49). In targeting their

customers those affiliated with presenting information about yoga online not only define yoga through images and text, but they establish a collective identity of yoga and the people who seek its practice. Yoga instructor, Brenda K. Plakans (2010) contends that yoga studio homepages "can help [studios] to support [their] local students outside of the classroom, as well as expand [their] audience beyond geographical borders to serve a global yoga community" (para. 1)—a community interested in experiencing yoga as it is depicted on yoga studio homepages. This community does not include teens; they are visually absent from the pages and their needs as learners are disregarded in terms of the heuristic developed out of the questionnaire responses, writings, and drawings of the eight teen girls that participated in this study. Additionally, if one of the goals is to serve a global yoga community as Plakans suggests, some of the needs the girls expressed: naming poses and descriptions or directions for executing them, could benefit others in that community.

IRDs are positioned to design experiences through which individuals can learn about the practice of yoga and how it complements their lives and conceptions of self. Those who responded to the survey focused on presenting pragmatic information to imagined users in terms of answering the where, when, and cost concerns associated with practicing yoga in the space of a studio, rather than providing users with information through which they could define the practice of yoga for themselves. A yoga studio owner writes that these homepages include, "enough necessary information to make the student curious without being overwhelmed" (Respondent 6). In piquing curiosity, these pages, "could be spiritual, factual (location & schedule), or suggestive of a good workout or a relaxing respite from a stressful life," writes an information designer (Respondent

15). Sixty-three percent of respondents conceived yoga studio homepages as persuasive tools that provide information about yoga studios that "highlight overall philosophy and point users to useful information/action such as schedules and upcoming events," as a yoga studio owner writes (Respondent 24).

However, the teen girls participating in this study did not find the same result. While the girls expressed interest in reading the homepages as resources with the potential to provide them with information about yoga, in practice this did not happen. The homepages evaluated in the previous chapter were designed for consumers who were imagined as reading the information on them as it was presented, rather than the homepages functioning as interactive texts that required the participation of their users. Whereas, it is argued throughout this study that information should be designed in a way that maximizes "community outcomes from the perspective of the user" (Merkel and colleagues, 2004, p. 8), serving as resources that provide "a way to understand knowledge by doing" (Spinuzzi, 2005, p. 163). Since, the way in which information is designed "creates a new practice, and changes the practices of everyday work, both to the extent that users participate in design, and because it changes the instruments of work" (Bødker & Iversen, 2002, p. 2). Because the information on yoga studio homepages was not interactive, descriptive, or explanatory about the practice of yoga, yoga as represented on these homepages remains unchanged. If users are not given the option to participate in the design or the unfolding of information then representations of experience become stagnant. The user provides the current and flow of informational texts. As self-explanatory as the title "yoga studio" could be, the girls participating in this study did not know what yoga was or why they should want to go to a yoga studio. Presently, these

homepages are designed in ways that prevent innovation in the evolution of what yoga is and how it is practiced.

THE YOGA STUDIO HOMEPAGE

Respondents described the design of informational content on yoga studio homepages as varied. For example, a yoga student writes, "Some studios have very busy pages, and others have more calming pages—kind of like the difference between *Google's* search page (simple & calm) and *Yahoo's* (busy)" (Respondent 18). The examined yoga studio homepages created a homologous representation of yoga that neglected to offer users opportunities to interact with the content of the homepage. The teen girls had an interest in learning more about what yoga was and how it is practiced as they determined if yoga was something they wanted to incorporate into their lives, if studio homepages provided this information for them, teens would be more likely to participate in yoga classes at studios. The information about yoga on these homepages is shaped by individual approaches to the practice of yoga as represented by particular yoga studios; resulting in yoga experiences unique to each studio space and representative of individual studio based points of view. For the teen girls, whose interest was mainly in understanding what yoga was, the space of a studio, location, and cost information was less important than learning more about how to do yoga.

Before they participated in this study, the teen girls thought of yoga as something for older people. The majority of which, eight out of nine of the original participate, would not have willingly participated in the Yoga & Art Series if it were not for their mothers registering them and friends inviting other members of their social group. Despite this, once they practiced an interpretation of yoga designed specifically for them

in a space that was all their own for 90 minutes, once a week, for a month, the girls

discovered that the practice of yoga could complement their perceptions of themselves.

The evaluated homepages communicated a single vision of the practice of yoga, vastly

different from that of the teen girls as they developed experiences with its practice,

making it necessary as Crovitz (2007) suggests for IRDs who want to build a wider

audience base to, "imagine the choices that lie behind this scene, and to begin pondering

'why'" (p. 52).

According to the responses of those surveyed, geographic, scheduling, and cost

information lie behind the scenes of the design of yoga studio homepages. A yoga studio

owner described the purpose of yoga studio homepages as, "welcoming students to the

studio, to direct them toward information they are looking for, [and] to the set the tone"

(Respondent 2). Individuals operating businesses that provide experiences with yoga

propagate individualized interpretations of what constitutes the practice of yoga through

studio homepages. If a teen is using a yoga studio homepage as a resource further shape

their paradigm of what yoga is, then the girls participating in this study indicated an

interest in instructions for how to physically practice yoga to be conveyed rather than

information about studio facilities.

As website users, teens are characterized as not spending a great deal of time

reading the content of a website unless their attention is engaged right away by the design

and arrangement of the page content (Agosto, 2002; Nielsen, 2005b). Supporting this

observation, the teen girls participating in the Yoga & Art Series wanted to do as little

reading as possible. If the homepages they analyzed would have named the postures

pictured, provided definitions of yoga, or directions for how to execute particular

postures, the girls might have paid more attention to the text of the sites: however, since the sites did not provide this information, the girls found themselves focusing on the images and the colors featured. Out of the 28 respondents, a yoga studio owner wrote that yoga studio homepages should "focus more on the subject of yoga and use the homepage less for marketing" (Respondent 8). This is primarily what the teen girls participating in this study communicated needing from yoga studio homepages—more information about the practice of yoga—if they were to become regular users of them. As learners constructing their perceptions of yoga out of their experiences with its practice and their reading of yoga studio homepages as informational texts, the girls needed to know different information than that presented on the homepages. While, as a whole, unlike the shift away from the focus on marketing Respondent 8 suggests, survey respondents viewed the purpose of the yoga studio homepage as providing the necessary information for potential consumers.

THE USE OF YOGA STUDIO HOMEPAGES

Eighty percent of survey respondents said that yoga studio homepages made them want to physically practice yoga, which is to be expected as the majority of survey respondents were yoga studio owners and are using these websites for precisely this purpose. In this way, the homepages are successful; all nine of the original teens participating in the Yoga & Art Series also said that the yoga studio homepages they analyzed made them want to practice yoga. They expressed excitement about trying the postures shown, even though they were unsure if they would be successful at performing what was shown. Yoga studio owners imagined users needing cursory information about a studio's offerings through which they intended to persuade individuals to take yoga

classes. Thirty percent of survey respondents indicated their intent was to market

information about yoga studios (see *Figure 45*). Whereas, only seven percent of

respondents identified providing information about yoga as a possible goal of yoga studio

homepages—primarily the information the teen girls were seeking.
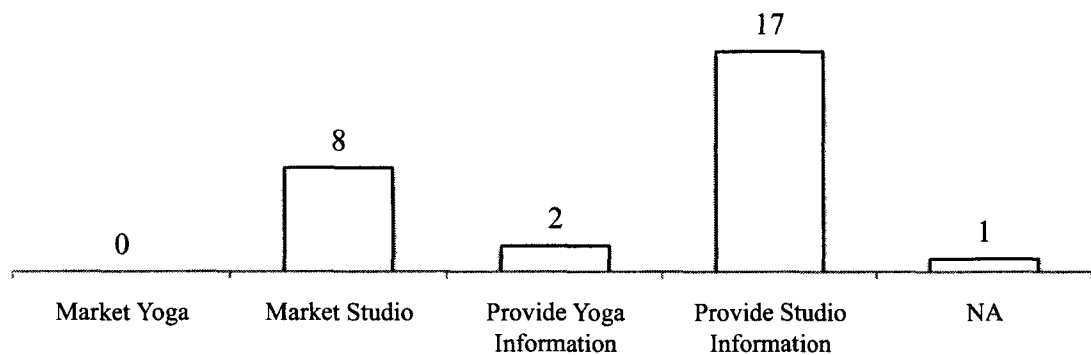
Figure 45. Survey respondents intended use of yoga studio homepages

"I both advertise my own yoga studio and search out class information, for the

purposes of attending classes, at other studios," writes one yoga studio owner

(Respondent 10). This respondent also writes on her or his homepage, "there is a

welcoming message that gives and overview of the services offered at the studio. Then

there are various pages offering information, instructor bios, upcoming events, massage

services," which was reflective of the format of the homepages as observed through the

heuristic evaluation of 307 homepages (as discussed in Chapter 4: Heuristic Evaluation).

The services provided are the focus, not the experience yoga, again a missed opportunity

to garner a larger audience of yoga practitioners in the space of studios.

The websites in their current state do not meet the needs of teens. They do not

take advantage of the sheer size of the potential market teen practitioners of yoga

represent. The numbers vary; in 2009, the US Census reported around 25 million teens

living and buying experiences in the United States, while the Magazine Publishers of

America (2004) reports,

> Between 1990 and 2000, the number of teens ages 12 to 19 soared to 32 million,
> an increase of nearly 4.5 million. Their 17 percent growth rate far outpaced the
> growth of the rest of the population. Needless to say, the United States is facing a
> massive population shift. With this large number of Teens on the cusp of
> becoming young adults, the behaviors and attitudes they exhibit now are
> important to marketers in the present and in the years to come. (p. 1)

A yoga studio owner writes that studio homepages can meet the needs of the producers of

the page content and those of the users of that information through "accurately reflecting

on what the studio offers so that potential or current students understand the type of yoga

offered and whether it is appropriate for them" (Respondent 26).

As consumers, teens are active agents, "in terms of the money they spend, as well

as in the influence they wield in their families and on societal trends"(Magazine

Publishers of America, 2004, p. 16). Teens "display a remarkable self-confidence in their

judgment," as they "do their research prior to making large purchases because they want

to make informed decisions and are particular about what they buy (Magazine Publishers

of America, 2004, p. 16). Beyond providing an accurate reflection of what these studios

offer, the teen girls were seeking an understanding of what yoga was and, secondarily

why they should practice it. Once they know what it is and why they should practice it,

teen are more likely to become interested in where they can take yoga classes and for how much that experience can be purchased.

Survey respondents perceived yoga studio homepages as general resources providing information about studios, rather than as sources of information about the practice of yoga, 80 percent of which indicated a belief that yoga studio homepages affect the physical practice of yoga. Respondent 3, a yoga studio owner, discussed the intended audience and purpose for the homepages is to "give our clients the information they need most." The foundational information about what yoga is that the teen girls participating in this study expressed a need to know most was not provided, which seems to suggest that teens are not an intended audience for the pages, nor are they conceived as potential customers, or as participants in the practice of yoga in a studio setting. The needs of the teen girls and survey respondents are divergent (see *Table 10*), but a convergence of interests is possible through dialogue. The purpose of information design should be to facilitate the creation of information that is effective, efficient, and sustainable within the communities in which it is used (Johnson-Eilola, 1999; Spinuzzi, 2000; Hart-Davidson, 2001; Merkel and colleagues, 2004; Potts, 2009).

	Role	Use of Homepages	Need from homepages
Teen Girls	Content consumer	To access information about what yoga is	To define yoga through interacting with the content of the homepages
Respondents	Content producer	To provide information about purchasing experiences with yoga	To persuade individuals to take classes at individual yoga studios

Table 10. Individual's role, use, and need from yoga studio homepages

MEETING THE USER

Teens make choices based on the influence of family, peers, and other sources as they solidify their individual identities and choose experiences in which to participate as they construct their worlds (Palan & colleagues, 2010; Crutsinger & colleagues, 2010). They are described as a population homogenized by age and are characterized as possessing a disposable income with which they consume popular media and products on trend (Russell & Taylor, 2005; Chia, 2010). From the data derived from the teen girls participating in this study, if experiences are designed for teens in ways that optimize their learning through engagement and opportunities for them to co-design these constructs, then teens will most likely try an experience. Despite a willingness to try yoga as exhibited by the teens participating in this study, the yoga studio owners surveyed did not view teens as potential customers, this is reflected in the fact that 89 percent of respondents said that yoga studio homepages were not designed with teens in mind. These pages did not incorporate images of teens or describe and/or define what yoga is which was the information the teens participating in this study needed. Again, a missed

opportunity considering the buying power of teens and their interest in experiences like yoga, they represent a market of consumers waiting to be served. The Magazine Publishers of America (2004) describe teens as a robust part of the economy possessing "a significant income of their own to spend and also wield increasing influence on household purchases" (p. 1).

The intended function of yoga studio homepages as stated by 63 percent of survey respondents is to provide information about yoga studio offerings for potential customers. Within this study, there is a conflict of interest between the content producers of yoga studio homepages, the imagined consumers of these homepages, and teens as potential users of the content presented on these pages—which could be used to further their own practice with yoga as they seek to define it for themselves. If the needs of teens as learners are addressed through the design of information on yoga studio homepages, then their potential as customers of specific studios increases. Yoga studios expressed the need to sell classes, not yoga. From the perspective of the teens participating in this study, if they are going to consider travelling to a studio and paying for a yoga class, they want to know what yoga is. Thusly, more time spent marketing what yoga is on studio homepages could garner more customers for yoga studios because users of the homepages would enter studios with an idea of what they might experience, not just what they can purchase.

Beyond the intended purpose of yoga studio homepages and the imagined audiences using them, the question arises: how do yoga studio homepages influence an individual's experience with yoga? Five respondents, all yoga studio owners, said that the representation of yoga on studio homepages affected an individual's time spent on their

yoga mat. Yoga studio homepages represent how individuals who practice yoga look, feel, and move within studios; representing an embodiment of the practice of yoga as envisioned by those surveyed as occurring in particular studios. The teen girls participating in this study did not think they could do yoga when they initially analyzed a sampling of the homepages (as discussed in Chapter 3: Participant Observation). Maddi said it will be, "Intense and beastly." Lauren C said, "It will be hard."

A big factor in the teen girls' verbal apprehension was that the individuals on the homepages did not appear to be similar to them in age or perceived physical ability. The rhetoric of yoga studio homepages is ineffective for attracting individuals who are not already yoga practitioners. The homepages provide schedules of classes and events for individuals who have already defined what yoga is for themselves and are most likely already practicing it in some way. Yoga studio homepages are cyclical through design and usage; they are designed for those who are already using them to determine the time and location of classes. They are not designed for individuals who are curious about the practice of yoga without knowing what it is; individuals who if they could access foundational descriptive information about yoga on studio homepages, would be more compelled to purchase experiences with yoga as informed consumers.

If the teen girls' entire experience with yoga depended upon how information about yoga was represented on the homepages, seven out of nine of the girls stated that they would not have tried yoga because they did not think they could do the postures as represented on the homepages they analyzed. Yoga studio homepages offer a viable approach to communicating information about yoga to teens because of their usage patterns of information they encounter on the Internet to construct their worlds (Wells,

2006; Chia, 2010). Within the Yoga & Art Series, the teen girls formulated their own definitions of yoga and related its practices to themselves as individuals. In defining yoga from their individual points of view, the girls became practitioners of yoga who were capable of communicating how they needed information about yoga to be presented to them, and by communicating what they needed, they became co-creators of their experiences with yoga.

MEETING THE NEEDS OF THE USER

When asked how information on yoga studio homepages could be designed to meet the goals of survey respondents as content producers providing experiences with yoga for consumers to purchase, a yoga studio owner writes, by "creating an aesthetic that reflects the practice the studio promotes" (Respondent 22). Another yoga studio owner writes that the homepages should "accurately reflect what the studio offers so that potential or current students understand the different types of yoga and whether they are appropriate for them" (Respondent 26). If it were important that users of the homepages understand the varying types of yoga as they decide what is appropriate for them, studios defining and describing what yoga is from their individualized lenses would achieve this. Not only would this further delineate one yoga studio from another by representing a studio's point of view, it would supply users of these pages with representations of yoga as it is offered at that studio, rather than how it mass-produced within the larger industry of marketing experiences with yoga.

Describing her or himself as other, Respondent 12 writes, homepages are best when they give general information about the studio and what is taught there, as well as try to give a feel of the energy at the studio." In presenting general information, a yoga

studio homepage is simply one of many. In communicating a studio's individualized philosophy about the practice of yoga through description and definition, these homepages could appeal to a wider audience through differentiation and the presentation of knowledge based information. As a user of yoga studio homepages, a yoga student writes, "I think yoga pages should be calming and information clearly presented—make important information front and center, make links easy to locate and clearly define where they go" (Respondent 18). The teen girls participating in this study were not concerned with the feeling of a studio as mentioned by Respondent 12, but they were more interested in accessing the information they were looking for in the ways that Respondent 18 recommends. The girls sought homepages that allowed them to interactively discover information about what yoga is and how to do it.

In their present form, the evaluated homepages provide monologues representing how individual yoga studios interpret the practice of yoga; they do not require the interaction of users nor do they provide a consumer base that recognizes teens. In their presentation of yoga related content, yoga studio homepages should be designed to provide opportunities for users, especially teens, of them to create personal relationships with the practice of yoga. A yoga student and designer writes,

> The homepage provides basic information about the studio as well as summaries of what types of yoga are practiced in the studio. A blog or more personal component is always a plus as many people come into yoga with little or no relationship to all the benefits. It's always nice to have a more personal touch, plus it can be used to answer common questions about the studio or yoga practice. (Respondent 17)

This respondent participates in yoga classes and designs information in some way related to the practice of yoga. According to her or him, homepages are used to create a relationship between an individual and a studio, through providing just enough

information to peak the curiosity of the homepage viewer; rather than to educate her

about yoga and its practices unless the homepage is extended or supplemented by a blog.

MEETING THE NEEDS OF THE TEEN USER

The majority of the survey respondents (89 percent)—16 studio owners and 8

individuals describing themselves as designers, students, and other—thought that yoga

studio homepages did not address teens as an audience (see *Figure 46*). The three

individuals who said these homepages did address teens described themselves as yoga

studio owners. However, the majority of survey respondents confirm as this study found

that yoga studio homepages are not designed in consideration of a teen demographic from

a visual perspective.
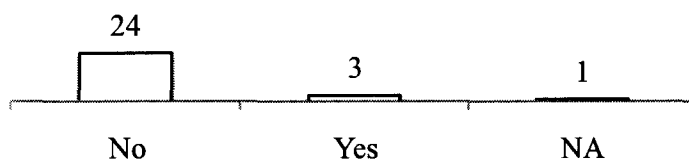
Figure 46. Do yoga studio homepages address teen users?

This researcher's heuristic evaluation of yoga studio homepages based on the

learning needs expressed by the teen girls revealed that images of teens on yoga studio

homepages were nonexistent. Pictures of adult female yoga practitioners were plentiful

and there were even a handful of images of children (five). A number of the yoga studios

offered classes for children, but widely, the adolescent age group was not considered. A

yoga studio owner writes, "My studio offers classes mainly for adults. I also have a

webpage detailing classes offered for kids, but the age range is 7-12, and not targeted

toward teens" (Respondent 10). The evaluated homepages did not present information

about yoga for teens. This is a missed opportunity because as mentioned previously, teens

spend a great deal of time using online sources throughout the course of their day.

Crovitz (2007) writes,

> On average, young people spend about three hours each day on the Internet, as
> much time as they do watching television. And just as TV can be watched from a
> noncritical, passive perspective, so too can teens surf the Web—or build
> websites—without analyzing or evaluating the information they encounter,
> treating at face value that which has been constructed for an intended effect. (p.
> 55)

Whether deliberate or accidental, yoga studio homepages communicate that teens do not

practice yoga in studios because they are absent from the representation of yoga on these

pages. According to all of the individuals who responded to this survey, teens do not

make up enough of a potential customer base for their needs to be addressed through the

design of information on their studio homepages.

When asked how the information on yoga studio homepages might be expanded

to include teen users of them, a studio owner writes, "face to face" (Respondent 1).

Another studio owner writes, "in their own language" (Respondent 2). Survey

respondents offered ideas for designing information for teens that the teen girls

themselves mentioned. Emily said that she learned best when someone was talking to her

whether face-to-face, through video tutorials, and/or audio instruction. She did not

express the need for a special language, but she and the other girls expressed a need for

yoga to be defined for them through directions for how to do a sampling of its postures described in ways that necessitated that the teens participated with the information they were viewing. Three yoga studio owners wrote that interactive features are the most effective way to present information teens, even though these features were not incorporated on the 307 homepages evaluated throughout the course of this study (see more about interactivity in Chapter 4). A yoga studio owner writes, "more interactive content, and more video and audio and social networking features" (Respondent 11). Another writes that "photos, videos, interactive imagery, ability to post to *Facebook*, *Twitter*, and other social networks" (Respondent 5) would increase their appeal for teen users.

The yoga studio owners who responded to this survey described interactive media, visuals, and humor as methods of effectively designing information for teens. Students of yoga suggested that "demonstrations and peer review" are relevant ways to present information to teens, because "teens follow their friends or those whom they want to befriend" (Respondent 16). Additionally, "if it looks cool and trendy it would appeal more to a younger generation" (Respondent 21). The survey respondents stated ways to present information to teens that overlapped what the teens participating in this study said they needed as learners from these homepages. The individuals surveyed expressed viable ideas, which could only be strengthened through actual consultation with teens. If a goal of these information producers becomes to serve a teen market of consumers, then they must provide teens with the services they seek in ways that meet their needs while engaging teens as participants in the creation of their own experiences.

Homepage Design for Teens Should Contain:
Interactive Content
Demonstrations
Colorful & Customizable Design

Table 11. Survey respondents' suggestions for presenting information effectively to teens

Characterized as being in-between the pebble of their youth and the rock of

adulthood (Johnson et al., 1999; Huebner, 2000; Jenkins et al., 2009), teens are all

together ignored as potential customers of yoga studio homepages and in essence as

practitioners of yoga. Five survey respondents (four yoga studio owners and one yoga

student) out of 28 said they did not know how to design information for teens. A yoga

studio owner writes, "Frankly, I haven't a clue" (Respondent 23). Another yoga studio

owner writes, "I have no idea" (Respondent 10). Whereas another studio owner

acknowledged,

> Young adults want to know why they have to do anything so including the
> benefits of yoga, and how it can transform your body and mind are critical. They
> like seeing photos of their peers doing yoga so they don't feel they are alone.
> They like seeing all body types and personality types. (Respondent 19)

This respondent echoed the needs that the teen girls of this study expressed in learning

about yoga and themselves.

Several respondents provided suggestions for designing information about yoga

for teens that overlapped the needs expressed by the teens participating in this study. At

the time of this study, the presentation of information on the evaluated homepages did not

reflect survey respondent suggestions or the learning needs expressed by the teen girls

participating in the Yoga & Art Series, identified as: images of teens doing yoga, names of yoga postures, interactive content, and bright color schemes on the homepages. From the interest in yoga the teen girls expressed, it is evident that teens represent an untapped market of yoga practitioners who might embrace the practice of yoga (at studios) through informational texts and experiences designed for them. However, if teens are left out of the representations of yoga on studio homepages and other informational portals, then teens are less likely to explore yoga because they perceive it as something not for them as illustrated by the girls' hesitation about whether they themselves could do yoga after initially viewing the homepages they analyzed.

A yoga studio owner writes, "I would love to hear what they would do differently [on yoga studio homepages], maybe more pictures" (Respondent 1). When asked how they thought teens would present information about yoga on studio homepages: two respondents wanted to know what teens would do differently (one of which was quoted above); 20 respondents (71 percent) mentioned visuals, interactivity, and coolness. Three respondents indicated they did not know. One respondent did not want teens to present information about yoga. Two respondents did not answer the question. Over half (78.5 percent) of those surveyed were open to considering how to design yoga studio homepages in ways that included the needs of teen users. Many of the suggestions were feasible—in the case of suggesting more images of teens, building in interactive page features, and the inclusion of instructional content requiring as little reading as possible— the responses of those surveyed matched how the teen girls said they would present information about yoga on studio homepages. It is not impossible to design for niche audiences, but this type of design necessitates knowledge of the user that can only be

ascertained through direct work with them in knowledge based communities, in which they serve as active participants in the construction of subject-related information and in the conceptualization of experiences, which they will then use in learning environments.

When asked how they thought teens would present information about yoga on studio homepages of their own design, a yoga student and designer writes, "They would be informative and probably utilize social media outlets" (Respondent 17). Yoga studio owners also mentioned online forums and word of mouth promotion among their friends. An individual describing her or himself as a yoga student and other writes that teens would, "Make it seem cool and edgy. Make others wish they were having as much fun," using, "lots of pictures, lots of unique locations, plenty of slang" (Respondent 16). Again, these elements—images of teens and more socially and individually conscious approaches to the presentation of information—were also mentioned by the teens participating in this study.

FACTORING TEENS INTO THE CO-DESIGN OF HOMEPAGES

Yoga studio homepages, as well as other informational and experiential mediums for teens, can and should be co-designed with users as users identify what they need to be successful learners experiencing information. At the very least users should be asked what they think of existing approaches to presenting information and the ways in which that information could be more effectively designed to meet their needs. In order to co-design educational, fun, and edifying experiences for teens, a concerted effort must be made to interact with teens as individuals whose observations, opinions, and needs as learners matter to those designing experiences for them. Many of the survey respondents, already knew how teens would want to see information about yoga presented to them

within the context of yoga studio homepages. This was reflected by the 20 respondents (71.4 percent) whose suggestions overlapped with the needs expressed by the teens participating in this study. Yet, these approaches were not incorporated into any of the evaluated yoga studio homepages. When the teen girls designed their own homepages, they incorporated images of people they perceived to be their age and provided links to the information they said would further define yoga and its practice. The motives of the teens and the survey respondents differed—teens wanted to know what yoga was, while respondents wanted to attract the attention of potential customers who would purchase classes in the space of yoga studios.

Teens perceived the purpose of yoga studio homepages to be to provide information about where yoga can be practiced. Seventy-one percent of survey respondents suggested that information on the homepages could be more interactive and include images of teens. These pages could be more effectively designed if the eight teens girls interfaced with the twenty survey respondents who were interested in how they would present information for this age group on their yoga studio homepages. The audiences of these pages can grow, their purpose for using the pages could expand if from them individuals could learn more about what yoga is and how its practice might fit into their lives. A client base for the pages already exists, but in order for the consumers of yoga studios to grow, the needs of a wider base of users, including teen aged girls, of yoga studio websites; consequently, a varied or more diverse view of practitioners of yoga must be considered.

DISCUSSION

Although willing to respond to survey questions, some of the yoga studio owners,

yoga practitioners, and designers of information surveyed communicated a wish for the

totality of their websites to be considered, not just the information communicated on the

homepage, which is antithetical to the Internet usage patterns of teens. If their interest is

not grabbed right away, typically teens will not explore any further (Agosto, 2002;

Nielsen, 2005b). In this researcher's evaluation of 307 yoga studio homepages, these

pages did not address the needs of teens (as discussed in Chapter 4); though, the teen girls

participating in this study expressed an interest in the images of yoga postures displayed

on the homepages they analyzed. Agosto (2002) in her examination of the website design

preferences of teen girls, writes,

> Site designers should understand that no matter how high quality the remainder of
> a site might be, if the front page is not of high youth appeal, young users are
> likely to avoid a site entirely. (p. 337)

The girls participating in the Yoga & Art Series indicated a desire for related content,

beyond that on the homepages, which would encourage them to further investigate the

websites.

For the teen girls of this study encountering the design of information on yoga

studio homepages, these texts not only influenced their perceptions of a particular yoga

studio, as intended by survey respondents, but, these digital artifacts also shaped how the

teens perceived the practice of yoga. Typically, and more so with teens than other age

groups, in order for them to buy into an experience, they have to believe that they

themselves can participate and that the people they want to be like are already

participating, while their interest has to be peaked, and their allegiance to an experience

sustained. Additionally, if these conditions are met, the teen girls in this study expressed

an interest in content that they identified as important (directions for executing named

postures), beyond that on the homepage, aligning their needs with the goals indicated by

survey respondents for the entirety of their websites to be examined.

The intended purpose of yoga studio homepages as expressed by survey

respondents was not to aid individuals in learning more about yoga, or themselves, but to

attract potential customers willing to purchase experiences with yoga as they were

represented. Marketing is the action or business of promoting and selling products or

services (see *Table 12*). The IRDs designing yoga studio homepages were invested in

people consuming experiences with yoga within the spaces of the studios represented.

Yoga Studio Homepages		
Respondent #	**Approach**	**Outcome**
2	"Welcome students to the studio, direct them towards information they're looking for, and set the tone for a studio."	Communicate characteristics of yoga studios
6	"Convey practical and initial information to prospective students… more detailed information is then conveyed via email, telephone, or in person."	Communicate how individuals can purchase experiences
28	"Bring awareness to special events and classes offered."	Communicate what experiences individuals can purchase

Table 12. Yoga studio owners use of yoga studios homepages

Again, it must be stated that teen girls are potential economic players in this market. Constance Loizos (2010) writes,

> No one knows exactly how big the yoga market is, but with the number of yoga practitioners in the United States reaching the neighborhood of 15 million, many estimates place it in the hundreds of millions of dollars. (para. 1)

Yoga studios are businesses marketing a space in which experiences with yoga are housed for purchase. This researcher believes they are poised to bridge the gap between this economic reality and the learning and societal needs of teen girls that would benefit from practicing the tenets of yoga as communicated on the sampled pages. The Magazine Publishers of America (2004) reports that teens are important consumers because they represent a "growing powerbase of spenders and influencers" who: "have significant discretionary income, spend family money as well as influence their parents' spending, and establish and affect fashion, lifestyle, and overall trends" (p. 3).

In addition to selling teens experiences with yoga designed to meet their needs as learners, the focus here is to provide teens with experiences in which they can learn more about yoga and themselves as individuals who may incorporate facets of its practice into their personal conceptions of self. Dale H. Schunk (2000) writes,

> Our experience and interpretations of them foster or hinder attempts at growth. With development, individuals become more aware of their own being and functioning (self-experiences). This awareness becomes elaborated into a self-concept through interactions with the environment. (p. 311)

In the space of becoming self-actualized individuals in their experiences with yoga, the teen users of this study indicated that they needed information about yoga to be presented differently on yoga studio homepages in order to support their needs as learners. However, in past research if the teens were not satisfied with the presentation of information on the homepages, researchers painted them as deficient users of the pages,

not as individuals, whose knowledge of what they needed as learners equipped them to find fault with the designs of informational resources that did not communicate what they needed to know.

CONCLUSION

Ultimately, teens "provide a 'window' into our society—a view of how it is now, and what it is likely to become" (Magazine Publishers of America, 2004, p. 3). In relation to the perceptions of the teen girls participating in this study, the survey responses of 28 individuals positioned as yoga studio owners, yoga practitioners, and information designers represent a blend of perspectives explored through the artifact of yoga. Survey respondents considered yoga studio homepages to be an effective means of attracting potential customers to practice yoga at their studios through the purchase of classes. The general consensus being that the purpose of yoga studio homepages was to "provide information about yoga studios," as a yoga studio owner writes (Respondent 14). As IRDs realize their goals as producers of experiences with yoga, the needs of users must be acknowledged.

The intention of this study is a mutual meeting of needs. In responding to how do you think teens would present information on yoga studio homepages, a yoga studio owner writes, "I wouldn't want them to, most teenagers I know are semi-illiterate and couldn't string two meaningful words together" (Respondent 2). If this were a factual summation of teen users of websites, of teens as yoga practitioners, of teens as individuals, it is a direct call to action. This observation necessitates an immediate need to design informational experiences that teach teens how to read data created for them, equipping teens to get to know themselves, enabling them to communicate their needs as

informed participants co-designing the experiences in which they learn best. The final

chapter of this study, Chapter 6: Unification, sets forth recommendations for co-

designing educational constructs with teens through their participation in experiences that

meet their cognitive, developmental, and experiential needs.

CHAPTER 6

UNIFICATION

This dissertation explores the experiences of teens practicing yoga and examining the design of related information. The perceptions of eight teen girls solidifying their identities and those of 28 survey respondents were collected to create a pedagogical method. Through this methodology those in the position of designing information for teens can co-design these experiences in ways that will optimize learning and experiential outcomes for this demographic and provide financial opportunities for Instructors, Researchers, and Designers (IRDs). The teen girls participating in this study physically practiced yoga within a community of their peers. As the girls experienced yoga as a method of integrating their physical movements with their cognitive processes, they functioned as individuals in the process of becoming self-actualized through their experiences with its practice. This contact equipped the girls to evaluate what they were experiencing in relation to the representations of yoga communicated on the studio homepages examined throughout this study.

Beginning with Chapter 1 (Introduction), this researcher defined the goal of education as encouraging individuals to shape their experiences as they reach their full potential in those experiences (Whitehead, 1929; Bloom, 1956). In Chapter 2 (Literature Review), this researcher referenced preceding studies of teen Internet usage, teens practicing yoga, and teens participating in recoding, remixing, and taking ownership of digital media for the purpose of contextualizing the experiences of teens participating in this study within the larger field of teen studies. Shifting to the main subjects of this study

Chapter 3 (Participant Observation) focused on the learning needs of the teen girls

participating in this study as communicated through their creative works. From their

participation and artifacts, four major heuristics were identified for designing Internet

pages about yoga for teen use. It was determined in Chapter 4 (Heuristic Evaluation) that

yoga studio homepages as they are currently designed do not meet the informational

needs of teens in the process of defining what yoga is and how it fits into their lives. In

Chapter 5 (Survey of Yoga Studios), this researcher explored the reasons why teens were

not considered as imagined users of studio homepages. Within this final chapter,

recommendations guiding the design of informational resources and interactive

experiences for teens are made to bridge the chasm between IRDs as producers and teens

as consumers of experience.

Holistically, this investigation chronicles the perceptions of a group of teen girls

learning about the physical practice of yoga. Pina Coluccia, Annette Paffrath, and Jean

Pütz (2003) write, "Understanding the self and connecting the identity to the body allows

for a holistic understanding of identity, one based both in emotional and physical realms"

(p. 2). As the teen girls experienced yoga they developed knowledge, which they used to

immediately determine and communicate their individual learning needs within a

community of girls of a similar demographic based on age and geographic location. Yoga

was used as an artifact through which the teen girls could internalize or reject aspects of

its practice as they solidified their perceptions of what yoga was. The girls physically

practiced yoga postures, cognitively creating representations of what they were

experiencing, enabling them to compare their personal perceptions of yoga to what was

represented about its practice on a sampling of yoga studios homepages. Homepages

meant to attract and maintain potential customers. This process of teens expressing their

needs as learners through questionnaires, writing, drawing, and analysis of

representations of yoga illuminated the ways in which this group of teens appropriated

meaning out of their individual practices, their interactions with each other, and their

examination of informational texts.

THE PURPOSE OF THIS STUDY

In 1999, Horst Niesyto wrote about teens communicating their perceptions of

their experiences, themselves, and their place in the world,

> If somebody wants to learn something about youth's ideas, feelings, and their way
> of experiencing the world, he or she should give them a chance to express
> themselves by means of their own self-made media productions. (p. 137)

Within this study, writing and drawing functioned as mediums through which the teen

girls perceived, appropriated, and (re) coded their experiences with yoga. The girls did

this in ways that allowed them to express themselves individually even as they

experienced an inwardly focused practice visible (and measurable) through their outer

movements in a community of their peers. After the mid-2000s, there were very few

studies investigating how teens use information to comprehend their experiences and

ground themselves within the world. This is unfortunate because teens are actively basing

their perceptions of themselves and their experiences on representations existing in

informational resources, within media, and especially those prevalent online.

Amanda Lenhart & Mary Madden (2005) write for the Internet and American Life

Project of the Pew Research Center,

> American teenagers today are utilizing the interactive capabilities of the Internet
> as they create and share their own media creations. Fully half of all teens and 57%
> of teens that use the Internet could be considered Content Creators. They have

created a blog or webpage, posted original artwork, photography, stories, or
videos online or remixed online content into their own new creations. (para. 1)

danah boyd (2010) describes teens as "living in a networked world" (para. 13), which

requires them to adopt strategies through which they can make meaning out of their

experiences in relation to Internet based media. The teen girls participating in this study

defined yoga as a practice as they experienced it as learners in the process of internalizing

the aspects of the practice that met their needs as individuals. The design of this study

required them to outwardly communicate how they perceived their practice of yoga. In

the midst of these experiences, the teen girls designed yoga studio homepage collages for

individuals they imagined to be like them. This process not only reflected their

experiences with yoga, but additionally their internal perceptions of yoga as a practice

was fore fronted in relation to their personal conceptions of self and their external

awareness of their peers.

The design of information on yoga studio homepages does not meet the learning

needs expressed by the teen girls participating in this study. Despite this reality, teens

should be considered as users of yoga studio websites because teens possess unparalleled

buying power (Magazine Publishers of America, 2004; Chia, 2010), potential interest in

the practice of yoga (as expressed by teens participating in this study), and a reputation

for spending a great deal of time online (Agosto, 2002; Nielsen, 2005b; boyd, 2008).

Mizuko Ito (2008) writes,

> Kids learn on the Internet in a self-directed way, by looking around for
> information they are interested in, or connecting with others who can help them.
> This is a big departure from how they are asked to learn in most schools, where
> the teacher is the expert and there is a fixed set of content to master. (para. 8)

As evidenced through the data generated by the teen girls of this study, this population will be interested in experiences with yoga if they are tailored to meet their modes of learning and aesthetic preferences. This was observed within the Yoga & Art Series through one-on-one and small group work with prospective teen users of information. The only methods for designing learning experiences effectively that generate relevant outcomes for teen users are in partnership with them as evidenced by this study. When teens can act as active stakeholders in creating the informational experiences in which they participate, the result is learning opportunities that are of their own making, increasing the likelihood of their academic and personal achievement.

In acknowledging that designed experiences cannot always satisfy the goals of IRDs while meeting the needs users, Donald A. Norman (2004) writes, "the designer must know the audience for whom the product is intended" (p. 39). In order to know the intended user of a product or experience, that user must be approached as a qualified co-creator of meaning. The teen girls participating in this study were approached as individuals who were capable of cultivating and communicating their perceptions and preferences of yoga as they practiced it. The purpose of this process was to unite the intended purpose of yoga studio homepages as marketing tools as they are identified by survey respondents acting as producers of information about yoga (see Chapter 5) with the functional needs of teen users. This study explored how meaning was discerned from yoga studio homepages by teen girls while observing how they perceived the practice of yoga, illustrating a pedagogical method of working with this population through a model for co-designing information and experiences with them.

YOGA AS THE ARTIFACT

In addition to how the outer world defines teens as a demographic, adolescence or teenhood can be a time of discomfort as girls decode their experiences, enact personas, and embody the traits and perspectives of influential others in the piecing together of personal identity. For Benjamin Richard Smith (2007), yoga is a "means of engaging with, developing and extending or critiquing previous theorizations of embodiment," (p. 41) through which the,

> Conjunction of the practice of yoga and a culturally inflected phenomenology of the body can provide for an encounter that results in the enrichment of both forms of inquiry into the character or nature of our embodied existence. (Smith, 2007, p. 41)

Vinod Pillai (2005) describes yoga as, "the process of connecting the head, heart, and hand i.e. the process of connecting thinking, feeling, and doing into one" (p. 1). He continues, "Yoga contains a set of practices, which aim to build awareness of all the things that you do" (p. 1). Erich Schiffmann (1996) describes yoga as "A way of moving into stillness in order to experience the truth of who you are" (p. 4). He continues, "It is also a way of learning to be centered in action so that you always have the clearest perspective on what's happening" (p. 4). Yoga offers a means through which teens can explore their worlds. A practice through which teens can claim their ground, hold, and develop the space of themselves internally as they communicate who they are externally.

In an article discussing teens, body image, and why they need yoga, yoga instructor Kim Weeks characterizes teenhood as "a time when girls can feel disembodied" (Harzog, 2008, para. 11). Teens feel pressured, as Angela and Lauren M described in their partner haikus written during the second week of the Yoga & Art Series

(see *Appendix B: Partner Haikus*). Andrea Stanet (2010), a yoga instructor and writer

offers,

> Young women experience unique challenges and risks, such as managing their physical development and dealing with the mixed messages they receive from the media about the definition of beauty. Yoga strengthens the mind-body connection. (para. 1)

This connection can enable teens to develop coping mechanisms that can be individually enacted even in the midst of experience; ranging from breathing deeply, to quieting the mind, to stretching and moving in ways that facilitates the body in feeling good, which increases the mind-body connection, enhancing learning. Previous studies focusing on how teens experience the practice of yoga found that teens that practice yoga report an increase in internal awareness (Derzotes, 2000; Guber & Kalish, 2006, 2006b; Shepler et al., 2008; Forzani, 2009), defined as a teens' concept of themselves and how they effect the world and are in turn effected by it. Mary K. Chryssicas, a yoga instructor and writer states that "with yoga, it's not the crowd cheering that makes you feel good about yourself. You, alone, are responsible for feeling good about yourself" (para. 6).

The collaged yoga studio homepages created by the teen girls communicated a need for relaxation through an activity that they perceived as fun. Using yoga as a tool through which mental clarity could be achieved (Guber & Kalish, 2006; Lark, 2008), the girls focused on their breathing and practiced being centered in thought and movement. The intention of this study was to create a forum within which the girls might use the practices of yoga to take ownership of their experiences with yoga, appropriating aspects of it that benefited them, and rejecting those that did not. Within this informal learning space, teens were observed creating personal representations of their experiences with yoga as they practiced its physical postures. The outcome of which was the

exemplification of how teens use the technology of their bodies to make the practice of yoga their own, which prepared them to inwardly define the practice of yoga for themselves.

Ultimately, the girls wanted to be consulted about their needs as learners once they knew it was acceptable to question the representations of yoga on the studio homepages. Instead of blindly accepting the way yoga was defined on the studio homepages as truth, the girls used their knowledge of the practice of yoga to read the homepages as persuasive tools rather than information resources. Whether through interactive features allowing them to control what or how content is revealed on yoga studio homepages or through marker and paper drawings, once the girls felt secure in the expression of their perceptions, they wanted to share their creative works and point of views. When the girls discovered there was no right or wrong in the space of the Yoga & Art Series, they not only shared their thoughts about yoga, but they discussed their day at school, their mothers, friendships, and crushes—they communicated where they perceived themselves to be in the world and revealing themselves within the timeframe of this study. As the girls developed confidence in their knowledge about yoga, evidenced through the deepening level of their physical postures, they were able to actualize their day-to-day experiences in relation to what they were learning in the Yoga & Art Series. The girls were able to "synthesize" (Bloom, 1956; Clark, 2010; Schifter, 2010) their knowledge of yoga in relation to their experiences outside of the practice of yoga.

Norman (2004) writes, "when something gives pleasure, it becomes a part of our lives, and when the way we interact with it helps define our place in society and in the world, then we have love" (p. 227). Yoga created the capacity for some of the girls

participating in this study to cultivate a strong sense of self as they connected their outer

actions with their internal spaces, like Angela who said she felt like a sunflower first

blooming. She was able to bloom because she identified roots to her inner self,

discovering a girl who could do yoga, who could write poetry once she tried and stopped

telling herself that she could not. Norman (2004) continues,

> Design is part of this equation, but personal interaction is key. Love comes by
> being earned, when an object's special characteristics makes it a daily part of our
> lives, when it deepens satisfaction, whether because of its beauty, its behavior, or
> its reflective components. (p. 227)

Once the teen girls identified personal uses for the practice of yoga—it was fun, relaxing,

made them feel sophisticated—yoga became an activity in which they wanted to

participate. The girls co-created these personal relationships with yoga through

interaction with the postures, each other, yoga studio homepages, and this researcher.

Teens are characterized as assembling mosaics of their worlds, "each piece containing

some information about certain situations" (Johnson et al., 1999, p. 7). These pieces are

collected through interactions with each other, with designed texts, and popular media.

When the girls identified aspects of yoga that personally benefitted them, they were

collecting pieces through experience, formulating their conceptions of yoga in large and

barely visible ways.

TEENS AS CO-DESIGNERS

In confronting the challenge of designing informational experiences that serve

diverse audiences (Hart-Davidson, 2001) and in answer to questions concerned with how

meaning is constructed (Rude, 2009; Bloustien, 2003), this study offers a pedagogy[32] for

designing yoga related learning environments with teen girls, encouraging them to co-

design the experiences in which they participate. Carolyn Rude (2009) asks, "How should

texts be constructed to work effectively and ethically?" (p. 176). Within the context of

providing relevant information based experiential learning opportunities for teens, texts

should be co-designed as IRDs and teens create "knowledge, values, and actions" (Rude,

2009, p. 176) of personal and social importance together. Gerry Bloustien (2003) asks,

"How do texts emerge from everyday life to become so meaningful?" (p. 18). In working

with teen girls as a niche population IRDs should recognize, embrace, and utilize the

perceptual distinctions that define them as users of websites, experiences, digital texts

and their peers as they seek to understand their world and themselves.

The teen girls participating in this study communicated their perceptions about

yoga as they learned about its practice through experiencing the postures and creating

visual, tactile, comparative, and analytical representations of what they felt. Within the

Yoga & Art Series, the girls —Angela, Maddi, Kathleen, Lauren C, Emily, Savannah,

Carem, Lauren M, and Hannah—began operating at the level Abraham Maslow (1968)

describes as an individual growing into the person they have always been. In other words,

the individual becomes self-actualized through applying her knowledge to experiences in

ways in which she no longer questions what she knows. In their writing and/or drawing

of yoga (week 1), their partner haiku about yoga (week 2), their drawing of themselves in

their favorite yoga pose (week 3), and their design of a yoga studio homepage through

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[32] According to Nancy Randy Blyer (2004), pedagogy should focus on heightening
student awareness of how meaning is structured in the world as a means of aiding
students in identifying how they can surpass those very same structures.

collage (week 4), the girls learned about the practice of yoga while simultaneously creating a personal relationship with it.

This study serves as a model for designing experiences for teens in a way that encourages these young adults to own and participate in the creation of those experiences wherein they can best learn. The teen girls were provided a weekly space within which to explore this connection. The purpose of which was to analyze the design of information about yoga from the perspective of a niche pocket of users who are described as spending hours using the Internet each day (Agosto, 2002; Nielsen, 2005b; boyd, 2008; Chia, 2010). A population that, in their own words, needs to: relax (Kathleen, Lauren C, & Emily); feel less pressured (Angela & Lauren M); and learn how to center themselves (Savannah, Maddi, & Carem). Through their experiences, teens assemble their worlds (Johnson et al., 1999; Huebner, 2000; Bloustien, 2003; Currie et al., 2009; Rodefer, 2009), the girls participating in this study did so from a place of self-reflection as they defined yoga as it related to their developing self-conceptions and needs as individuals.

Through identifying, how teens interpret designed information, the opportunity emerges for IRDs to provide what teens actually need as learners, rather than designing experiences for imagined audiences. This provides teens with what they need as consumers of information in terms that aid them in the comprehension of the construct communicated (Maslow, 1943), while providing IRDs with user extrapolated guidelines enabling the structuring of information that will be used by the audience for which it is designed. Previous work with teens has explored how they frame, display, and communicate their experiences and evolving world-views (see Chapter 2: Literature Review, citations Bloustien, 2003; Gauntlett 2005, 2007; Gauntlett & Holzwarth, 2006;

Currie et al. 2009), proving that when given a voice teens exercise authority over shaping their experiences as they seek to define themselves in the worlds they inhabit.

In terms of the pragmatic monetary yield for IRDs designing texts that engage, empower, and aid teens in learning more about themselves and their worlds, teens represent an untapped market for yoga-related experiences. Teens are actively embracing practices and products that they perceive to benefit them, which creates an opportunity for IRDs to design and implement yoga programs for teen consumption. The Magazine Publishers of America (2004) write, "As teens age, their yearly discretionary income increases from nearly $1,500 at age 12 to 13 to nearly $4,500 by age 16 to 17. As a group, teens of all ages spent a projected $112.5 billion dollars in 2003" (p. 4). If IRDs begin to design and provide programs meeting the needs of teens, a completely new demographic of yoga practitioners with solid buying power could potentially be encouraged to purchase experiences with yoga in the space of studios.

CO-DESIGNING YOGA PROGRAMS FOR TEENS

Before this researcher found a venue for the Yoga & Art Series, several proposals were submitted to yoga studios and gyms throughout the Hampton Roads, Virginia area. One yoga studio expressed an interest in the program and shared the submitted proposal with three women who had also contacted the studio about providing classes for kids. As per the studio's suggestion, this researcher met with the women whose goal was to form an organization that would provide yoga experiences for children first in schools and teens later through special workshops at yoga studios. At the time this study was conducted, all of the women were mothers over the age of 35, two of which were mothers to sons, and the other had a daughter who was in her teens, but living in another city with

extended family. They discussed their perceptions of what teens needed, based on their remembrances of how difficult teenhood was for them. They discussed news stories concerning teen pregnancy pacts and the rise of teen suicide rates. These women were under the impression that that they *knew* how to make teen's lives "better," as they said. They wanted to save teens from their anger and aggression, drug usage, and their "boy-crazed sexuality."

This researcher opted out of their shared mission to save teen girls from the perils of their emotions and interest in sex. Mainly because these women were not interested in co-designing experiences with the teens they were hoping to save, because they already knew what teens needed (from their own remembrances of teen girlhood), and how to best present information to them. Within a month of this researcher's last meeting with them, the women began to advertise an eight-week yoga series for teens, meeting on Sunday afternoons, incorporating art, breath work, and meditation practices for $185. Naming their organization Teens Applying Personal Power (TAPP), their stated mission was to teach a teen girl "about her self, about her emotions, about her inside world and how to TAPP into her own resources to help her help herself, and so in turn change the world" (TAPP, 2010).

On an advertisement for the series, the women talked about teens as a group, not to teens as their potential participants. An image of an adult woman, not a teen, bending at the waist, head down, wrapping her hands around her foot in *Head to Knee* pose is located to the right of the text on their flyer, which states,

> Girls and Yoga go hand in hand. Yoga teaches us about our bodies our minds and our spirit. We all need to know how to calm ourselves how to focus and how to remain true to our-selves. Life and our environment play huge roles in how we act or react to situations. Teenagers may not have the tools to deal with raging

hormones, peer pressures, school pressures, and trying to fit into their family structure. We are here to help. We are here to show her how to find and use her tools. (TAPP, 2010)

The subject of the texts shifts from girls and yoga, to an all encompassing "our" and "we" including the program organizers and teens collectively, then the "we" of the organizers intent emerges, which would teach girls about themselves and show them how to use their inherent coping tools to deal with their life conditions. They viewed teenagers as needing to be shown the way, needing to be taught how to be themselves, rather than providing them yoga experiences as tool through which they could listen to themselves from the inside out.

This researcher did not design the Yoga & Art Series to fix an imagined teen condition; rather, the series was designed to create a space in which teens could experience yoga, creative activities, and possibly themselves if that was something they desired. In building a framework in which the teen girls were consulted as co-designers of each session of the series, the teen girls were asked to participate in shaping what they were experiencing from a focus on particular postures, to guiding a discussion of intentions in relation to what they had experienced that day, and in that moment. This researcher outlined the format in which teens were expected to experience yoga as they defined its practice through their individualized needs. They could decide to view yoga in various ways: as a physical practice, a way to relax, or just something to do after school. Within this construct, the teen participants co-created the design by communicating their perceptions, answering the main question of this study, how they should be approached as consumers of designed information.

TAPP neglected to draw in participants. One of the women said in a personal email with this researcher that there was "lots of interest, verbally, no takers on the day" (I. Roeck-Akarkarasu, personal communication, October 19, 2010). The most important aspect of designing successful programs for teens is interactivity. Even in the midst of these designs, teens must be consulted within these with the understanding that they are in the process of shaping experiences, in the moment of becoming who they will be in the future. Teens are already complete individuals with belief systems, values, and notions of what they identify as important in their lives. If a program is being offered for teens, IRDs have to talk to teens, market to teens, and co-design the actual experience with teens. TAPP talked around teens, rather than to teens, in their flyer and in their approach to designing a yoga program for teens, this is the reason TAPP failed to attract participants. In order to design programs for teens, IRD goals as information producers must be merged with the needs expressed by teens as learners, consumers, and qualified co-producers of their experiences.

Sharon R. Mazzarella (2008) describes studies of teen girls as defining them "as potential victims of the culture that surrounds them" (p. 75). Much like the organizers of TAPP who sought to fix teen girls from the perspective of right and wrong, rather than to empower teen girls to be whomever and whatever they are at any given moment in their lives. The study at hand, focused on teens' ability to perceive, interact with, and make information their own as co-designers in the process of living those experiences. This was achieved by providing teens with a means of exploring their experiences with yoga; building weekly on scaffolding that required them to recode the representations of yoga presented on studio homepages with their own experiences. These experiences became

real for the teen girls, and in that sense, their perceptions became more inwardly defined than outwardly orchestrated.

MARKETING YOGA PROGRAMS FOR TEENS

When it was decided that the Yoga & Art Series would take place at the Great Bridge/Hickory YMCA, promotion for the program began, within the facility and throughout the surrounding community. This researcher designed an advertisement providing information about the location, session dates, and activities offered as part of the series (see *Figure 45*). Bright colors were used to draw attention the words "yoga" (orange) and "art" (yellow) in addition to the day and time (orange) and the dates of the sessions (yellow). A blue, green, and white background was intended to communicate a sense of calm and relaxation behind the images and highlighted text. The images featured three diverse individuals: a Caucasian woman's hands behind her back in *Reverse Prayer*, an African American woman reaches overhead in a variation of *Side Plank*, and an Asian man sits in *Comfortable Seat*. The teen girls participating in this study, Angela, Savannah, Carem, Lauren C, and Emily said that this advertisement made them want to participate in the Yoga & Art Series more than the advertisement designed by the marketing assistant of the YMCA (see *Figure 47*). Lauren C said, "I like it because it is brighter and more eye-catching," and Emily added, "It is more colorful and has cool pictures."
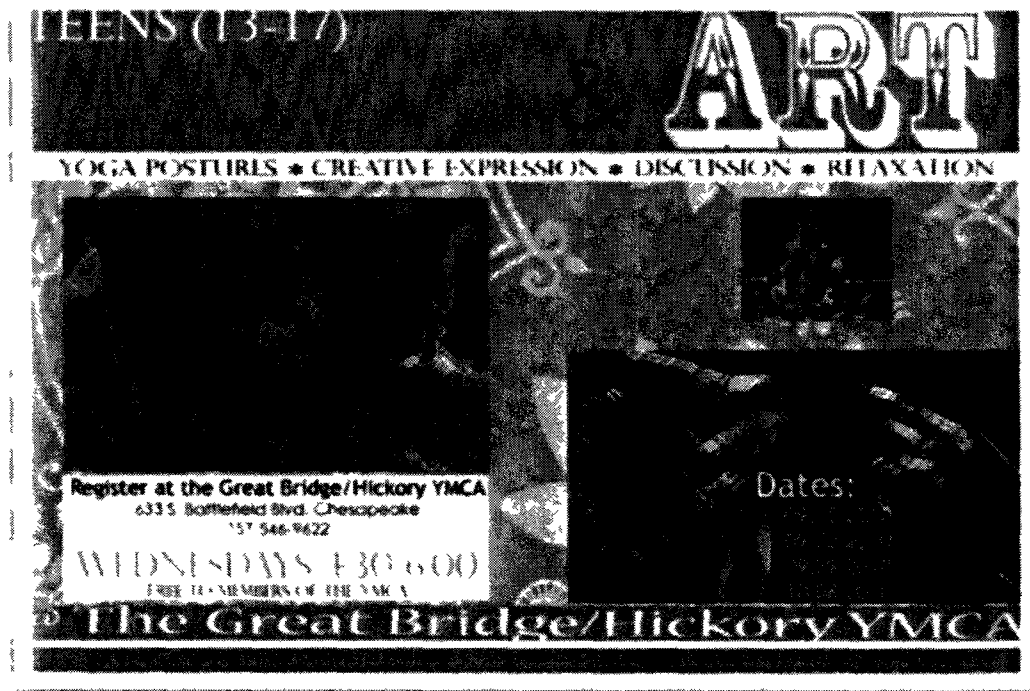
Figure 47. Flyer designed by this researcher

Since the Great Bridge/Hickory YMCA hosted the series, marketing materials

posted within the organization had to conform to the Y's standard approaches to design.

In a personal email between the branches' group fitness director, the marketing assistant,

and this researcher, the marketing assistant writes about the advertisement she designed,

"I know this is totally different from what she did, but I couldn't really incorporate those

images into the typical Y flyer" (A. Moeller, personal communication, August 9, 2010).

The focus of this flyer is an illustration of a woman seated in *Comfortable Seat* between

two trees on a grassy lawn spotted with flowers (see *Figure 48*). The color scheme,

mainly pink with splashes of orange, yellow, and green, is warm, set against a white

background, which is in line with the design preferences expressed by the teen girls.

Lauren M, Kathleen, and Maddi said this flyer made them want to participate in the Yoga

& Art Series because as Maddi said, similar to what Lauren C and Emily said about the

flyer designed by this researcher (*Figure 47*), "It's more colorful and pretty."

Figure 48. Flyer designed by the YMCA

Before working with this particular group of teen girls, this researcher believed that *Figure 47* would be more appealing to a teen audience because the images included both genders, the arrangement of the informational content used very little text, and the overall design mimicked that of a computer or television screen. However, in analyzing *Figure 48* from the viewpoint expressed by some of the teen participants, disregarding the amount of text on the flyer, this design utilizes bright colors and an illustration of a woman who could be perceived as a teen or as an adult. Interestingly enough, Gunther Kress & Theo Van Leeuwen (2002) describe orange as a color that encourages activity and pink as a color that can be used to relax aggressive individuals[33]. Both flyers utilize these color effects and were appropriate in advertising a yoga program for teens within which they would be expected to move their bodies through the physical practice of yoga while they learned techniques to relax themselves.

Essentially, the content of the flyers was the same, while the approach to visual and textual arrangement differed. The flyer designed by the YMCA is text heavy, when the teens participating in this study said they wanted to do as little reading as necessary to uncover the information they seek. The flyer designed by this researcher lacks images of teens in postures. While foundationally, both flyers miss the mark in naming the postures pictured. Herein lies a difficulty in designing experiences for teens when they are not consulted individually and in small groups. Constructing the design of information on indicators that IRDs speculate teens will embrace will not satisfy the needs of teens or IRDs.

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[33] See Chapter 4: Heuristic Evaluation for more discussion of the meaning of color.

Kress & Van Leeuwen (2002) say that "color does what people do with it" (p. 350); this holds true for the design of informational experiences as well. The effectiveness of designed experiences is dependent on how teens use it, learn from it, and make meaning out of its construct. Essentially, this researcher and the marketing assistant of the YMCA displayed an awareness of how to attract the attention of teen consumers, yet both advertisements would have benefitted from knowing how teens would have desired for this information to be presented to them. This researcher designed a third flyer (see *Figure 49*). While the effectiveness of this flyer was not tested within this study, the flyer integrates the design preferences the teen girls expressed. Images of teens are included, the yoga postures shown are named, the text is minimal, and the colors are bright.
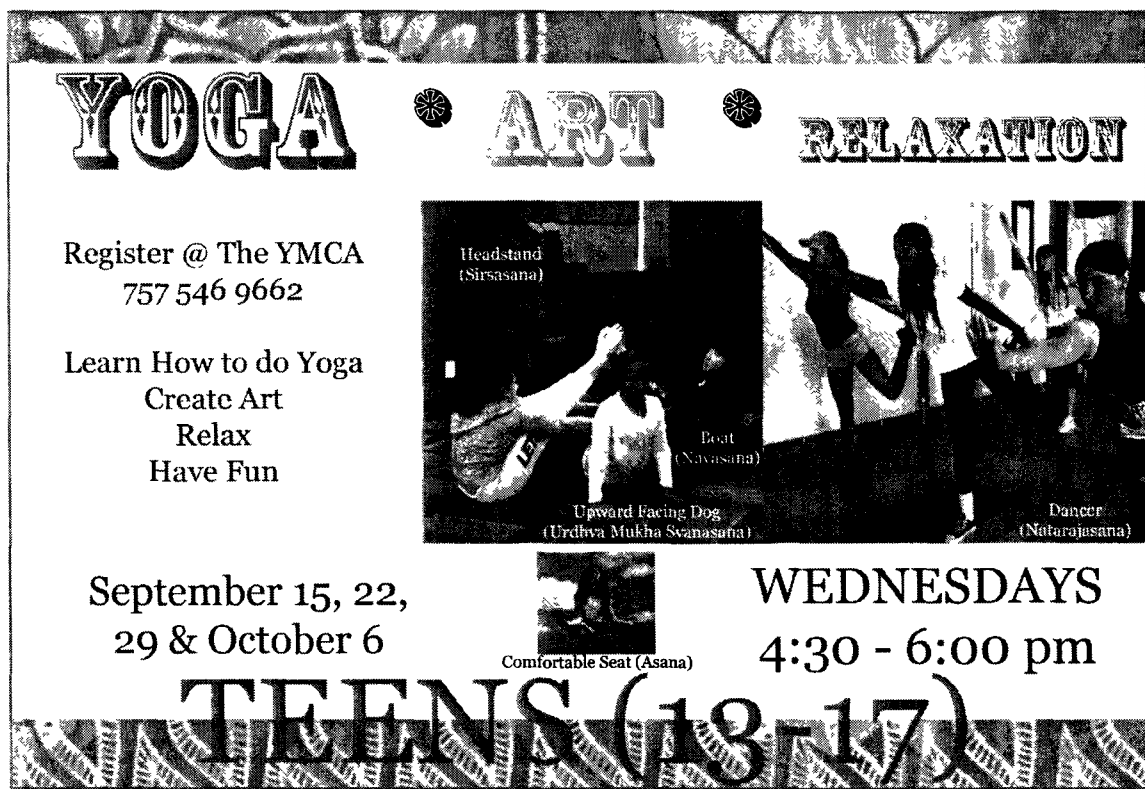
Figure 49. Flyer incorporating teen design preferences

AFTER THE YOGA & ART SERIES

According to the group fitness director of the Great Bridge/Hickory branch of the

YMCA following the conclusion of the Yoga & Art Series, parents and/or guardians

requested a continuation of the program through phone calls to the YMCA. This

researcher was asked to continue to provide the series for teen girls. When polled the teen

girls participating in the program said Wednesday was a good day but that they needed

the class to be offered about thirty minutes later. The series was incorporated as part of

the YMCA's weekly schedule of classes on Wednesdays from 5:00-6:30pm. Savannah

attended each week; Carem attended two sessions; Angela and Maddi came once; Emily did not return; Kathleen and Lauren C showed up two weeks in a row, expressing disappointment each time, "Where is everyone else?" asked Kathleen, "I was hoping it would be exactly the way it was before."

Even though the attendance of the girls participating in this study was sporadic, over the course of ten weeks of the scheduled class, new participants tried yoga and made art each week. Whenever the original participants showed up (alone or in pairs), they expected the experience to be the same, as they perceived it to be during the four-week series. This leads the researcher to conclude that teens need a beginning and end date to commit to when attending programs specifically designed for them. When the Yoga & Art Series was originally presented as a special program, 15 girls were registered for the series, nine of which showed up to the first session, with eight teen girls participating for the duration of the series. When the series was offered as a regular class, this researcher maintained the same structure to encourage the teens (new and original) to co-design their experiences weekly. However, the attendance of the teens never exceeded four girls. Consequently, this did not allow for the development of a new knowledge community built around the shared purpose and trust formed by the original group of girls who knew they were contributing to the entire design process of a meaningful yoga experience for themselves and other teens.

The open ended-possibility of being able to take a yoga class each week diluted the urgency exhibited by the original participants. Now teens could show up randomly because they knew classes would be available whenever they chose to attend them. Yoga became a part of an infinite juggling mix of: homework, other extracurricular activities,

parent's providing transportation indefinitely, etc. The teens participating in this study needed the responsibility and ownership of knowing they were showing up for a structured amount of time, for a set amount of weeks, with a group of girls they had come to know as members of a shared and co-created knowledge community.

The eight girls were motivated to participate in the Yoga & Art Series for the entire duration of the series because they were treated as knowledgeable and active stakeholders whose interest in yoga was being met. They also knew that as a group, their opinions mattered and the data they were generating had a special purpose to aid this researcher in designing yoga-related experiences for teen girls. This ownership served as positive reinforcement (Skinner, 2011): co-designing and knowing they were affecting the series fueled their perfect attendence. This important correlation invites and demands that IRDs leave room for teens to identify their own motivations for learning and regular participation as they experience designed artifacts. This identification and acceptance of shared responsibility results in the "ongoing actualization of [their] potentials, capacities and talents... and a fuller knowledge of, and acceptance of, [their] own intrinsic nature" (Maslow, 1968, p. 25).

In a way, the second group was also an unofficial test enabling this researcher to conclude: teens show up when they choose to buy into experiences. Teens co-design those experiences (on purpose, or accidentally, or incidentally) through their presence and participation as they determine if an experience meets the personal needs they have identified as being a possible outcome of the experience. Ultimately, teens communicate if their ever-shifting needs have been fulfilled through their on-going participation or absence from the experiences designed for them. The structure, the timeframe, and the

positive reinforcement and trust born of the knowledge community that emerged from the Yoga & Art Series provides strong evidence for programs modeled after its instructional design. The following section recommends approaches for designing yoga programs and resources for teens.

RECOMMENDATIONS

The goal of information design is to explore how optimal learning is constructed, appropriated, and maintained in society (Herndl, 2004; Barton & Barton, 2004). This study calls for IRDs as producers of information to collaboratively design learning experiences for teen consumers as they make meaning out of their experiences through co-designing them. In designing yoga programs, curriculums, and informational resources for teens, IRDs, educators, and yoga studio owners could profit greatly while creating experiences that would benefit teens as consumers and co-producers of the knowledge they as a community need. The teen market represents an economic wellspring, as they are characterized (through market analysis and research) as "a diverse, vibrant, growing, and crucial market in the world today," whose, "beliefs, attitudes, and behaviors will affect the marketplace for many years to come" (Magazine Publishers of America, 2004, p. 16).

As a practice, yoga "empowers teens to embody inner feelings of safety, connection, and self-control, better equipping them to handle the challenges of adulthood" (Thomson & Khouri, 2006, p. iii). Physician and writer, Deepak Chopra (2011) says to get teens to participate in activities that can potentially benefit their mental states and physical bodies, "the secret lies in helping these kids find something they like to do, something that doesn't seem like a workout or sport to them" (para. 4). Chopra

continues, these activities need to be "social, easy to learn and do not have to be competitive to be enjoyed" (para. 4).

INFORMATION DESIGN BY EDUCATORS

James M. Dubinsky (2004) links the process of teaching to the art of reflecting, "It is the capacity for 'mindfulness' or reflection that enables one to discover 'know-how'" (p. 8). This process of self-reflection is integral for students as well as instructors. Within schools, the addition of yoga programs would need to be approached from a collaborative learning perspective wherein the benefits of practicing yoga techniques is presented as a powerful facilitator in the overall processing of various types and forms of information. As a part of formal school based curriculums, yoga programs would increase student awareness and potential for success, setting them up to master the Health and Life Skills Standards of Learning[34] as well as those of other subject areas through its integration across several disciplines. Incorporating yoga programs into formal school settings, "is intrinsically interdisciplinary," and as Guber & Kalish (2006) write would create an "opportunity to provide integrated instruction which addresses overall health and wellness, and ultimately benefits everyone, teachers and students alike" (Guber & Kalish, 2006, p. 5).

If teens' needs as learners, "their basic needs for safety, belongingness, love, respect, and self-esteem" (Maslow, 1968, p. 25) are met, teen girls specifically are more prepared to identify, comprehend, use, analyze, synthesize, and evaluate their knowledge

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[34] In the state of Virginia, the Standards of Learning (SOL) outline the commonwealth's expectations for student learning and achievement in grades K-12 in the subject areas of English, Mathematics, Science, History/Social Science, Technology, the Fine Arts, Foreign Language, Health and Physical Education, and Driver Education (Virginia Department of Education, 2011).

of their experiences (Bloom, 1956). A constant theme emerging out of this study with teen girls is that teens need to be afforded the space to become stakeholders in their experiences. This premium space is one, which this demographic must buy into literally and figuratively. The original eight girls purchased stock in the purpose and benefits of this study, and in the power of the knowledge community they formed, which sustained their attendence throughout the series, driving them toward the following level of discernment.

In experiencing yoga, the teen girls were able to identify instances of what they experienced that were absent from the representations of yoga on studio homepages. In regards to the examined yoga studio homepages, the girls were able to "perceive what is there [and what is not] rather than [existing exclusively in] the over amplification of their own wishes, hopes, fears, anxieties, their own theories and beliefs"(Maslow, 1954, p. 250). Maslow describes this as achieving self-actualization through one's knowledge of what is and how it could be. Anne Wysocki & Johndan Johnson-Eilola (1999) describe designed information as telling an individual who she is, dictating what she might be as she, "situates and resituates representations in social spaces" (p. 367). The user of designed information transcend the imagination of the producer of that information when she participates as a co-producer actively defining the use of an informational resource in relation to her needs.

INFORMATION DESIGN BY IRDS & YOGA STUDIO OWNERS

This researcher recommends that the existing content of yoga studio homepages be altered in three major ways to provide teens with information about what yoga is. Recoding the language of these digital texts will increase their potential to attract teen

users to yoga studios (see *Table 13*). The recommendations are: using images of teens in

yoga postures throughout the websites; at the very least labeling the postures shown,

ideally though, brief descriptions of how to do the postures would also be presented with

the images or in links from the presented pose. Lastly, teens want to act in order to

display information, which responds to their individual needs as users of websites,

empowering them to create personal meaning in the package that most helps them make

meaning from the homepages.

Design Recommendations	
Less	**More**
Images of adults	Images of teens
Information about purchasing classes	Definitions/descriptions of what yoga is
Designer control of information	Opportunities for teens to affect page design

Table 13. Recommendations for designing yoga studio homepages for teens

INFORMATION DESIGN BY IRDS & EDUCATORS

The recommendations: that information for teens be designed with teens through

collaborative learning approaches and that yoga practices be conceived as complementary

to existing school-based curriculums are grounded on the perceptions of the eight teen

girls participating in the entirety of this study. Their participation resulted in the

generation of four heuristics for designing information about yoga for them (and their

peers) as potential users of yoga studio homepages. The teen girls participating in this study needed to:

- See individuals they perceive like themselves shown practicing yoga
- Know the names of the postures shown with the inclusion of brief descriptions for how to do them
- Affect the way information was presented on the pages through interactive page features
- Perceive the colors used as communicating a sense of fun

IRDs must step back to the mat of invention, making the design of information and experiences with yoga a participatory process that supports the necessity for teens to make meaning out of their experiences with yoga. Teens need to be approached as contributors in the process of designing experiential learning constructs for them, rather than as imagined bystanders.

Additionally, it is recommended that yoga studio owners provide applications accessible on the homepage of their websites that allow potential teen consumers to create relationships with the information provided by the studios. The resources described below could be downloaded for an appropriate fee each time they are accessed. Making video or audio recordings of yoga instructors leading teens through specifically designed yoga practices accessible on the homepages would allow this population to experience the practice of yoga when and how they choose. Similarly, the creation of individualized web pages for teens accessible from the studio homepages would allow for the bulk of a studio's websites to remain unchanged, while providing teens with an opportunity to engage with yoga related content designed especially for them. Through studio websites, yoga studio owners could host discussions, knowledge communities, and/or forums for teens to discuss their practice with providers of yoga experiences, as well as sponsoring the interaction with other teens. All of these recommendations would address the needs

the teen girls expressed for their experiences with yoga homepages to be interactive

regarding the presentation of basic information about what yoga is and how to do it.

PROSPECTIVE RESEARCH

Future scholarship in this area could address: if yoga studio homepages were

redesigned to meet the learning needs of teen users would teens rely on this information

exclusively to form their practice of yoga? Another thread of research could explore the

perceptions of parents and/or guardians that register their teen girls for programs like the

Yoga & Art Series: what factors help them choose or pursue programs for their teen?

How does this effect the teen's attendance? How will or does this external support help to

maintain or sustain the programs teens build into a regular practice? If yoga classes were

added to school curriculums; for example as a course choice, would they select this

offering and build a regular practice? If conducted as a means of creating opportunities

for teens to participate in the design of what they experience, this work would continue

the process of creating pedagogies that meet the learning needs of a diverse population of

teens and the purposes intended by IRDs.

CONCLUSION

This dissertation research focused on the developing definitions, physical

movements, self-perceptions, and communication processes of eight teen girls as this

researcher sought to form a "deep understanding of girls' culture and experiences" (Stern,

2008, p. 85). The girls participating in this study: Angela, Maddi, Savannah, Kathleen,

Lauren C, Emily, Carem, Lauren M, and Hannah provided direct experiential data from

which yoga studio owners and homepage designers can approach teens in the co-creation

of learning experiences. It is through working directly with an audience for which

experiential information is designed that those experiences, services, and products will possess the potential to meet the needs of unique consumers as they achieve the intended purposes of producers of those constructs. The process of designing for teens necessitates interaction with them, which empowers this population to participate in the creation of meaningful learning experiences, resulting in powerful knowledge communities.

Within the world of yoga, *Namaste* is a salutation used to recognize the spirit and light, what is and the possibilities of what can be, in another individual. Throughout the course of this study, this researcher has asserted that IRDs should recognize and harness the participatory power of those for which they design yoga-related experiences, in this case teen girls, by co-designing interactive resources, artifacts, and experiences with these unique users. In situating this research within a community of teen girls, heuristics for individualizing the design of information about yoga emerges with teens positioned as co-producers and sound consumers. This study illustrates a pedagogical method for working with teens as stakeholders partially responsible for constructing the experiences they choose to participate in, and in so doing, gives teens the opportunity to gain ownership over their experiences. As well as offering yoga studio sponsors an untapped population that has the interest, personal and social need, and economic power to support these services.

In the knowledge communities in which producers and consumers of yoga related information dwell, the goal must be to design artifacts that not only market specific experiences, but also edify, satiate, and teach the related principles. Experiences that communicate information in ways that aid a user in processing the phenomena being conveyed, in understanding the context in which the experience is offered, and in owning

their experiences as individuals responsible for using the power within them to help

shape how they view our world, as illustrated by the teen girls in this study.

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APPENDIX A

POSE GLOSSARY

Anjali Mudra
The palms are placed together in front of heart center, fingers pointing towards the sky. When the hands are placed behind the back fingers pointed upward, this gesture becomes *Reverse Prayer*.

Asana
The placing of the body into yoga postures.

Bridge (Setu Bandha Sarvangasana)
A supine back bending posture, in which the head, neck, shoulders, and feet rest against the earth as the hips lift skyward. For *Supported Bridge*, a yoga block is placed under the sacrum, allowing the lower body to rest while the hips remain elevated.

Comfortable Seat (Asana)
A seated posture, in which the base of the spine connects to the earth, and the legs are crossed in front of the body.

Crow (Bakasana)
An arm balance in which the palms ground into the earth, the knees bend deeply, and the shins are placed on the back of the upper arms. The weight of the body is shifted forward as the feet lift from the earth.

Dancer (Natarajasana)
A standing balancing posture in which the weight is supported on one leg, the other leg bends at the knee, and the hand (on the same side of the body) reaches back for the inner ankle as the shoulder externally rotates. Hinging from the hips, the torso extends forward, as the bent knee rises towards the sky.

Downward Facing Dog (Adho Mukha Svanasana)
The palms of the hands and the balls of the feet connect to the earth about 2-3 feet apart depending upon an individual's arm and leg span. The hips lift towards the sky. The body is shaped like an upside down V. In *Three-Legged Downward Facing Dog*, one leg extends towards to sky.

Forearm Balance
The weight of the body is supported on forearms.

Forward Fold (Uttanasana)
Standing, the torso is folded over the legs as the hands reach towards the earth.

Handstand (Adho Mukha Vrksasana)
The hands support the weight of the body as the feet extend upward towards the sky.

Hanumanasana (The Splits)
The legs extend forward and back out of the hip joints as the inner thighs move towards the earth.

Jnana Mudra
A hand gesture in which the tip of the thumb and index fingers are connected to create a circle, the rest of the fingers extend outward from the upward facing palm.

Mudra
A gesture that is symbolic or ritualized.

Namaste
A salutation meaning, "the spirit and light in me, honors and acknowledges the spirit and light in you."

Om (Aum)
The sacred universal sound of everything, yet the sound of nothing.

Pigeon (Eka Pada Kapotasana)
The legs extend forward and back, inner thighs moving towards the earth as the front leg is angled towards 90 degrees and the back leg is kept straight.

Relaxation or Corpse (Savasana)
A restorative posture in which the body is supine and the arms and legs rest outstretched from the torso.

Seated Head to Knee (Janu Sirsasana)
A seated posture in which one leg is straight and the other is bent at the knee, the foot of the bent knee is placed to the inner thigh of the extended leg, hinging from the hips, the torso is folded over the extended leg.

Seated Straddle Splits (Upavista Konasana)
A seated posture in which the base of the spine is connected to the earth, legs extend out wide, the torso folds over the center of the legs.

Side Plank (Vasisthasana)
The weight of the body is supported by one hand placed under the shoulder and the outer edge of the foot on the same side of the body. The top hand reaches towards the sky.

Sun Salutations (Surya Namaskar)
A series of 12 postures performed in succession coordinated with the inhalation and exhalation of the breath to alternately stretch the spine forward and back while warming the body.

Sunflowers
A flowing standing posture in which the feet are about 2-3 feet apart with the toes angled away from the body, the knees bend over the ankles, and the torso hinges forward at the hips, as the arms outline the sun sweeping down and up. The movement is repeated several times with the inhalation and exhalation of the breath.

Tree (Vrksasana)
A standing balancing posture in which the body weight is supported on one leg, the other leg bends at the knee, and the sole of the foot is placed to inner ankle, calf, or hip of the standing leg. Hands remain at heart center in *Anjali Mudra* or extend overhead.

Triangle (Trikonasana)
A standing posture in which the legs are about 2-3 feet apart, the foot of the front leg is angled at 90 degrees; the back foot is angled at 45 as the legs straighten. The body hinges over the front leg and the torso lengthens forward. The bottom hand rests on the front leg. The top hand reaches towards the sky.

Twisting Lunge (Parivrtta Anjaneyasana)
A standing posture in which one leg is extended forward, bending at the knee, as the other leg extends straight back from the hip joint heel aligned over toe. The hips and torso square towards the front leg as the arms extend upward towards the sky.

Warrior 1 (Virabhadrasana I)
A standing posture in which the legs are about 2-3 feet apart, the foot of the front leg is angled at 90 degrees, the knee bending over it, the back foot is angled at 45 as the leg straightens. The hips square towards the front leg as the torso lengthens upward and the arms extend towards the sky.

Warrior 2 (Virabhadrasana II)
A standing posture in which the legs are about 2-3 feet apart, the foot of the front leg is angled at 90 degrees, the knee bending over it, the back foot is angled at 45 as the leg straightens. The hips and shoulders open to the side, as the front thigh works parallel to the earth, the arms extend forward and back.

APPENDIX B

PARTNER HAIKUS

Savannah & Lauren C

I forced myself to try

I went down into the splits

The middle splits

       Peaceful relaxation

       Some pain, but its also fun

       Calm breathing & simple poses

Stretching really hard

Being calm like the rain

Laughing while being calm

       Laughing calmly

       Stretching, reaching, in the dark

       Finally, it's finished

Maddi & Kathleen

Deep in meaningful breaths

Seeing inside my soul

Becoming new

Thinking about yourself

Relaxing your mind

Becoming peaceful

Body, mind, and soul

Light shining from the heart

The three become one

Listening to your thoughts

Unite with your mind

Yoga makes me free

Emily & Carem

Peaceful & calming

Gets everything off your mind

Refreshing, stretching

Mats, blocks, and poses

Trancing and refreshing

Standing and sitting

Yoga, stretches

Quiet and dark

Enjoy and be renewed

Relax and move yourself

Rock back and forth together

Different names of poses

Angela & Lauren M

It centers myself

Calms my overstretched nerves

Venting processes

Calming, relaxing

Peaceful inspiration

Makes me feel less pressured

APPENDIX C

SURVEY

I am a Professional Writing & New Media doctoral candidate at Old Dominion University in Norfolk, VA. I am exploring the relationship between yoga studio homepages and the physical practice of yoga for my doctoral dissertation. If you could fill out the 10-question survey, it would be invaluable!

Thank You & Namaste,

1. How is information about yoga presented on yoga studio homepages?

2. The homepages of yoga studio websites make me want to practice yoga.
   True
   False

3. What do you use yoga studio homepages for?

4. What is the intended use of yoga studio homepages?
   Marketing yoga
   Marketing studio
   Provide information about yoga
   Provide information about studio

5. Do yoga studio homepages affect the physical practice of yoga?
   Yes
   No

6. How can yoga studio homepages meet the needs of yoga studios and viewers?

7. Do you think yoga studio homepages address young adults, 13-17 year olds?
   Yes
   No

8. What do you think is the most effective way to present information to young adults?

9. How do you think young adults would present information on a yoga studio homepage?

10. I am a:
      Yoga studio owner
      Yoga student
      Designer (information/graphic/web)
      Other

VITA

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Batten Arts and Letters 5000
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Philosophy Doctorate in Professional Writing & New Media Old Dominion University, Norfolk VA	September 22, 2011
Master of Arts in Journalism Regent University, Virginia Beach VA	May 2006
Bachelors of Science in Communications Old Dominion University, Norfolk VA	May 2004

EXPERIENCE

Yoga Teacher	2008-Presently
YogaFit Apprentice Trainer YogaFit, Torrance CA	2010-2011
Graphic Designer & Editor of Focus Magazine Regent University, Virginia Beach VA	2005-2006
Television News Intern WTKR News Channel 3, Norfolk VA	2004-2005

DESIGNED PROGRAMS

Belly Dance Basics	February 2011
Introduction to Meditation	January 2011
Teen Yoga & Art Series	September 2010

CONTINUING EDUCATION

Yoga Ed. High School Teacher Certification	April 2011
Yoga Philosophy & Meditation Certification in Rishikesh, India	November 2010
Registered Yoga Teacher with the Yoga Alliance	May 2008

HONORS

Screened a film short (Haiku) described as "Impressive" by the *Virginian-Pilot*	2006