ABSTRACT

The More We Play Together: An Illustrative Case Study Designed to Explore
Engagement at PlayGrand Adventures All-Abilities Playground

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Play is an important part of childhood with physical, cognitive, and social developmental benefits. Three in four Americans live within walking distance of a park or recreation center, affording opportunities for many to play, socialize, and enjoy the health benefits of being in nature (National Recreation and Parks Association, 2020). While federal laws provide minimum standards for accessibility, people with disabilities face inequities at public playgrounds. The law allows play spaces to be designed for typically-developing children rather than enforcing equity, supporting inferior design and social acceptance of the status quo. As the first all-abilities playground in Grand Prairie, Texas, PlayGrand Adventures tackles these issues head on by designing the playground specifically for inclusive play (Bunn et al., 2021).

This illustrative case study explores and describes community engagement at PlayGrand Adventures through the lenses of Bandura's Social Cognitive Theory (1986) and Gibson's Affordance Theory (1979). Together, these theories support the need for inviting play spaces that afford personal agency, social belonging, and community

engagement, regardless of one's physical or developmental abilities. The reciprocal roles of environment, person, and perception influence both playground engagement and sustainability.

This study begins with a questionnaire then utilizes purposive criterion-based sampling to identify participants for follow-up semi-structured interviews. Concurrent playground observations utilize a consistent protocol to collect data on categories of people who visit the playground, which features are used, and how features are utilized. All data are collected, coded, and analyzed utilizing the data spiral (Creswell & Poth, 2018). Recommendations, based on findings, provide guidance on design and engagement for future phases of development at PlayGrand Adventures.

This case study lays the foundation for a deeper understanding of all-abilities playgrounds as a solution to the systemic underserving of people with disabilities in the United States. The final report is the first step to a roadmap to guide inclusive playground development and implementation in other regions of the country. Replication of this study in different regions and at a larger scale fills a gap in academic scholarship on inclusive playgrounds in the United States and increase opportunities for inclusive play and therapeutic recreation.

The More We Play Together: An Illustrative Case Study Designed to Explore
Engagement at PlayGrand Adventures All-Abilities Playground

by

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A Dissertation

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

ADA: Americans with Disabilities Act of 1990

ADAAA: ADA Amendments Act of 2008

Parks Department: City of Grand Prairie Parks, Arts, and Recreation Department

PGA: PlayGrand Adventures

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and presentations she listened to over the past two-and-a-half years. She checked my codes, suggested theoretical frameworks, and talked me through my interpretations. Momma, Zac—thank you. You are my lifelong heroes.

In the time I spent developing and implementing this study, the landscape of play has changed in North Texas. I am pleased to say we now have several inclusive playgrounds, though I will always be partial to PlayGrand Adventures. I have grown as a researcher and person through this study in ways I did not expect. I am grateful, humbled, and excited for the future of inclusive play opportunities and academic scholarship.

DEDICATION

To Emita Garcia, whose passion, love, and determination made me an instant PlayGrand
Adventures apostle, and to my mother who nurtures and drives all my dreams, including
this one.

CHAPTER ONE

Introduction to the Problem of Practice

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Introduction

       Children and adults with disabilities merit the same opportunities for development

and social engagement as those without disabilities. It can be challenging, however, to

find playgrounds that are engaging for all visitors. Playground design should include

equitable features for marginalized populations, yet almost 20 percent of the United

States population is consistently left with fewer, inferior opportunities to play (Brault,

2012; Stanton-Chapman & Schmidt, 2019). People with disabilities are at a greater risk

of acute and chronic health issues stemming from a lack of physical activity (Booth et al.,

2012; Centers for Disease Control and Prevention, 2018; Office of Disease Prevention

and Health Promotion, 2020). The same population earns a median income of $22,047

per year and is significantly more likely to be unemployed than their peers without

disabilities (Kraus et al., 2018). Free, accessible city services and facilities, like parks and

recreation centers, are critical to ensure the physical and mental health and development

of all people.

North Texas is a 9,000 square mile region containing 150 cities, including Dallas and Fort Worth (North Texas Commission, 2016). Nearly ten percent of the 6.8 million North Texans live with physical and cognitive disabilities, and 114,433 of these live below the poverty line (North Central Texas Council of Governments in *PlayGrand Adventures: A Dallas-Fort Worth Destination*, n.d.). PlayGrand Adventures, an all-abilities playground located in the North Texas city of Grand Prairie, aims to be a playful, barrier-free environment that allows children and adults of all ages and abilities to play together (PlayGrand Adventures, n.d.). PlayGrand normalizes inclusion by offering equipment and features that can be enjoyed by everyone: children with physical and intellectual disabilities, children without disabilities, parents with disabilities who want to play with their children, aging relatives, people who want open spaces, people who love risky play, and people who prefer tranquil spaces. The master plan for development is divided into phases to launch over time; the first phase opened to the public on January 15, 2021. As the vision and creation of this playground develops with the launch of each phase, an understanding of how visitors engage should guide design and implementation strategies.

This study explores and describes community engagement with and perception of PlayGrand Adventures. Engagement with the first phase informs design and implementations strategies for the next phases. Outside of the immediate community, this study fills a gap in academic research on inclusive playgrounds in the United States. While observational studies have been conducted on playgrounds to understand visitor participation, this detailed case study adds donor engagement and stakeholder perception data to provide a complete picture of engagement and implications for sustainability.

Statement of the Problem

Almost 20 percent of Americans have disabilities that affect how they see, hear, learn, move, think, and feel (Brault, 2012). Seven million public school students between three and 21 years of age received special education services in 2017–2018 under the Individuals with Disabilities Education Act (National Center for Education Statistics, 2019). While disabilities can significantly alter how someone lives, moves, and learns, these conditions do not erase, replace, or override their personality, preferences, or values (Buchanan & Johnson, 2009). Individuals with disabilities are just that: individuals.

Everyone needs and *deserves* to play, connect, and belong. People with disabilities need the social-emotional, cognitive, and physical development supported by playing independently, cross-generationally, and with their peers. Furthermore, people with disabilities are positively impacted by learning and practicing attributes such as respect, empathy, creativity, and self-advocacy agency in social situations with peers (Clarke, 2018; Deaver & Wright, 2018; Yılmaz & Soyer, 2018). Communities must ensure all individuals have equitable access to engaging playgrounds and other play spaces.

The lack of equitable play-based resources and opportunities impacts how often children with disabilities play (Jenvey, 2013; Reimers et al., 2018). In 2014, 23 playgrounds in North Texas listed in an online database were deemed accessible based on a minimal standard of having at least one accessible feature (NPR, 2014). This standard means a playground could qualify as accessible by having a smooth, wheelchair-friendly surface, even if none of the play equipment was accessible by a child in a wheelchair. These 23 playgrounds offered a variety of features, mostly focused on mobility accommodations, but none offered all accessible features. Twelve had smooth surfaces

throughout for ease of transport within the space. Eight had transfer stations for visitors to move or be moved from their mobility device to a play feature, and six had ramps to play components. Six had an accessible swing, three had play components utilizing sound, and one had a play component for visually-impaired visitors (NPR, 2014).

North Texans with disabilities are marginalized by the deficit of inclusive playgrounds in the region. The 23 accessible playgrounds in the region served all 666,947 people with disabilities in North Texas (North Central Texas Council of Governments in *PlayGrand Adventures: A Dallas-Fort Worth Destination,* n.d.). Each of the 23 playgrounds would need to serve almost 29,000 visitors for everyone with a disability to utilize at least one piece of accessible equipment. This number does not include caregivers, family members, or friends who would be visiting with them. Given that the average number of annual visits by every citizen to a playground is 29 (Espada, 2016), each of the 23 would need to be able to serve 2,304 visitors with disabilities every day. It is imperative that more inclusive opportunities are created to ensure all can access and enjoy playgrounds and recreational facilities.

The extent to which people with disabilities in North Texas are underserved is an ethical issue, but there are also legal considerations. The goal of the Americans with Disabilities Act of 1990 (ADA) was to prohibit discrimination against people with disabilities and to ensure equity in rights and opportunities (Americans with Disabilities Act of 1990). It is not mandatory, though, for all existing playgrounds to meet code restrictions. While city facilities, public schools, and private schools must be ADA-compliant, churches and homeowners' associations are not governed by the same regulations (McGovern, 2015).

Public recreation facilities, like city parks and playgrounds, must follow certain specifications to ensure equitable opportunities and resources are available for all visitors. Playgrounds must have accessible pathways to and from parking areas and within the playground. The surfacing material and grade must allow ease of use by people with physical disabilities. There must be ramps and transfer stations that allow access to play equipment for people who use mobility aids (Americans with Disabilities Act of 1990). Accessibility is necessary and these accommodations are important, but they are not enough to ensure equitable experiences for all visitors. The law requires attention to critical mobility issues regarding equipment and entry, but it ignores sensory issues, sight and sound disabilities, developmental delays, and intellectual disabilities.

Parks need more than smooth surfaces and transfer stations for wheelchairs. These mobility accommodations provide access to some playground features, but they do not give independence to a child who wants the freedom to play on a piece of equipment without being lifted by a caregiver. Is it enough to allow those with disabilities access into a park while leaving them limited and dependent on others to engage and utilize aspects of the park? Playgrounds need more than just a swing that can accommodate a wheelchair—they need swings, slides, and towers that can accommodate wheelchairs, walkers, braces, and crutches. Is it enough to provide a person with disabilities one piece of equipment to enjoy while others are boundless? Playgrounds need more than accommodations for mobility challenges. They need quiet spaces, features with lights and sound, sensory elements, challenge courses, and open areas that can be used for all types of play. Parks need to innovate, create, expand, and provide opportunities for all unique individuals to play *together* so all are able to reap the positive benefits of play.

Community engagement is necessary for parks like PlayGrand Adventures to succeed, expand, and innovate. All-abilities playgrounds require significant space and funding, so there must be a perception of value to multiple community stakeholders for long-term support and sustainability. Building an all-abilities playground is an important first step in solving the problem of access to equitable places to play. Without engagement from the community in the form of visits, advocacy, and funding, an all-abilities playground will not thrive. For this reason, this study focuses simultaneously on the need for all-abilities playgrounds to support people with disabilities and the need for community engagement to support such playgrounds, specifically PlayGrand Adventures.

Purpose of the Study

The problem PlayGrand Adventures and other similar playgrounds across the nation strive to solve is one of inclusion. Currently, there are approximately 1200 inclusive playgrounds in the nation that exceed the accessibility standards required for ADA-compliance (M. Kaplan, personal communication, August 4, 2019). Building these spaces paves the way for social inclusion, but the playgrounds will not thrive and the movement toward inclusion could halt without community engagement in the form of visitors, supporters, and advocates; therefore, community engagement is critical.

This qualitative case study seeks to understand community engagement with PlayGrand Adventures all-abilities playground in Grand Prairie, TX. PGA (PlayGrand Adventures) is the first large-scale inclusive playground in North Texas. The master plan is ambitious and designed to be built over several years. In addition to providing an inviting place to play for underserved people with disabilities in the region, it connects

the community through an upcoming curriculum-design partnership with Grand Prairie

Independent School District. While the park is free to the public, it could eventually

contribute to the economy with MA's Café, a planned concessions area that will be

staffed by locals with disabilities (E. Garcia, personal communication, June 11, 2019).

This playground is a place for play, learning, connection, and opportunity that will serve

as a model for similar initiatives in other areas.

Understanding how the community engages with the first phase of PGA is

essential for making informed, effective decisions about future building phases,

partnerships, and engagement strategies. The purpose of this case study is to explore

community engagement at PlayGrand Adventures playground in Grand Prairie, Texas. At

this stage in the research, engagement was considered through the lenses of visitation and

donor behavior.

One central research question guided this qualitative case study: How do

community members engage with PlayGrand Adventures? This central research question

was informed by three sub questions. First, how do visitors utilize PlayGrand

Adventures? Second, how do donors support PlayGrand Adventures? Third, how does

community perception of PlayGrand Adventures drive engagement?

This study satisfied a need to determine how community constituents engage

with, utilize, and perceive PlayGrand Adventures. The results will inform design and

implementation strategy at PlayGrand Adventures to ensure future phases meet the needs

of the community for a place everyone can play. A larger, long-term opportunity exists to

raise awareness about the need for reasonable proximity and access to all-abilities

playgrounds across the nation, to create a roadmap for replication, and to fill a gap in research on the topic coming from the United States.

Theoretical Framework

Social Cognitive Theory, introduced by Albert Bandura in 1986, posits that (1) people learn from observing others, (2) learning may not result in a change in behavior, (3) cognition plays an important role in learning, and (4) people have control over their actions and environment to a certain degree. The environment is critical in this theory because learners react to what they observe in the environment: general conditions and immediate stimuli. They see that actions are vicariously or directly reinforced, ignored, or punished, and they learn what behaviors to enact based on the observed consequences. Perception affects behavior—people need to see a payoff to pay attention to something or perform a behavior. These perceptions and observations combine with a person's sense of self—self-efficacy, self-confidence, and self-concept—leading to reciprocal causation, or an interaction of the environment, the person, and the enacted behaviors (Merriam & Bierema, 2013). This theory is observable in both formal and informal environments, including school buildings, online learning environments, and even playgrounds.

Gibson's Affordance Theory (1979) underscores the importance of understanding how perceptions shape experiences. Affordance Theory in perception psychology explains how humans and animals interact with their environment.

> [O]rganisms are given, furnished, provided, or "afforded" support and resources by the environment so that the individual has an opportunity to behave in a particular manner. For example, the affordances of an edible substance, a smiling face, and a solid surface provide, respectively, the individual with the opportunities to eat, to engage in conversation, and to walk securely across an unfamiliar expanse. (Roeckelein, 2006, para. 1)

Gibson posits that while what the environment affords remains constant, perception can change depending on who is interacting with the environment. For example, something that is at eye level for an adult is not eye level for a child, creating a difference in how an object is actually viewed. A cliff face that is perceived as dangerous to a human might be perceived as a suitable path for a mountain goat. The perception of what the environment affords impacts the experience one can have in the environment (Gibson, 2015). Considering this theory is important in ensuring people with disabilities are afforded environments and experiences that are inclusive rather than exclusive.

Creating a playground with multiple features that bring all ages and abilities together affords an environment of equity and inclusion that surpasses the minimum standards required by federal law. This type of environment affords a perception that everyone can have fun playing together in comfortable, safe, and developmentally beneficial ways. This approach decreases the stigma often associated with disabilities and removes societal barriers and limitations imposed on a significant portion of the population. Through this study, multiple opportunities to engage are considered and the level of engagement is explored. If there is a perception of value to the community, the community will engage with PlayGrand Adventures.

Research Design

This study utilizes an illustrative qualitative case study design to deeply explore community engagement at PlayGrand Adventures including playground visitation and utilization, donor behaviors, and the role of perception in driving engagement. The qualitative case study methodology is appropriate for the specific focus on a sole location

with a small sample size. This narrow focus allows deeper exploration of multiple themes and perspectives utilizing a variety of data sources (Yin, 2017).

Data were collected anonymously via a questionnaire, semi-structured interviews, and on-site observations. The data were organized, coded, and categorized into themes using a procedure introduced by Creswell and Poth (2018). Triangulation, member checking, and peer debriefing mitigated the risk of confirmation bias. The themes were interpreted to address the research question, with specific recommendations presented for several common challenges facing all-abilities playgrounds such as funding and equipment utilization. While the recommendations are specific to PlayGrand Adventures, other inclusive playgrounds facing similar challenges could apply the findings to their own situations.

Anticipated Outcomes

The research questions in this study seek to thoroughly describe engagement with and perception of PlayGrand Adventures. Focusing on utilization and donor behavior addresses two key challenges faced by existing all-abilities playgrounds: securing funding for expensive equipment and ensuring the playground is engaging for typically-developing visitors without excluding visitors with disabilities. This information is beneficial for PlayGrand Adventures leadership as they expand the playground with new phases. Thoughtful, intentional design of playground zones and engagement opportunities benefit PlayGrand Adventures stakeholders. Finally, the recommendations can also inform playground design in other cities.

Recommendations and implications will be shared with Grand Prairie Parks, Arts and Recreation staff and board members via a written report. Findings will also be

presented in a video posted to social media, presentations at the Baylor Emerging

Research Conference and Southeastern Universities Graduate Research Symposium, and

an article in the CPED *Impacting Education* journal on Ed.D. research. Other

opportunities and audiences will be considered in consultation with PlayGrand

Adventures' leadership to support playground development in Grand Prairie and

surrounding cities.

Definition of Key Terms

Able-bodied: A term referring to people who do not have physical disabilities. This term

is not person-first language and will only be used in direct quotes (National Center on

Disability Journalism, 2018).

ADA: "Signed into law on July 26, 1990, the ADA is a wide-ranging civil rights law that

prohibits, under certain circumstances, discrimination based on disability. It affords

similar protections against discrimination to Americans with disabilities as the Civil

Rights Act of 1964, which made discrimination based on race, religion, sex, national

origin, and other characteristics illegal" (Southeast ADA Center, n.d., A section).

ADAAA: ADA Amendments Act of 2008; "The ADAAA, Pub. L. 110-325, overturns a

series of Supreme Court decisions that interpreted the Americans with Disabilities

Act of 1990 in a way that made it difficult to prove that an impairment is a

'disability'. The ADAAA made significant changes to the ADA's definition of

'disability' that broadens the scope of coverage under both the ADA and Section 503

of the Rehabilitation Act" (U.S. Department of Labor, n.d., para.1).

Accessible playground: "Accessible means to be reached or entered. Accessible

playgrounds are those that have gone beyond ADA to ensure that people using

11

wheelchairs can use the playground" (Accessible Playgrounds, n.d., What do all the different terms mean? section).

ADA-compliant playground: "This is a playground that meets all of the Americans with Disability Act regulations for playgrounds. It is the least you can do according to the law. We believe that ADA is not nearly enough to ensure that all kids can play" (Accessible Playgrounds, n.d., What do all the different terms mean? section).

Adventure playground: Playgrounds utilizing non-traditional materials, such as ropes, scrap construction materials, discarded tires, and tools to encourage children to freely build, create, and engage in risky play (Matthews, 1985).

Boundless playground: Another term for inclusive playgrounds that refers to a movement supporting barrier-free play (Roberts, 2005).

Disability: An actual or perceived mental or physical impairment that prevents or limits major life activities and basic biological functions (Americans with Disabilities Act of 1990).

Inclusive innovation: "The development and implementation of new ideas which aspire to create opportunities that enhance social and economic wellbeing for disenfranchised members of society" (George et al., 2012, p. 663).

Inclusive playground: "Inclusion is ensuring that people feel they belong, are engaged, and connected. Inclusive playgrounds are ones designed specifically to ensure that children of all abilities can play together. It goes way beyond wheelchair access. All-inclusive playgrounds are accessible, but not all accessible playgrounds are inclusive" (Accessible Playgrounds, n.d., What do all the different terms mean? section).

Intersectionalities: Originally coined to describe the experience of black women, the term

    has colloquially expanded to include the overlap of multiple identities (Crenshaw,

    1991).

Person-first language: Language that places the person first and the reference to a

    disability after the person (National Center on Disability Journalism, 2018).

Public accommodation: Private entities that affect commerce, including parks, zoos,

    amusement parks, or other places of recreation (Americans with Disabilities Act of

    1990).

Public entity: "Any department, agency, special purpose district, or other instrumentality

    of a State or States or local government," such as the City of Grand Prairie in this

    study (Americans with Disabilities Act of 1990).

Risky play: Play that is exciting, thrilling, and could lead to injury (Sandseter, 2009a)

Societal inclusion: "Inclusion means that all people, regardless of their abilities,

    disabilities, or health care needs, have the right to be respected and appreciated as

    valuable members of their communities, participate in recreational activities in

    neighborhood settings, work at jobs in the community that pay a competitive wage

    and have careers that use their capacities to the fullest, and attend general education

    classes with peers from preschool through college and continuing education"

    (Institute for Community Inclusion, n.d., para. 1).

Transfer stations: A system of platforms, steps, and supports that allow people to access

    elevated play structures with mobility devices; can be combined with ramps to

    increase accessibility (KaBOOM!, n.d.).

Typically developing: "Children who pass a set of predictable milestones at expected

times as they grow and develop" (Office of Early Childhood Development, 2014, p.

107).

Universal playground: For the purposes of this study, the term *universal playground*

shares a definition with *universal design*. "Universal design refers to a broad-

spectrum solution that produces environments that are usable and effective for

everyone" (Accessible Playgrounds, n.d., What do all the different terms mean?

section); "Also known as "inclusive design" and "design for all," this is an approach

to the design of products, places, policies and services that can meet the needs of as

many people as possible throughout their lifetime, regardless of age, ability, or

situation" (Southeast ADA Center, n.d., U section).

Conclusion

People with disabilities are often stigmatized, underserved, and left out of
experiences including opportunities to fully enjoy public playgrounds. All-abilities
playgrounds that provide equitable play opportunities for everyone are expensive to build
and maintain, require large amounts of space, and can be overly specific or fail to engage
all visitors (Siu et al., 2017; Stanton-Chapman et al., 2020). This qualitative case study
seeks to understand how the community engages with and perceives PlayGrand
Adventures all-abilities playground in Grand Prairie, Texas. A case study addressing
perception and engagement fills a gap in the literature and provides a foundation for a
guide to replication in other cities. The next chapter explores existing literature on
playgrounds and play, highlighting trends and opportunities for further study.

CHAPTER TWO

Literature Review

Portions of this chapter are accepted for publication as Bunn, T. D., Howell, L., &

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at PlayGrand Adventures all-abilities playground. *Impacting Education: Journal on*

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Introduction

Children who play benefit from active, creative opportunities for social,

emotional, and physical development (Buchanan & Johnson, 2009; Deaver & Wright,

2018; Menconi & Grohmann, 2018; Siu et al., 2017; U.N. Commission on Human

Rights, 1990; Zahl et al., 2014). Unfortunately, most public playgrounds are not equally

accessible by all children, especially those with disabilities. Federal law stipulates that

people with disabilities must have access to the same quality of public services as people

without disabilities, yet the same law sets accessibility standards for people with

disabilities that are far below what the general population can enjoy (Americans with

Disabilities Act of 1990; ADA Amendments Act of 2008). Allowing this inequity to exist

does a disservice to the almost one in five Americans living with physical and cognitive

disabilities, an already chronically underserved and disadvantaged group of people

(Brault, 2012).

This chapter begins by describing the benefits of play. Next, a review of federal

law elucidates requirements, followed by a comparison of different types of playground

designs and features. An explanation of barriers to building inclusive playgrounds

follows, including fiscal considerations, prioritization of efficiency over inclusion, the role of equipment manufacturers in raising awareness, the disproportionate amount of attention on accommodations for certain disabilities, and the lack of scholarship on the topic. Finally, examples of corporate social responsibility, school partnerships, and community education initiatives suggest strategies to engage the community.

This chapter provides evidence for an ethical and legal dilemma present on our nation's playgrounds. With a growing footprint in this country, universal playgrounds offer a solution to the inadequate accommodations, but there is little scholarship on the topic. Research related specifically to inclusive and universal playgrounds in the United States is lacking compared to the rich academic discourse on play, inclusion, and community engagement in general (Stanton-Chapman et al., 2018, 2020; Stanton-Chapman & Schmidt, 2019). Studies that replicate implementation of successful designs, raise awareness of problems and solutions, develop a framework for robust community engagement to normalize inclusion, or advocate for policy change could fill this gap.

The Benefits of Play and Playgrounds

All children deserve the right to reap the developmental benefits of play. Article 31 of the United Nations Convention on the Rights of the Child states that members should "recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts" (1990). A combination of structured play, free play, indoor play, and outdoor play can lead to better learning outcomes, increased attention and focus, healthy bone and cardiovascular development, improved sleep, and a deeper understanding of the environment, nature, and science (National Resource Center, 2018).

16

Without opportunities to play independently and with others, children lose opportunities for typical, age-appropriate development.

When children play, the brain creates neural pathways that help them process emotions and gain executive functioning (Brown, 2010; Panksepp, 2007). Play is critical for developing happy, creative, well-adjusted adults who innovate and sustain positive relationships (Brown, 2010). By participating in team play, children develop teamwork, empathy, and respect while learning to follow rules and help others (Siu et al., 2017). Children need to play in different environments to develop emotional intelligence, social skills, motor coordination, problem-solving, and abstract thinking (Siu et al., 2017; Yılmaz & Soyer, 2018).

Playgrounds provide a place for people to engage in different types of play that can introduce new skills and experiences. Children develop social skills like patience and problem-solving while playing together on playgrounds. Academic lessons that take place on outdoor playgrounds build cognitive and social skills including inquiry, observation, and motor skills like digging and climbing. Learning at a playground increases feelings of well-being in children and provides an opportunity to make connections between curriculum and the natural world in ways that are not possible in a traditional classroom (Deaver & Wright, 2018).

In addition to social, emotional, and academic development, playgrounds promote healthy physical development. When children see their peers engaged in physical activity on a playground, they are more likely to engage in physical activity themselves (Reimers et al., 2018). Playgrounds provide a space for children to get outside, run, jump, climb, and interact with one another. "Playgrounds should offer a wide variety of play facilities

and provide spaces for diverse play activities to respond to the needs of large numbers of different children and to provide activity-friendly areas enabling their healthy development" (Reimers & Knapp, 2017, p. 1). According to Reimers and Knapp, these spatial features impact physical activity more than other predictors, including cleanliness, aesthetics, quality, division of features, or playground size (2017).

Children are curious, and playgrounds provide a space for them to take calculated risks that develop their decision-making skills, judgment, and understanding of consequences. Play is fun, engaging, and interesting, and children enjoy activities that raise their stress levels and induce a bit of fear. Risky experiences help them build flexibility, resilience, and confidence. Playgrounds provide an important facility for children to practice risk compensation and test their boundaries. Climbing, spinning, play fighting, and moving fast all contribute to this growth and development opportunity (Gill, 2018; Sandseter, 2009a, 2009b).

Benefits of Play for People with Disabilities

Without equitable access to a full array of play spaces and playground equipment, people with disabilities are unable to experience the same valuable opportunities to grow, learn, and interact socially as their peers. A fully-accessible and usable playground with appropriate equipment and structures provides greater opportunities for family and caregiver engagement, social inclusion, and promotion of physical activity (Zahl et al., 2014). Denying access to equitable play experiences and opportunities, in both quantity and quality, is denying children with disabilities the opportunity for development and social belonging.

Opportunities to play help children with disabilities develop academically, socially, and emotionally. A group of Turkish children with intellectual disabilities experienced positive growth in social and academic areas after participating in a 24-week physical education and play program (Yılmaz & Soyer, 2018). The study found statistically significant differences between treatment and control groups in interpersonal relationships, self-control, and academic skills, noting positive decreases in aggressive-nervous and destructive behaviors. "Based on these findings, regular physical education and playing practices have an impact on social competence and negative social behavior of individuals with mild mental deficiency" (Yılmaz & Soyer, 2018, p. 6). More specifically, children with autism respond positively to play-based activities focused on improving their engagement peers without autism. After receiving social skills lessons and prompting procedures before engaging with other students in naturally social environments, like the school playground, students with autism improved social engagement behaviors including verbal interaction and active listening (Hartzell et al., 2015).

Children with disabilities sometimes need to be taught how to play with others (Buchanan & Johnson, 2009; Movahedazarhouligh, 2018). Preparing students with disabilities to interact with others is an important step in empowering them to advocate for their inclusion. "Play affords contextually relevant instructional opportunities for acquiring, maintaining, and generalizing other skills" (Movahedazarhouligh, 2018, p. 596). At an inclusive playground, social and play skills can be taught to both students with and without disabilities to inspire reciprocal inclusion, empathy, and understanding.

19

Teaching children to play with others also happens at home. Mothers of toddlers with disabilities can be protective at home, modeling a nurturing, socially acceptable style of play in hopes their children transfer the home play experience to opportunities out in the world. Unfortunately, this transfer does not always occur. Children with disabilities often choose not to play with others in public, preferring the comfort and safety of playing at home with familiar people. In other cases, children with disabilities play in unconventional ways that are unfamiliar to children without disabilities. Both scenarios lead to exclusion (Buchanan & Johnsen, 2009).

> In order for these children to be included in early childhood settings where play is the context for social connection, they *must* learn to play. What happens to play when play becomes another deficit in a child's development and a cause for intervention? For children to be treated equitably in inclusive settings, they not only need to play in conventional ways, but they need to "play well" to attract and sustain the engagement of their peers. (Buchanan & Johnson, 2009, pp. 57–58)

Advocacy for the right for all children to play is crucial, but people with disabilities must be prepared to engage socially when that right is received. Inclusive playgrounds are the ideal setting for this type of intentional, focused preparation for children with disabilities and the parents, caregivers, teachers, and other stakeholders helping them develop.

The Difference Between Accessible and Inclusive Playgrounds

While federal law defines discrimination against people with disabilities, there is less clarity around the terminology of equity and inclusion. Historically, accessibility on playgrounds has been determined by a ratio of standard equipment to equipment adapted for use by people with mobility differences. This section explains the federal requirements and describes types of playgrounds that meet and exceed legal standards.

Understanding Federal Law

The Americans with Disabilities Act of 1990 provides baseline standards of accessibility for people with disabilities, including parks, playgrounds, and recreational facilities, but stops short of requiring fully inclusive design (Americans with Disabilities Act of 1990). The law also defines discriminatory actions but was not historically enforced to the benefit of people with disabilities. The law was amended on September 25, 2008, after several Supreme Court decisions sided with employers, resulting in the ADA Amendments Act of 2008 (ADA Amendments Acts of 2008).

> Congress stated in its introduction to the ADAAA that those decisions limited the rights of persons with disabilities so the ADAAA reversed those decisions by broadening the law. Specifically, the ADAAA changed the definition of the term "disability" by clarifying and broadening it - which, in turn, increased the number and types of persons protected under the ADA and other federal nondiscrimination laws. (Georgetown Law Library, 2021, para. 2)

The cases interpreted were all based on employment issues, but the amendments impacted both public and private recreation facilities, including playgrounds. The focus shifted to discrimination based on diagnosed or perceived disabilities, removing the burden of proof of a disability from the victim of discrimination. This distinction put the attention on eliminating discrimination, not forcing a victim to prove they need assistance for a disability.

In Title 42, Chapter 126, Section 12101, Congress acknowledged a persistent issue impacting playgrounds and public access to critical services, including recreation. Discrimination appears as architectural barriers, failure to modify existing structures and spaces, overprotective rules and policies that lead to exclusion, and inferior services, programs, and opportunities for people with disabilities. While perhaps not intentional, this message of isolation and separation echoes what is found in census data, polls, and

scholarship: people with disabilities have an inferior status and continue to be socially

disadvantaged (ADA Amendments Act of 2008).

The ADAAA goes on to indicate the initial purpose of the Americans with

Disabilities Act of 1990. Congress found that,

> (1) in enacting the Americans with Disabilities act of 1990 (ADA), Congress intended that the Act "provide a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities" and provide broad coverage;
> (2) in enacting the ADA, Congress recognized that physical and mental disabilities in no way diminish a person's right to fully participate in all aspects of society, but that people with physical or mental disabilities are frequently precluded from doing so because of prejudice, antiquated attitudes, or the failure to remove societal and institutional barriers. (ADA Amendments Act of 2008, §2)

Calling out the reasons for prejudice gave context to the need for protection-based laws.

The language is clear and strongly in support of anti-discrimination measures.

The playgrounds described in this study fall under the categories of "public

accommodations" when they are private entities affecting public commerce or "public

entities" when under the authority of state or local government (ADA Amendments Act

of 2008). The latter applies to PlayGrand Adventures, the subject of this study, as part of

the City of Grand Prairie Parks, Arts, and Recreation Department. In these types of

spaces, discrimination is defined as

> (1) A failure to make reasonable modifications in policies, practices, or procedures, when such modifications are necessary to afford such goods, services, facilities, privileges, advantages, or accommodations to individuals with disabilities; (2) a failure to take such steps as may be necessary to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently than other individuals because of the absence of auxiliary aids and services; and (3) a failure to remove architectural barriers, and communication barriers that are structural in nature, in existing facilities. (Americans with Disabilities Act of 1990, §12812)

The law prohibits direct and indirect discrimination against individuals with disabilities through denial of services or resources available at public entities. Participation must be available in the least restrictive appropriate environment, and if it is deemed a facility or opportunity, must be separate. The accommodations are required to be equal to the experience provided for individuals without disabilities (ADA Amendments Act of 2008). Yet, even with an amended law that demands accessibility and support inclusion, people with disabilities are restricted from fully engaging with playgrounds.

Moving Beyond Compliance

Compliance with ADA is a steppingstone to inclusion. For an environment to be accessible, it must be designed to provide access to all people. When the design does not support accessibility, accommodations should be made to allow for full participation. The environment affords accessibility, but the people in the environment invite inclusion.

> Disability inclusion means that individuals with disabilities have the opportunity to participate in every aspect of life to the fullest extent possible. These opportunities include participation in education, employment, public health programming, community living, and service learning. Including people with disabilities in everyday activities and encouraging them to have roles similar to their peers who do not have a disability is important for building the capacity of youth, especially youth with disabilities, and making society more inclusive for all individuals. (youth.gov, n.d., para. 1)

Making society more inclusive requires the participation of people with and without disabilities. Inclusion for people with disabilities requires accessible design, accommodations, adherence to the law, and full commitment to inviting others to fully engage in social opportunities.

Neither ADA nor the ADA Amendments Act of 2008 demand full inclusion at playgrounds. For example,

A playground built to the Americans with Disabilities Act (ADA) guidelines will only have 50 percent of its elevated decks accessible, mostly through transfer decks. This level of accessibility forces a person in a wheelchair to abandon his or her equipment in order to participate. (Roberts, 2005, p. 49)

Requiring only 50 percent accessibility sends a message that people with disabilities only deserve 50 percent of the experience people without disabilities deserve. This messaging is problematic.

The New England ADA Center detailed in a checklist what is needed for a playground to be considered ADA-compliant (New England ADA Center, 2016). The document contains items related to transfer stations, the amount of clearance required around play structures and equipment, and accessibility of routes. One item put forth standards for surfaces and included a graphic to show the minimum number of ground-level components required for every elevated component. The numbers indicated that people who need ground-level components are legally allowed to have fewer options available (Table 2.1). Worse than this inferior accommodation, there is not a single mention of accommodations for people with non-physical disabilities. On the checklist, those requirements do not exist. The law purports to eliminate discrimination by requiring equal opportunities, yet the guidelines allow for an inferior experience. Some playground designs exceed this minimum standard by allowing people with mobility disabilities to access at 70 percent of playground features without abandoning their equipment, and by including features that address less visible sensory, intellectual, or developmental disabilities (Roberts, 2005; Stanton-Chapman & Schmidt, 2019).

Table 2.1

Ground-Level Requirements Based on Elevated Play Components

Number of elevated play components provided	Minimum number of ground-level play components required to be on an accessible route	Minimum number of different types of ground-level play components required to be on an accessible route
1	Not applicable	Not applicable
2–4	1	1
5–7	2	2
8–10	3	3
11–13	4	3
14–16	5	3
17–19	6	3
20–22	7	4
23–25	8	4
More than 25	8 + 1 for every 3 over 25	5

Note: Adapted from the New England ADA Center, 2016.

Types of ADA-Compliant Playgrounds

When considering all legal requirements set forth by ADA, three different types of playground designs emerge: accessible, inclusive, and universal. Each of the aforementioned playground types meets or exceeds the minimum standard of accessibility required by ADA. Universal design was determined to be the best design for the most children based on the availability of engaging accommodations and opportunities for socialization (Stanton-Chapman & Schmidt, 2019). A comparison of features is depicted in Table 2.2.

Accessible playgrounds include access ramps and transfer stations, a balance of ground-level and elevated features, and barrier-free entrances and pathways (Stanton-Chapman et al., 2020; Stanton-Chapman & Schmidt, 2019). An accessible design only increases opportunities for people with mobility-based physical disabilities, ignoring children with speech and language impairments, autism, developmental delays,

intellectual disabilities, or hearing and vision disabilities, which each affect between one

percent and 34 percent of students (National Center for Education Statistics, 2019).

Figure 2.1 depicts an accessible playground.

Table 2.2

Types of Playgrounds and Their Characteristics

Playground Characteristics	Types of Playgrounds		
	Accessible	Inclusive	Universal
Ramps leading to upper decks and/or provides transfer stations	X	X	X
Provides ground level activities and elevated activities, if applicable	X	X	X
Play equipment challenges children at different ability levels		X	X
Play equipment is of appropriate size and space. Children can approach, reach, manipulate, and use the equipment regardless of body size, posture, or mobility			X
Provides no barriers to entrance or along pathways of the play structure	X	X	X
Provides extra-wide travel routes		X	X
Provides safety surfacing that allows children with mobility devices access to visits all areas of the playground		X	X
Design does not disadvantage or stigmatize and group of users			X
Design accommodates a wide range of individual preferences and abilities			X
Design is easy to understand regardless of the user's abilities			X
Design can be efficiently and comfortably used with little fatigue			X

Note: Reprinted with permission from Stanton-Chapman and Schmidt, 2019, p. 511.

Inclusive playgrounds go beyond accessible playgrounds by including safety

surfacing, wider routes for mobility devices, and challenging elements for all ability

levels. These accommodations allow children to be in close proximity to their peers, but

they are expensive, sometimes tailored specifically to an individual child in a community, and can be boring for children without disabilities (Stanton-Chapman et al., 2018). Figure 2.2 depicts an inclusive playground.

Figure 2.1. Example of accessible playground design. People with disabilities can access some features but do not have full independence. From Stanton-Chapman and Schmidt, 2019. Reprinted with permission from the authors.

Universal playgrounds further extend accessibility and opportunity by ensuring play equipment is appropriately sized and spaced for visitors with various postures and mobility levels, incorporates a variety of interests and preferences, and reduces stigmatization by encouraging visitors to play on the same equipment together. Use of equipment, whether traditional or specialized, is easily understood at universal playgrounds, and an efficient design reduces unreasonable fatigue and discomfort for people with disabilities (Stanton-Chapman & Schmidt, 2019). When compared to an inclusive playground, more children played for a longer duration at a universal playground (Stanton-Chapman et al., 2020). Figure 2.3 depicts a universal playground.

Figure 2.2. Example of inclusive playground design. People with disabilities can access some features but do not have full independence; various ability levels are represented. From Stanton-Chapman and Schmidt, 2019. Reprinted with permission from the authors.

Striving toward universal design is a worthwhile goal. It should be noted that terminology is not standard in the field and what one designer considers inclusive another might consider universal. As more scholarly research is conducted and frameworks are developed, standardized language and expectations will limit confusion and support a common goal of inclusion for people of all disabilities in public spaces.

Figure 2.3. Example of universal playground design. People with disabilities have increased independence; various ability levels are represented. From Stanton-Chapman and Schmidt, 2019. Reprinted with permission from the authors.

Barriers to Creating Intentionally Inviting Play Spaces

There are several barriers to creating engaging playgrounds for all people including cost, competing societal priorities, and impoverished dialogue. Accessible features are expensive, and they often require more space than traditional playgrounds. Further, cities and citizens must be willing to embrace the work of building inclusive playgrounds, and apathetic attitudes impede progress. A gap in objective academic research on inclusive playgrounds in the United States exacerbates a lack of awareness about the problem and potential solutions. Much of the information available is limited or one-sided, coming from news articles focused on one point of view or from for-profit playground equipment manufacturers.

Fiscal Considerations

Inclusive playgrounds require a higher capital investment than traditional playgrounds, depending on the types of surfaces and equipment utilized. As early as 1996, the cost of inclusive playgrounds ranged from $65,000 to more than $1,000,000 (Roberts, 2005). In the current market, the budget for a large inclusive playground could reach $10,000,000 (PlayGrand Adventures, n.d.). Table 2.3 lists prices of standard playground equipment compared to their inclusive counterparts. Prices listed do not include installation or maintenance.

Existing inclusive playgrounds employed multiple strategies for raising funds. Taylor's Dream in Indiana began with $10,000 raised through community and school fundraisers, then completed the budget with grants from the City of Fort Wayne and gifts from Pepsi and CVS, both of whom have a local corporate presence (Zahl et al., 2014).

29

Table 2.3

Playground Equipment Cost Comparison

Traditional Playground			Inclusive Playground		
Equipment	Cost	Source	Equipment	Cost	Source
Composite Structure	$94,922	Play & Park Structures, 2021	Composite Structure with Ramps	$138,606	Play & Park Structures, 2021
Large Sandbox	$630	AAA State of Play, 2021	Elevated Sand Table	$1,365	AAA State of Play, 2021
Swing Set	$675	AAA State of Play, 2021	Wheelchair Swing	$833	AAA State of Play, 2021
Merry Go Round	$800	AAA State of Play, 2021	Accessible Merry Go Round	$7,019	AAA State of Play, 2021
Slide	$1,637	AAA State of Play, 2021	Avalanche Inclusive Slide	$4,606	Miracle Recreation Equipment, 2019
Monkey Bars	$779	AAA State of Play, 2021	Wheel Thru Arcade	$892	AAA State of Play, 2021
Wood Chip Surface	$1 per square foot	KaBOOM!, 2019	ADA Surface	$5-$8 per square foot	KaBOOM!, 2019

In addition to providing grants to build the playground, Pepsi and CVS partnered with Taylor's Dream through the City of Fort Wayne's "Adopt a Playground" program. Through this initiative, both partners committed to keeping the playground clean, safe, and inviting while raising awareness about the importance of unstructured play (City of Fort Wayne Parks & Recreation, n.d.). Another playground, Shane's Inspiration in Los Angeles, began with very little funding, but eventually raised $850,000 through galas, 5k races, golf tournaments, and grants from local philanthropy groups; they have continued these fundraising activities to maintain the playground and advise others on how to build their own. Similarly, Jonathan's Dream in Connecticut took two years to raise $350,000

for its design and continues raising funds through programming, parties, and donations on their website (Inclusion Matters by Shane's Inspiration, 2019; Jonathan's Dream, n.d.; Roberts, 2005).

Raising the necessary amount of capital to build inclusive playgrounds requires time, community engagement, and dedicated champions for the cause. Potential donors and volunteers are more willing to engage when they see the value of the initiative and understand the benefits to the community (Swanson, 2013). Raising the funds necessary can take multiple years and partners, but every conversation with a potential funder increases awareness, opens lines of communication, and sows the seeds of advocacy. It is important that playground builders begin connecting with their community constituents early in the process to build engagement.

Prioritization of Efficiency Over Inclusion

Traditional playgrounds across the world feature similar designs that include easily maintained, mass-produced features. They are familiar, perceived as safe, and can fit into compact spaces. A study of inclusive playgrounds in Hong Kong noted the sameness of public playgrounds and the reliance on efficiency of design and maintenance.

> [P]laygrounds had a 'fast food' standardized characteristic. The play contents were homogenous and repeated. The playground design did not focus on children and their rights to play. Instead, having less safety issues, less complaints, easier management and maintenance were the ultimate goals of designing playgrounds. (Siu et al., 2017, p.171)

This focus on efficiency leads to playgrounds that are deemed inclusive based on a few features, such as smooth surfaces and the availability of ramps. However, while technically accessible, these playgrounds are not inclusive. They lack signage and aids

31

for caregivers and, while there are some games for hearing, vision, and cognitive development, the composite structures do not include proper accessibility for inclusive play (Siu et al., 2017). Figure 2.4 compares what is considered an accessible seesaw to a truly inclusive seesaw. The accessible seesaw (left) does not differ much from traditional seesaws. The inclusive seesaw allows independent entry and utilization by people who use mobility devices via a wide ramp connecting the ground directly to the seating area. The smooth surface around the traditional seesaw allows people who use mobility devices to get to it, and it is low enough to the ground for a caregiver to lift a child out of a wheelchair and onto the seesaw, but a person with a physical disability is not able to play on the seesaw independently (Siu et al., 2017).

Figure 2.4. Comparison of accessible and inclusive seesaws. The accessible seesaw (left) does not differ much from traditional seesaws, but the inclusive seesaw allows independent entry and use by people who use mobility devices. From Siu et al., 2017. Photos are available for reprinting through a creative commons license.

This same issue of accessibility by technicality is seen in parks in North Texas and across the United States and includes other playground equipment, like slides and swings, that are accessible but do not invite independent play.

> Removing physical barriers promotes accessibility, but doesn't necessarily improve social inclusion. Providing greater physical access within the play environment without creating similar social access can actually emphasize a child's disabilities, rather than their capabilities. Perhaps only one in ten children who use wheelchairs and other mobility aids are able to use a standard transfer system. And then they may be able to move around the equipment only by crawling. Too often, children with disabilities who can access equipment find themselves isolated because the 'fun stuff' is all at higher levels, beyond their reach. (Christensen & Morgan, 2003, 9. 51)

Access without inclusion does not afford an equitable opportunity for social belonging or physical, cognitive, and emotional development to children with disabilities. PlayGrand Adventures strives to be an inclusive space where people of all ages can experience engaging play together.

Inclusive playground designers must think about accessibility in multiple ways for an experience to be truly inclusive and not just accessible. Many existing inclusive playgrounds include sand tables in their design that bring the traditional sandbox up to the height of a wheelchair. This design allows people who use wheelchairs to play alongside others (Roberts, 2005). Areas for different age groups allow developmentally appropriate design throughout playgrounds by designing with age in mind rather than ability level (Zahl et al., 2014). Sensory elements, such as paths with stones that light up and play sounds when engaged, engage children with hearing and vision disabilities, and balancing activities benefit people with Down syndrome (Roberts, 2005).

> Boundless playgrounds will many times include elements such as stepping blocks placed next to a ramp to allow children who are able bodied and with special needs to play together. At a boundless playground in Los Angeles, creators painted a pathway to look like a racetrack—children in wheelchairs will race their able-bodied friends who are using scooters or skates. (Roberts, 2005, p. 50)

These designs were meant to create an environment where children with and without disabilities, parents with and without disabilities, and caregivers can all play together.

Another barrier to building inclusive playgrounds is that playground designers and city officials fear litigation from injuries. Designs that prioritize efficiency, safety, and familiarity cater to parents' desires to protect their children from every potential playground injury, keeping them as safe as possible rather than "as safe as necessary" (Brussoni et al., 2012). Pre-packaged, tested designs mitigate the risk of lawsuits (Siu et al., 2017). However, research indicates children are more careful when they have freedom and autonomy to seek out risky play opportunities (Brussoni et al., 2012; Gill, 2018; Sandseter, 2009b).

A current movement towards "adventure playgrounds" advocates for appropriately risky opportunities for children to swing, build, crawl, and create in spaces that do not look like standard playgrounds. The variety of materials, surfaces, and textures spurs creativity and imagination. Some adventure playgrounds only allow parents in certain areas, leaving children to play independently under the supervision of highly trained staff members (Misra, 2018). Children with disabilities need opportunities for autonomy, personal responsibility, and proving their own capabilities to avoid disrupting the developmental cycle of building self-respect and respect for others (Bundy et al., 2015). There is room for a sense of adventure and freedom in inclusive playground design if society is willing to reject the status quo.

The Role of Equipment Manufacturers in Raising Awareness and Creating Solutions

Commercial playground suppliers continue to expand the types of equipment available for purchase, innovating and exceeding the standards set by ADAAA. While there is capital interest and a financial bottom line to consider, several playground equipment companies continue to raise awareness of the need for inclusion while raising

awareness about their products. Before showing any of their products available for purchase, Miracle Recreation Equipment's brochure states on the first page why inclusion is necessary: "Every child deserves to feel exhilarated and experience new sights, sounds, and textures. It is important to design a playground that not only meets ADA requirements but also provides engaging experiences for children of all abilities" (Miracle Recreation, 2019, p. 1). Another corporation, No Fault, makes ADA-compliant surfaces and uses their platform to raise awareness about the differences between accessibility and inclusion, stating on their website, "[A] wheelchair glider somewhere on the playground makes the playground 'accessible.' Modified swing sets where children can swing without leaving their wheelchairs and remain in the same play area as everyone else might make the playground truly *inclusive*" (No Fault, 2018, para. 14). Several manufacturers link to ADA guidelines, explain the benefits of inclusive play, and share statistics from the National Center for Education Statistics and Center for Disease Control to give context to the need for inclusive equipment (AAA State of Play, 2019; Little Tikes Commercial, 2019; Miracle Recreation Equipment, 2019; Play & Park Structures, 2019). Some create products in partnership with engineers, medical professionals, and the nonprofit organizations building inclusive playgrounds (Little Tikes Commercial, 2019; Miracle Recreation Equipment, 2019; Playworld, 2019). It is important for corporations to take a stand on this issue, create products that solve the problem, educate consumers, and demonstrate the importance of partnership.

As for-profit corporations, even with the best of intentions, the goal is to maximize profits. The legal requirements set minimum standards that are then interpreted by manufacturers. As important as it is for manufacturers to meet the need for inclusive

equipment, it is also important to acknowledge the need for scholarship and empirical research. "It is imperative that playground equipment be empirically tested, rather than to simply accept that it is the best equipment for children and families because the playground manufacturers say so" (Stanton-Chapman & Schmidt, 2019, p.8). Schools, public parks, and other playground providers should do their due diligence when designing playgrounds and selecting equipment to ensure the highest number of children and ability levels have opportunities for equitable, appropriate, inclusive play.

Lack of Attention on Intellectual Disabilities and Adults with Disabilities on Playgrounds

On public playgrounds, discrimination against people with any disability violates the law, but more attention is given to children with physical disabilities than children with intellectual disabilities or adults with disabilities. Of the more than six million children receiving special education services, one percent have an orthopedic impairment, 35 percent have a learning disability, 21 percent have a language impairment, eight percent have autism, and 13 percent have other developmental delays or intellectual disabilities (National Center for Education Statistics, 2019). Physical disabilities are more prevalent as people age, increasing from 4.3 percent in adults ages 18 to 44 to 45.5 percent in adults 75 years of age and older (Blackwell & Villaroel, 2018). Still, most of the accommodations readily available target physical disabilities in children.

Because intellectual disabilities are less visible than physical disabilities, they have not received the same level of theoretical, cultural, or social attention. "[T]heory and academic discourse hide nuances related to cognitive disabilities from theoretical consideration… It is possible, then, that disability scholarship has – inadvertently, perhaps – aided in constructing a homogenized view of disabled populations by

prioritizing the exceptional physical body" (Fraser, 2018, p. 37). This biased

prioritization is reflected in the specific federal requirements for equitable mobility

accommodations for people with physical disabilities versus a vague nod to the illegality

of discrimination against people with intellectual disabilities as part of the whole category

of people with disabilities (Americans with Disabilities Act of 1990; ADA Amendments

Act of 2008).

Focusing playground accommodations on physical disabilities for children,

without providing equipment for adults with or without disabilities, prevents parents,

grandparents, and caregivers from playing with the children in their care. This inhibits

healthy child development and further stigmatizes adults with disabilities (Frederick,

2017; Jones, 2004; Milteer et al., 2012; Runcan et al., 2012). Parents and caregivers play

a critical role in guiding and teaching children with disabilities as they develop socially,

emotionally, intellectually, and physically. Parents need to play with their children, not

just be near them while they play, to form secure bonds, show children they are valued,

and increase the likelihood children will form positive relationships with their peers as

they grow (Jones, 2004; Milteer et al., 2012; Runcan et al., 2012). In addition to benefits

for children, providing opportunities for adults with disabilities to play with their children

and grandchildren eliminates barriers to social engagement, normalization, and defiance

of negative stereotypes (Frederick, 2017).

The Need for Scholarship

In the cases of Taylor's Dream, Shane's Inspiration, and Jonathan's Dream,

awareness of and interest in inclusive playgrounds grew as the parks were built (Roberts,

2005; Zahl et al., 2014). *Time* magazine published a story on Jonathan's Dream that led

to hundreds of requests for help in building similar playgrounds, and the creators of Shane's Inspiration received so many inquiries they created a foundation to help others build inclusive playgrounds in their cities (Roberts, 2005). Grassroots efforts and word-of-mouth marketing have been effective, garnering attention from local media and playground equipment manufacturers, but there is a need for more academic research to deepen understanding of how inclusive playgrounds create opportunities for people with disabilities to thrive. Inclusive playgrounds have existed since at least 1996, yet there is little scholarship on the impact of inclusive playgrounds coming from the United States. The knowledge transfer that comes from academic research leads to technology, service, and product innovations that potentially disrupt the market and provide solutions to societal inequities (Boldureanu, 2015). Critical discourse is necessary for raising awareness, understanding options, and insisting on inclusive – not just accessible – opportunities and resources for people with disabilities.

Opportunities for Community Engagement and Partnership

Partnership efforts go beyond funding to include educational programs, corporate social responsibility, and other engagement methods. Community engagement strategies are prevalent in higher education and the healthcare industry; however, scholarship is lacking in other industries. Opportunities exist to develop a community engagement framework for parks and recreation departments and public recreation facilities. Creative opportunities for engagement and partnership have the potential to build greater awareness and increase the utilization of new and existing inclusive playgrounds.

Corporate Social Responsibility

One opportunity for community engagement stems from corporate social responsibility and inclusive innovation. In the spirit of bringing opportunities to the disenfranchised, "bridging access involves implementing new forms of partnerships and networks that connect hitherto disconnected individuals with opportunities" (George et al., 2012, p. 676). Partnerships might include funding and volunteering opportunities, as demonstrated by Pepsi and CVS's involvement with Taylor's Dream in Indiana (Zahl et al., 2014), but opportunities could also extend into mentorships, internships, and product and opportunity development. The field of inclusive innovation lacks a framework, leaving more questions than answers about how to be effective. Opportunities exist for future study and early adoption of innovative principles that positively impact society through partnerships and knowledge transfer. "The basic conditions of innovation depend in practice on local needs and resources that likely vary considerably. The extension of business models to enfranchise individuals and communities involves considerations that may not be central to established models of innovation" (George et al., 2012, p. 673). Partnering early ensures proper affordances are considered and the needs of the community can be met, providing proof of the value and mutual benefits that encourage engagement from multiple stakeholders (Swanson, 2013).

School Partnerships

School and playground partnerships engage multiple community stakeholders to develop a shared purpose for inclusive playgrounds is collaborating with the end-user by speaking directly with children about what they want in their playgrounds. High Hopes inclusive playground in Lancaster Park, Maryland did this by connecting with children

attending summer camps and holding design parties (Roberts, 2005). A similar idea

connected elementary school and university students in Italy, where playgrounds suffered

from the same cookie-cutter standardization found in Hong Kong (Menconi &

Grohmann, 2018; Sui et al., 2017). Using Affordance Theory (Gibson, 2015) and the

theories of Dewey (1938) and Vygotsky (1978) as a framework, the researchers designed

a collaboration that included multiple workshops in which university students collected

spontaneous, unfiltered visions from the elementary schoolchildren. Researchers

identified, combined, and pared down themes over the school year with the elementary

students' help. The result was a design for a playground that met the needs of the end-

user (Menconi & Grohmann, 2018). The method was complex but transferable and

echoes the principles of Problem-Based Learning in education (Kilbane & Milman,

2013).

An opportunity exists for continued study on the link between community and

school partnerships and awareness of the need for inclusive playgrounds. This fact is

noted by the parents involved with Shane's Inspiration in Los Angeles. After getting

many requests for assistance in replicating their inclusive playground, these individuals

created a nonprofit organization, also called Shane's Inspiration, to provide

programming, transportation, and educational services in support of continuing the

inclusive playground movement. Their partnership with Los Angeles schools is offered as

a model to be replicated and studied in other school districts.

> The program asks able-bodied children to write their feelings down about children
> with disabilities. They are then paired with a special needs friend, play together
> on a boundless playground for two hours, and are then asked to discover what
> they can about their buddy. They return to the classroom and complete another
> writing assignment on their experience… In the first writing task, the participants
> of one classroom wrote the word "sad" about children with disabilities 90 times.

In the writing assignment proceeding the play time, the word was only used five times." The experience on the playground helped shift bias from seeing disabilities as sad to seeing people with lives and something to share. (Roberts, 2005, pp. 51–52)

In addition to raising awareness about the playground, examples like the one above open minds and humanize a systemically stigmatized population. Meaningful, intentional lessons and partnerships pave the way for increased empathy and inclusion.

Community Education and Utilization Initiatives

Education initiatives for caregivers, teachers, parents, playground staff, and the community at large must be implemented for inclusive playgrounds to flourish and for community members with disabilities to experience full support and inclusion. Maintenance staff at existing inclusive playgrounds learned how to care for the playground equipment and surfaces, in turn broadening their understanding of the need for such accommodations (Roberts, 2005). This knowledge and understanding should be transferred to park visitors to ensure proper utilization. Without proper signage or guidance, caregivers often misuse inclusive equipment, leaving the children in their care without the full experience available (Siu et al., 2017). To mitigate the risk of misuse, the designers of Taylor's Dream included therapy guides in each playground pod for caregivers and friends to understand how to properly utilize the equipment, including ideas for play, user cues, and developmental tasks (Zahl et al., 2014). These types of guides would also benefit teachers wishing to take their classes to inclusive playgrounds for experiential learning opportunities. Taking these guides a step further, partnering with schools to provide professional development to teachers on how to best utilize inclusive playgrounds as learning centers could lead to a deeper understanding of how to engage students with disabilities, inclusion, and the benefits of play-based learning. With support

41

and autonomy to take curriculum into the field, teachers inspire students to play, connect with nature, and include the whole class while students are encouraged to take ownership of their learning (Deaver & Wright, 2018). An opportunity exists for teachers, staff, and caregivers to work together on educational materials, guides, and activities to be used when enjoying inclusive playgrounds.

Education is not only for the children visiting inclusive playgrounds on field trips. Educating the community on utilizing playgrounds effectively includes communicating all the ways they can be enjoyed while visiting to play. Therapeutic recreation specialists can access inclusive playgrounds for their work with clients; they "may elect to use them as assessment tools for observation of developmental skills, early intervention and motor development, leisure education (e.g., decision making and problem solving), physical activity, and/or to promote inclusive play opportunities in their communities" (Zahl et al., 2014, p. 346). Further, opportunities exist for site-based research to advance evidence-based practices in professional fields related to diagnosing, treating, and managing physical and intellectual disabilities. This opportunity could extend beyond therapeutic recreation specialists to include occupational therapists, psychologists, orthopedists, medical students, and caregiver training programs.

Conclusion

In 2006, the House of Representatives acknowledged that play is an essential factor in developing lifelong physical, social, and cognitive skills, yet six million children in the United States with chronic disabilities are not able to enjoy traditional playgrounds due to the lack of accessible and inclusive features (H.R. Con. Res. 484, 2006). House of Representatives Concurrent Resolution 484 states, "at least one playground in each

42

community or regional area should be a barrier-free Boundless Playground, where children of all abilities can play and learn together and gain developmental advantages" (2006; p. 2). Federal law prohibits discrimination by providing inferior services and facilities to people with disabilities, calling for equal opportunities (ADA Amendments Act of 2008). However, even with government support and regulations, people with disabilities do not have the same opportunities and are not fully included in spaces such as public playgrounds. This inequity in opportunity limits their ability to engage socially and fully participate in opportunities to play.

All children need to be able to play in different ways for their health and development; however, due to poor design, many playgrounds do not afford opportunities for robust and diverse play to all children (Menconi & Grohmann, 2018). Building more inclusive playgrounds is an important step towards ensuring people with disabilities have the same opportunities for physical, social, and cognitive development as people without disabilities. This will require funding, community engagement, innovation, and rejection of the inequities allowed by accepting accessibility instead of demanding inclusion.

Research on this topic is limited; however, there is much to learn from existing playgrounds, both domestically and internationally. As more playgrounds are built, awareness will grow, leading others to learn about and support the work ahead. Demand for inclusive playground equipment will increase, in turn lowering its cost as it becomes more efficient to mass-produce. An increase in scholarship could drive policy change to more thoroughly insist on inclusion for people with disabilities in public playgrounds, impacting legal requirements, availability of resources, and societal mindsets. Development of inclusive playgrounds depends on the engagement of the community,

inclusive mindsets, and prioritization of resources including space and funding. This study aims to begin the work of cultivating these outcomes through academic scholarship by thoroughly describing community engagement during the implementation of PlayGrand Adventures.

CHAPTER THREE

Methodology

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Introduction

People with disabilities are often underserved by or excluded from opportunities

to fully enjoy public playgrounds. While federal law specifies minimum standards for

equipment on public playgrounds, intentionally all-abilities playgrounds that provide

equitable play opportunities for everyone can be hard to find in this country. These types

of playgrounds are expensive to build and maintain, require more space than traditional

playgrounds, and are sometimes so specific to certain disabilities they are not engaging

for the general population (Stanton-Chapman et al., 2020).

PlayGrand Adventures aims to be a playground that is inclusive, engaging, and

inviting for everyone, regardless of age or ability level. Infrastructure is in place for the

entire ten-acre master plan. The first phase opened to the public on January 15, 2020 to

great fanfare and appreciation. With plans to develop and build future phases over the

next few years, it is important for the PlayGrand Adventures leadership team to

understand how community stakeholders interact with the playground to ensure

supporters continue to engage via visits and donations.

This qualitative case study explored community engagement and the role of perception as a motivator through one primary research question: How do community stakeholders engage with PlayGrand Adventures? Three sub questions guided this exploration of engagement. The first, how visitors utilize PlayGrand Adventures, was answered through on-site observations of playground visitors focused on how they interacted with the equipment, the environment, and other visitors. The second, how donors support PlayGrand Adventures, explored donor behavior and fundraising activities. The third, how community perception drives engagement, sought to uncover the role of perception through the lenses of Affordance Theory (Gibson, 1979) and Social Cognitive Theory (Bandura, 1986). While it was necessary to identify what types of engagement took place, understanding what drives engagement enables PlayGrand Adventures and potential new all-abilities playgrounds to respond to stakeholder perception in planning future design, implementation, marketing, and funding strategies.

The results stemming from data collection and analysis guided recommendations for both PlayGrand Adventures and other playgrounds that wish to provide more all-abilities opportunities. The research questions provided an understanding of how and why stakeholders engaged with PlayGrand Adventures, which informs future strategies. Trends in the literature pointed to space, expense, design flaws, and safety concerns as barriers to implementing inclusive playground design. This thorough illustrative case study provided recommendations to mitigate these challenges and fills a gap in the literature on inclusive playgrounds in the United States.

I believe everyone should have equal access to opportunities, but my privileged position protects me from personally experiencing oppression and disenfranchisement. Having never been challenged with a physical, intellectual, or developmental disability, I can freely enjoy playgrounds and recreation facilities. I have not experienced or witnessed the frustration of inaccessible equipment or facilities. I am someone who felt my heart warm when I saw a playground with an accessible swing because it seemed progressive and inviting. The research I have conducted thus far in this field has opened my eyes to the inequities legally permitted on playgrounds and what it means to be truly accessible to everyone. Inferior opportunities for people with disabilities inhibit their development and further stigmatize an already disenfranchised population.

A deeply passionate Parks Department board member introduced me to PlayGrand Adventures in May of 2019. When she explained the purpose of the playground as a place anyone can play, I instinctively recognized the importance for children with disabilities. Then she said something that made me think differently about accessibility and inclusion: What about parents with disabilities who want to play with their able-bodied children? Where do they go to play together? I was ready to get involved with PlayGrand Adventures from that first conversation.

I am now connected to the playground through my friendship with the aforementioned board member and a few other key city leaders who have guided and supported my research questions and design. The nonprofit organization I lead has become a supporter of PlayGrand Adventures through a donation of $10,000 and a handful of virtual awareness-raising activities. This work is separate from my research, which should have no bearing on future business engagements with the playground,

though I acknowledge I will not be able to divorce myself from the knowledge I gain during this research process. No financial support is awarded by the nonprofit without expressed and documented approval by at least five of the eight board members; I can make recommendations, but I do not have voting privileges.

While I primarily approached this work as an etic, I acknowledge my personal connection to the playground and its' leaders as a supporter and advocate. There was a risk of confirmation bias because we all want the playground to be successful. However, I believe the best way to plan for success is to look critically and honestly at the data, and I was grateful to have a similar-minded sounding board in the playground leaders.

I approached this research with a pragmatic, constructivist worldview. I wanted to learn as much as I could from the data, and I remained open to adjusting course as needed to tell the complete story of PlayGrand Adventures. Understanding how the community interacts with the playground was the first step in what I hope to be the development of a complete roadmap to replicating the design and implementation of all-abilities playgrounds in cities across the country.

I believe that people want to give others opportunities, and that they will if they experience the benefits and see a practical way to make things happen. As a researcher, this topic provided an opportunity to fill a gap in academic literature, tap into diverse perspectives, and examine a problem from multiple angles. As a human being, this has been a learning opportunity with the potential to change hearts, minds, and actions.

Theoretical Framework

The two theoretical frameworks supporting this study were Gibson's Affordance Theory (1977) and Bandura's Social Cognitive Theory (1986). Each theory contributed to

the research design and philosophy individually, with Affordance Theory focused on environmental responses and Social Cognitive Theory adding a layer of personal agency and reciprocal causation. The role of perception in how we engage with environmental affordances integrated the two theories for the purpose of this study.

Gibson posits that while what the environment afforded remains constant, perception can change depending on who is interacting with the environment. An individual's perception of what the environment affords impacts their experience. When an environment is perceived as inviting, people are more likely to spend time in it. When the environment contains perceived barriers and dangers, people choose not to engage. The critical piece of Affordance Theory to understand in playground design is that people react based on their perception of the design, not on the intention of the design (Gibson, 2015). While designers should be intentional about designing for inclusivity, visitors choose whether to engage based on their perception of the environment. This study uncovered how various PlayGrand Adventures community members responded to the afforded environment.

The principles of Affordance Theory are observed in physical and virtual environments. Social media affords nonprofit organizations opportunities to engage followers in volunteer activities including promotion, fundraising, knowledge-sharing, and training. These activities primarily benefit the organization, but increasing opportunities and capabilities for virtual collaboration could increase positive perception and engagement for followers who are driven to raise awareness about the causes they support (Raja-Yusof et al., 2016). In fundraising, crowdfunding and peer-to-peer platforms afford a sense of community that motivates donors to give, and microfinance

and micro-action platforms afford structured opportunities for contributing to loans and advocating for different causes (Choy & Schlagwein, 2015; Ilten, 2015). The existing literature highlights financial constraints and awareness as two barriers to building inclusive playgrounds, so looking at these challenges through the lens of Affordance Theory could shed some light on possible solutions.

Social Cognitive Theory presents four key principles: (1) people learn from observing others, (2) learning may not result in a change in behavior, (3) cognition plays an important role in learning, and (4) people have a certain degree of direct control over their actions and environment (Bandura, 1986).When children see someone punished or rewarded for a behavior, they use this information to decide whether to engage in the behavior themselves (Merriam & Bierema, 2013; Ormrod, 2020). Perception affects behavior—people need to see a payoff to pay attention to something or perform a behavior. These perceptions and observations combine with a person's sense of self— self-efficacy, self-confidence, and self-concept—leading to reciprocal causation, or an interaction of the environment, the person, and the enacted behaviors. This reciprocal causation is physically observable on playgrounds, but can also be seen in donor behavior.

Social Cognitive Theory aligns with Affordance Theory's perspective on perception guiding response, but Bandura adds personal agency and reciprocity as key factors in learning and decision-making (Bandura, 2001; Merriam & Bierema, 2013; Ormrod, 2020). "[People] are agents of experiences rather than simply undergoers of experiences… The human mind is generative, creative, proactive, and reflective, not just reactive" (Bandura, 2001, p. 4). Self-efficacy contributes to personal agency through

vicarious experiences, and children with strong social self-efficacy are happier, more physically active, and less prone to illness (Alison et al., 2013; Dewar et al., 2013). Reciprocity is evident in how children play and also in donor behavior. Children need to perceive a playground as engaging to want to play there, and donors need to feel that their donation is supporting something of value (James, 2017; Manzo & Perkins, 2006; Stanton-Chapman et al., 2020). Considering engagement an intentional choice is important for PlayGrand Adventures and other inclusive playgrounds as they seek to engage visitors and supporters.

Affordance Theory and Social Cognitive Theory contributed to the development of the research question, data collection, and data analysis in this study. As previously mentioned, engagement is a choice that incorporates perception, agency, and reciprocity (Bandura, 1986; Gibson, 1979). The research question in this illustrative case study includes sub questions related to visitation, donor behavior, and perception, all engagement measures informed by Affordance Theory and Social Cognitive Theory (Table 3.1).

Data collection strategies included a questionnaire, semi-structured interviews, and on-site observations. The questionnaire and interview questions were designed to elicit data on participant perception and engagement activities, including past and future visitation and donation behavior, perceived benefits to the community, and perceived needs to address in the development of future phases. During observations, I recorded detailed notes on types of visitors, how visitors interacted with each other, and how playground features were utilized.

Table 3.1

Data Collection and Analysis

Sub question	Data Collection	Data Analysis
How do visitors physically engage with the playground environment?	Questionnaire *Have you visited PlayGrand Adventures?* (Y/N) *Do you intend to visit in the future? Why or why not?* (open response) Follow-up semi-structured individual interviews On-Site Observations *Describe the types of visitors. Describe how visitors interact with each other. Describe how features are used.*	Description using an observation protocol and field notes template designed for this study Identification and description of themes
How do donors economically engage with the playground?	Questionnaire *Have you donated to PlayGrand Adventures?* (check boxes with existing ways to donate) *Do you intend to donate to PlayGrand Adventures in the future? Why or why not?* (open response) Follow-up semi-structured individual interviews	Description of different types of giving and rationale for giving Identification and description of themes
How does stakeholder perception of PlayGrand Adventures drive engagement?	Questionnaire *How does PlayGrand Adventures benefit the community?* (open response) *What would improve PlayGrand Adventures?* (open response) *What features should PlayGrand Adventures add?* (open response) Follow-up semi-structured individual interviews	Analysis of frequency of different types of behaviors Analysis of themes based on word choice in responses Comparison of behaviors in different perception groups

After the data collection process, I analyzed and categorized data following the data spiral (Creswell & Poth, 2017). I identified trends in donor behavior and utilization based on responses to stimuli and opportunities for engagement, perception of the playground, use and misuse of features, and mimicry of other visitors or donors. These data elucidated the relationships between participants and the environments afforded, including how their perceptions motivated decisions to engage and how they responded through reciprocal causation. Affordance Theory and Social Cognitive Theory provided frameworks for coding and theme identification.

Research Design

My pragmatic, constructivist worldview supported this qualitative study. Pragmatism was evident in the real-world orientation and problem-centered nature of the research questions and design. Constructivism was evident in the desire to understand the playground based on participant utilization and perception (Creswell & Creswell, 2018).

I utilized a qualitative case study design to deeply explore community engagement at PlayGrand Adventures including playground visitation and utilization, donor behaviors, and the role of perception in driving engagement. "Illustrative Case Studies are used to describe a situation or a phenomenon, what is happening with it, and why it is happening" (Hayes et al., 2015, p. 8). The qualitative case study methodology was appropriate for the specific focus on a sole location with a small sample size. This narrow focus allowed deeper exploration of multiple themes and perspectives utilizing a variety of data sources (Yin, 2018). I deeply examined multiple elements of one playground, offering thick description and an accurate, contextual explanation of how visitors, donors, and other stakeholders interacted with the playground in person and

virtually during the course of the study (Creswell & Poth, 2018; Hayes et al., 2015). The in-depth analysis was bound by time and utilized multiple data collection strategies. The central research question and sub questions explored how people engaged with the playground, and the role of the researcher was simply to collect and analyze data organically rather than controlling events or intervening in any way (Yin, 2017). Just as participants interpret the environment and their experiences, I made meaning of the social engagement observed and understood through the inductive, constructivist process meant to adapt and respond as new data emerged (Creswell & Creswell, 2018).

My findings uncovered how PlayGrand Adventures came to be, how it exists currently in a stage of young maturity, and what it has the potential to become with further development and responsiveness to community input. Lessons learned and personal connections from participants led to recommendations based on findings, which are targeted to multiple audiences to bridge gaps in understanding and provide practical and implementable solutions (Hayes et al., 2015; Yin, 2018). The research process was iterative and informed by learnings along the way. The participants guided some of the process, hinting at a participatory social justice design that could develop in follow-up studies (Creswell & Plano Clark, 2018).

Data Collection

I collected data virtually and on-site at PlayGrand Adventures in Grand Prairie, Texas, in two concurrent phases. I began collecting virtual questionnaire responses in October, 2020 then followed up with semi-structured interviews beginning in November, 2020. I conducted on-site observations in October and November of the same year. Data collection ended in January, 2021.

PlayGrand Adventures is a sprawling, ten-acre tract of land within a larger public entertainment and recreation area called Epic Central. In total, Epic Central comprises 172 acres of city-owned land and includes five lakes, a recreation center for active seniors at least 50 years old, a dog park, an indoor waterpark, an interconnected trail system, and an all-ages recreation facility with sports courts, exercise studios and equipment, a theater space, a recording studio, and a restaurant. The playground is centrally located within Epic Central and accessible via a small parking lot, shuttle service from larger parking areas, or the walking trail system (PlayGrand Adventures, 2020).

Development of the PlayGrand Adventures began in 2013 with a team of dedicated professionals and parents familiar with the needs of people with disabilities. They envisioned a playground where equipment and features shift from manufactured to natural, active to tranquil, and team-based to individual play as visitors walk through the grounds. This vision is depicted in the rendering in Figure 3.1. Once fully implemented, the master plan will accommodate all ages, ability levels, and play preferences (PlayGrand Adventures, 2020).

The playground is divided into multiple zones for different types of play (Appendix A). The first phase is roughly five acres and includes the Adventure Zone and Adventure Hill zones. These zones are described in Table 3.2 and depicted in Figures 3.2 and 3.3.

Figure 3.1. PlayGrand Adventures Master Plan. From www.playgrandadventures.com. Reprinted with permission from City of Grand Prairie Parks, Arts, and Recreation.

Table 3.2

PlayGrand Adventures Phase 1 Play Zones

Zone	Description
Adventure Zone	Adventure Zone provides the highest intensity play for all ability levels, featuring vibrant and whimsical play equipment and a wide variety of play opportunities, such as climbing, swinging, and spinning. Abundant shade and areas to socialize are spaced throughout the play area. This zone includes a play area specifically designed for toddlers with separated activities on a miniature scale.
Adventure Hill	Adventure Hill provides visitors of all abilities the opportunity to experience varying heights and physical challenges at new levels. The playground will accommodate spinning, sliding, climbing and learning activities in ways traditional playgrounds cannot offer. Challenging opportunities expand as one climbs the 'Hill'.

Note. All text is reprinted directly from www.playgrandadventures.com.

While there are plenty of options for people to play at their own ability level, the layout invites collaborative play, utilizing physically scaffolded structures with multiple entry points and equipment designed for a variety of ages and sizes. (Hope 4 All, 2019).

Figure 3.2. PlayGrand Adventures Phase 1 play zones. From www.playgrandadventures.com. Reprinted with permission from City of Grand Prairie Parks, Arts, and Recreation.

The play areas in Phase 1 offer familiar composite structures, swings, and slides.

However, these are made more inclusive with multiple levels of access, sensory play

elements, and ADA-compliant poured-in-place rubber surfacing. Many pieces of

equipment are available for any ability level, such as outdoor musical instruments, and

others are specialized for specific needs, such as an isolated wheelchair swing

(PlayGrand Adventures, 2020).

Figure 3.3. PlayGrand Adventures Phase 1 equipment. Photos taken by the author during on-site observations.

Participants and Sampling

This study utilized purposive criterion-based sampling consistent with a

qualitative research design. Participants were connected to PlayGrand Adventures as a

social media followers, donors, visitors, or Parks Department employees, or board

members. These roles ensured the participant had at least some interest in PlayGrand

Adventures and knowledge of the playground. The participant pool varied for each data collection strategy, though there was overlap in participants.

I conducted participant sampling in two distinct but convergent phases: virtual and in-person. Participation in the virtual phase was voluntary, beginning with a questionnaire initially distributed via PlayGrand Adventures' website and Facebook page (Appendix B). After sluggish early participation, two participants and I reached out to our personal networks to increase participation. Respondents' households included families with children, senior citizens living alone, and parents with adult children at home. Eighteen households included someone with physical and/or intellectual disabilities including Asperger's, autism, seizure disorders, speech differences, and stroke-related physical differences. They were frequent park-goers, outpacing the American average of at least two visits per month (National Recreation and Parks Association, 2020). They represented 29 zip codes, ranging from a short neighborhood walk to the playground to a two-hour, one-way drive (Figure 3.4).

I conducted semi-structured interviews with willing participants identified through the questionnaire. This group included three Parks Department board members and several parents who had visited PlayGrand Adventures with their children, three of whom have children with disabilities and learning differences. I again utilized snowball sampling due to low numbers of participants in the early stages of data collection.

Participants in the in-person observation phase were visitors to PlayGrand Adventures. Observations took place during operating hours over a four-week period. I did not identify or interact with the participants to avoid disruptions, preserve anonymity, and reduce interference with natural reactions to the environment (Yin, 2017).
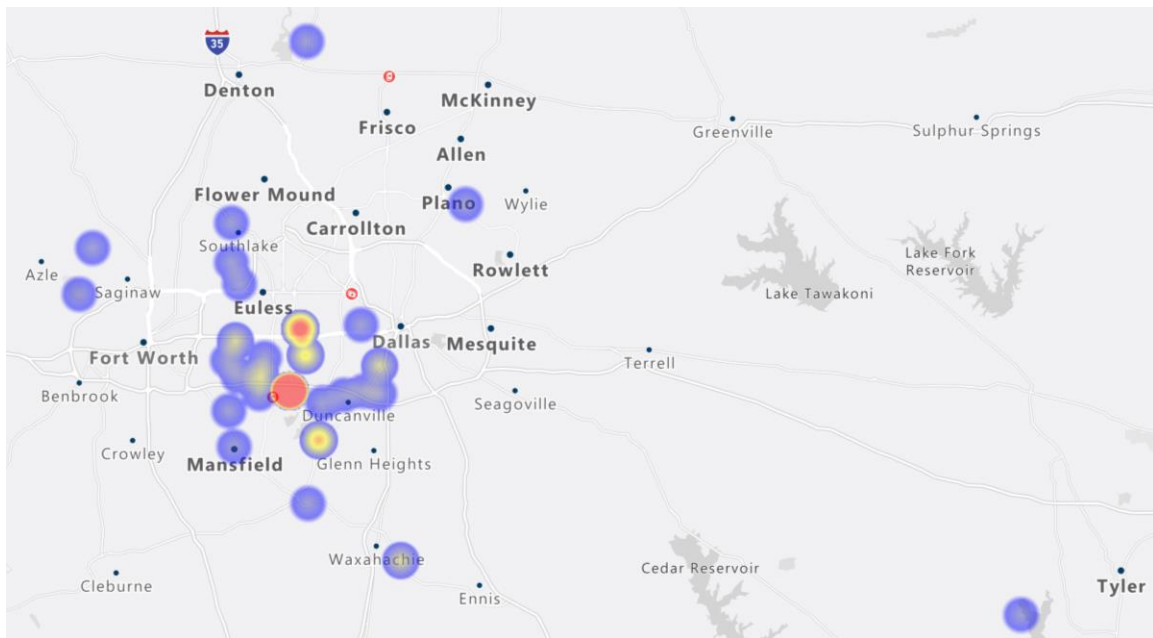
Figure 3.4. Participant zip code heat map.

The virtual phase began with a questionnaire distributed to potential participants via PlayGrand Adventures social media and email subscribers. Interview participants were selected from questionnaire participants who indicated they were willing to participate in a follow-up conversation. Interview participants fell into the following categories: (1) people who visited the playground and donated, (2) people who visited but did not donate, (3) people donated but did not visit, and (4) Parks Department board members. I conducted a total of sixteen interviews.

Participants in the in-person observation phase were visitors to PlayGrand Adventures. Most observed participants were likely residents of Grand Prairie or surrounding cities with their own transportation, as there is no public transportation in the city. All visits took place during regular operating hours at a variety of times to attempt to observe a variety of participants. I did not interact with the participants to avoid

60

disruptions, to preserve anonymity, and to reduce interference with natural reactions to the environment.

Data Collection Procedures

Data were collected in a variety of methods consistent with the qualitative case study design. The analysis focused on identifying trends in engagement and perception that informed recommendations to PlayGrand Adventures leadership. While it was impossible to avoid bias completely, the interpretation of the data incorporated strategies to support the validity and reliability of the study (Creswell & Creswell, 2018). This process is depicted in Figure 3.5.

As stated in the previous section, there were two convergent data collection phases in this study: a virtual phase consisting of a questionnaire and follow-up interviews, and an on-site observation phase. These phases supported different sub questions stemming from the central research question, as detailed in Table 3.1. The on-site observation phase provided descriptions of utilization from my vantage point, while the virtual phase collected data on visitation, donor behavior, and perception from the participants' points of view.

The questionnaire served as a first step in collecting and understanding data associated with each of the three sub questions. The first question informed participants they were participating anonymously in a case study on PlayGrand Adventures and prompted them to provide consent. Participants answered yes/no and open-ended questions on their visitation habits, donor behavior, and perception (Appendix B). The open-ended responses provided initial engagement and perception, which uncovered patterns to contextualize in the follow-up interview phase.

As responses were submitted via the Survey Monkey platform, I reached out via email to schedule virtual interviews with willing participants. Interviews were recorded and saved in a password-protected cloud drive to ensure only I had access to the raw data. Participants gave consent for both their participation in the study and their willingness to be recorded before the interviews began. They also indicated they understood they could opt out of participation at any time. Anonymity was respected and maintained throughout the data collection and analysis process.

Individual questionnaire responses shaped questions for the semi-structured interviews. I followed a consistent protocol throughout the semi-structured interviews to ensure relevant data were collected to add context to trends in visitation, donor behavior, and perception of the playground. Keeping the protocol semi-structured and the questions open-ended allowed new themes and information to emerge that could be missed with a more rigid data collection strategy. I focused on a few key questions to elicit participant views and opinions that helped explain and contextualize questionnaire responses (Creswell & Creswell, 2018). A complete list of questions can be found in Appendix C.

The on-site observation phase was separate from the virtual phase but was conducted concurrently. This phase focused specifically on the sub question addressing playground utilization. Unobtrusively observing playground utilization in the field provided data on how different types of people used the playground including how they interacted with each other, used or misused playground equipment, and popularity of playground features. As a nonparticipant, I recorded my observations in a freehand style without engaging with participants or disrupting their natural behaviors (Creswell & Creswell, 2018). Observations drew on Affordance Theory (Gibson, 1979) and Social

Cognitive Theory (Bandura, 1986) to guide observation foci, especially responses to the equipment, the environment, and other visitors.

I planned to follow a model for playground observation from an existing observational study comparing inclusive and universal playgrounds. In the model study, observers followed a pre-planned path, stopping for a pre-determined amount of time in each spot to record observations on an observation form (Stanton-Chapman et al., 2020). During the first observation at PlayGrand Adventures, I learned the process was not appropriate in this context due to the size of the playground, how quickly visitors moved among zones, and the restrictiveness and unwieldiness of my observation form in practice. For subsequent observations, I took freehand observation notes on a password-protected iPad and moved throughout the playground with a focus on observing useful interactions rather than strictly following a rigidly timed course.

I conducted fourteen observations over a four-week period in October and November of 2020 before the playground unexpectedly closed due to a regional spike in COVID-19 cases. I set observation windows between 8:00 and 11:00 in the morning, 11:01 and 2:00 in midday, and 2:01 and 5:00 in the afternoon. This process increased the opportunity to observe a variety of visitor types including caregivers with toddlers, school-aged children, and weekend crowds. This phase enriched the data collected on usage in the virtual phase by including authentic data on how visitors interacted with the playground environment and features.

All data collected through the aforementioned strategies were stored securely in a password-protected cloud file. No names or identifiable descriptions were attached to

specific data points to maintain anonymity of participants. I was the only person with access to raw questionnaire data, interview notes, and observation field notes.

Data Analysis

Data analysis followed the *data spiral* as explained and depicted by Creswell, Creswell, and Poth (Creswell & Creswell, 2018; Creswell & Poth, 2018). After collecting data, as described in the previous section, I organized and filed raw data including pictures, field notes, interview recordings, and questionnaire responses. I stored the data in a password-protected cloud file only I could access to protect identities and preserve anonymity.

I transcribed interviews using the Otter.ai online platform and filed them along with observation field notes and open responses from questionnaires. Next, I noted general impressions and key words within data sources on an Excel spreadsheet. This reading and memoing stage allowed me to categorize, compare, and hand code data to identify and classify emerging themes. Finally, I created visual and narrative representations and explanations of the identified themes to interpret the analysis and make recommendations (Creswell & Creswell, 2018; Creswell & Poth, 2018). The explanation and visualization of themes and recommendations was intended to be easily understood by audiences with varying levels of understanding about all-abilities playgrounds, consistent with an illustrative case study design (Hayes et al., 2015).

Data Validation

Interpreting qualitative data requires a researcher to make assumptions, revisit existing literature, and engage their personal beliefs and worldview in a responsible, trustworthy way. The researcher must acknowledge and clarify their biases and

positionality as these cannot be separated from their interpretation. My positionality and

biases are discussed in an earlier section. I also took care throughout the data collection

and analysis processes to maintain validity.
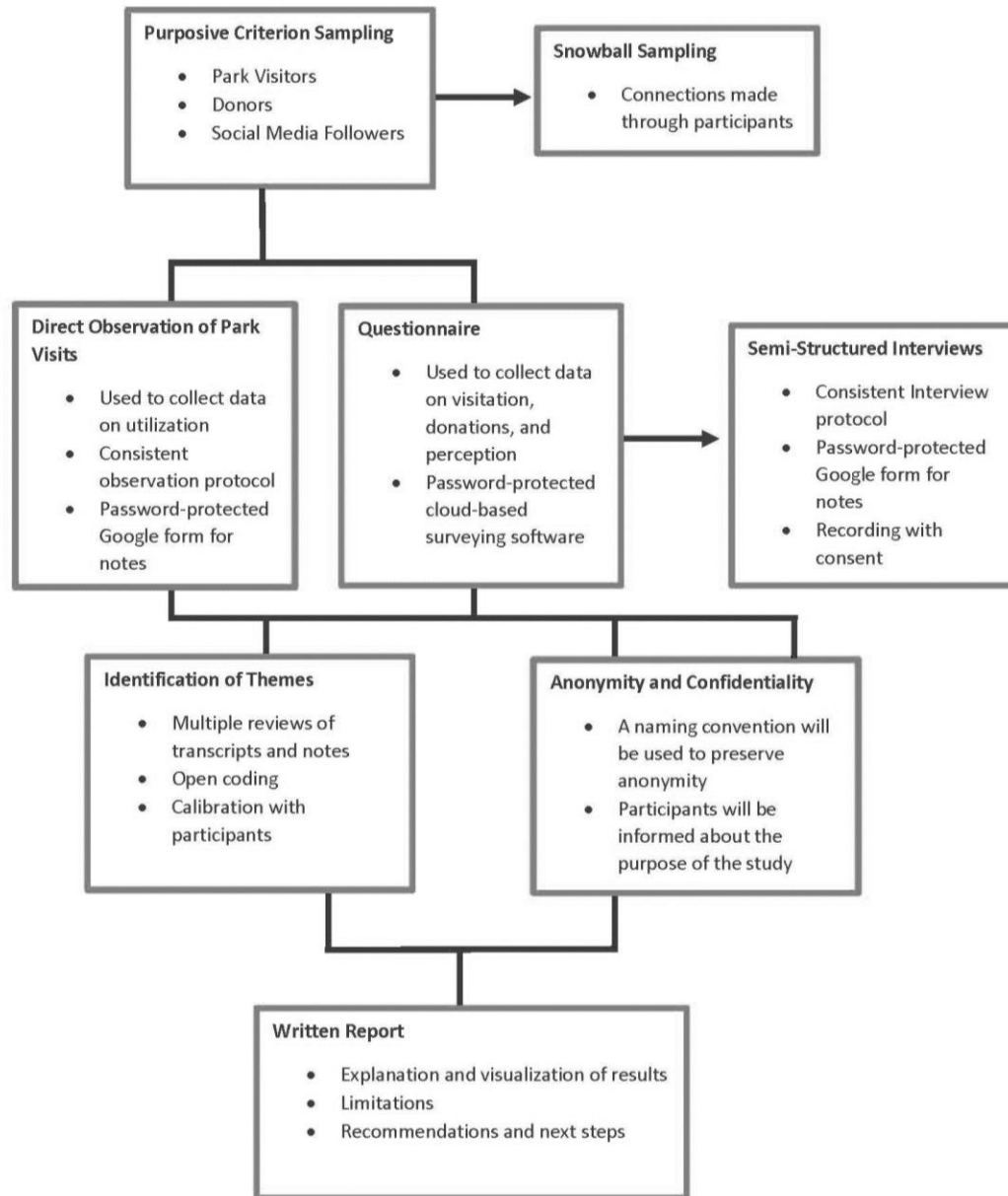
Figure 3.5. Research methodology.

The interpretation of this case included triangulation of multiple data sources, member checking, and peer debriefing to ensure all perspectives were accurately represented. I collected data via three methods: an online questionnaire, semi-structured interviews, and on-site observations. I gained participant perspectives from the questionnaire responses and interviews, then balanced these by gaining my own perspective during on-site observations. Interviews also served as a member-checking checkpoint and an opportunity to gain deeper context on questionnaire responses. I prepared interim reports for review by select participants and Parks Department stakeholders. Finally, I engaged in peer debriefing throughout this process with colleagues and external experts. These measures mitigated confirmation bias and contributed to the validity of the study (Creswell & Creswell, 2018).

While reliability cannot be confirmed based on these findings due to the nature of the study and the focus on one location. However, another researcher could repeat this process using the same methodology and protocols to test the results (Yin, 2018). This is recommended for future study.

Limitations and Delimitations

There were several limitations in this case that must be addressed. The strict focus on one playground and small sample size prevented expansion into a mixed methods case study and also inhibited the generalizability of the findings (Creswell & Plano Clark, 2017). The thick, rich description herein paints a detailed picture of PlayGrand Adventures that informs future development for this population, but these results could differ in other locations. The interpretation was based on data collected from a sample that might not be fully representative of the population, and much of the data were

filtered through participants' differing lived experiences. Direct observations provided a different lens, but these were subject to my personal interpretation of behaviors due to my non-participatory role (Creswell & Creswell, 2018). The impact of COVID-19 further restricted the sample size and data collection opportunities due to an extended playground closure and an abundance of caution when facilities began to reopen.

Delimiting factors included the focus on one playground, specific factors in sub questions, and the criteria for interview participants. Choosing an illustrative single case study allowed deep exploration of multiple sub questions, perspectives, and data sources that would have been unwieldy in a larger study with more locations and a larger sample size. This intense focus and depth of exploration benefits PlayGrand Adventures through specific recommendations customized for the needs and perceptions of its stakeholders. While several common challenges facing inclusive playgrounds emerged from existing research, the choice to focus on visitation, donor behavior, and perception was specific to the expressed and felt needs of PlayGrand Adventures. Likewise, choosing interview participants based on questionnaire responses ensured opportunities to collect additional data from key constituents with direct connections to the variables explored in this case. The study also fills a gap in the literature by addressing multiple common challenges facing inclusive playgrounds rather than focusing on specific challenges in isolation. This sets the stage for future research and the creation of new evaluation tools, frameworks, and theories.

Ethical Considerations

This study was conducted in an ethical manner consistent with a qualitative case study design. The design did not qualify as Human Subject Research and thus was

exempt from the full Instructional Review Board, but I took steps to protect participants throughout the study. As mentioned previously, participants remained anonymous throughout the data collection and analysis processes and only I had access to the password-protected cloud file containing raw data to protect privacy and confidentiality. The questionnaire began with a prompt informing participants about the nature of the study and confirming consent. Likewise, interview participants gave consent to participate and to be recorded (National Research Council, 2003 in Yin, 2017).

Robert K. Yin provides several suggestions for conducting ethical research as they pertain to researcher skills and values, including asking good questions, being a good listener, staying adaptive, having a firm grasp of the issues being studied, and conducting research ethically (Yin, 2017, pp. 82–83). The research question, sub questions, and theoretical frameworks guided planned questionnaire and interview questions, but I continued to ask questions and fairly interpret answers throughout the data collection process to "create a rich dialogue with the evidence" (Yin, 2017, p. 83). In "listening" to the data, I explored multiple data sources and transcribed, assimilated, and triangulated data to "follow not only what might have been said but also what was meant" (Yin, 2017, p. 84). This must be done without bias to the greatest extent possible. To avoid potential confirmation bias, as mentioned earlier, I collected data from my own perspective (observations) in addition to various participant perspectives (questionnaire and interviews). These balanced perspectives, combined with strategies such as peer debriefing and member checking, mitigated the risk of confirmation bias and avoidance of contrary evidence. A thorough literature review guided the development of the study and I continued consulting outside research, member checking, and peer debriefing

throughout the data collection and analyses processes to maintain a firm grasp on the issues in the field and those specific to PlayGrand Adventures. Finally, I remained adaptive throughout the data collection process but also stayed true to the intent of the study (Yin, 2017).

Conclusion

This qualitative case study addressed community engagement at PlayGrand Adventures through attention to three common challenges facing inclusive playgrounds. Understanding how visitors engage with the playground highlights usage data that informs future development and the addition of new equipment, features, and play zones. Understanding donor behavior provides data that informs a sustainable funding strategy. Finally, understanding how perception drives engagement allows playground leadership to respond to the needs of community, build relationships, and cultivate attachment.

Perception is personal and critical when engaging with different environments. Gibson's Affordance Theory (1979) and Bandura's Social Cognitive Theory (1986) provide the frameworks through which this study addresses the research question. Data collection, analysis, and interpretation critically consider human interactions with physical and virtual environments and how perception influences engagement. Without engagement, PlayGrand Adventures and similar playgrounds are not sustainable. The results and implications of these data are thoroughly presented and reviewed in the next chapter.

CHAPTER FOUR

Results and Implications

Portions of this chapter are accepted for publication as Bunn, T. D., Howell, L., &

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Introduction

PlayGrand Adventures first opened to the public on January 15, 2020, but chose

to close in March of that same year due to the COVID-19 pandemic. After reopening at

the end of October, 2020, the city again made the difficult decision to close the gates after

only a few weeks due to another surge in COVID cases. In the short time it was open,

PlayGrand Adventures became a beloved playground and jewel in the crown of Epic

Central, a

> 172-acre park is the home of The Epic, Epic Waters Indoor Waterpark, The
> Summit, and Grand Prairie's Public Safety Building. Park amenities include 5
> lakes, a grand lawn with an amphitheater, boardwalk, pad sites for future retail,
> and plenty of open space for kites, frisbees, picnics, or a game of catch. (City of
> Grand Prairie, Texas, 2021)

The bright colors and welcoming design brought families through the gates, and the

engaging, challenging play features kept them coming back for more fun. Ceramic tiles,

painted by community members as a fundraising opportunity, adorn the entrance with

personal connections to the playground. In the time of COVID-19, families craved an

outdoor space where they could eat lunch, move their bodies, and step away from their

screens for a moment of refreshment in the fresh air. Data analysis indicates PlayGrand

Adventures benefits the community as a safe, inclusive, well-maintained recreation area for people of all ages and abilities to learn, play, and develop.

This chapter describes and explains findings, implications, and recommendations for future development. The chapter begins with findings specific to each sub-question: (1) how visitors utilize PlayGrand Adventures, (2) how donors support PlayGrand Adventures, and (3) how community perception drives engagement. Each subsection explores themes and connections to Affordance Theory and Social Cognitive Theory. These focused themes lead to discussion and overall implications for all-abilities playground design and sustainability, future research opportunities, and specific design and sustainability recommendations for PlayGrand Adventures.

Qualitative Data Findings

In this section, I share findings from my data collection process for each sub-question. I organize findings by data collection method: questionnaire, follow-up semi-structured interviews, then on-site observations. Next, I reflect on consistent themes across the data collection methods with connections to Affordance Theory (Gibson, 1979) and Social Cognitive Theory (Bandura, 1986). Then, I connect findings to the literature reviewed in Chapter Two. The chapter ends with a discussion of implications of the study, including recommendations for PlayGrand Adventures and suggestions for further research.

Sub question 1: Visitor Utilization of PlayGrand Adventures

This section focuses on the first research sub question: how visitors utilize PlayGrand Adventures. I explain the findings in three distinct sections beginning with data collected through the questionnaire, then follow-up semi-structured interviews, then

on-site observations. Responses indicate appreciation for the playground environment, equipment, intentionally inclusive design, and opportunities for social engagement.

Questionnaire. When coding the 72 responses from the online questionnaire, I noticed two overarching categories related to playground utilization: the physical and natural environment of the playground and the equipment on the playground. These categories emerged from an open coding processes of responses to two open-ended questions: (1) "What are the best features, amenities, and/or equipment at PlayGrand Adventures?", and (2) What features, amenities, and/or equipment would improve PlayGrand Adventures?" Answers that referenced specific equipment were coded with the name of the equipment and categorized as "equipment." Answers that referenced the design of the playground, amenities, or general experiences were coded based on key words and categorized as "environment." I did not categorize answers including "everything" and "nothing." Figure 4.1 shows an example from the open coding schema I used for questionnaire responses related to all research sub questions.

An analysis of questionnaire data indicates the environment of PlayGrand Adventures is inviting, cheerful, and encouraging. The design and amenities afford a sense of safety and comfort for adults while providing children an inclusive, fun place to play. Visitors remarked that PlayGrand was a welcome respite for children and adults alike who needed a break from near constant pandemic-induced screen time. Getting outdoors in the fresh air allowed visitors to refresh, recharge, and refocus in a unique playscape. Visitor responses to the environment of PlayGrand Adventures are depicted in Figure 4.2.

Evidence: "There is plenty of seating and shade available."	Key Words	Shade, seating
	Code	Amenities
	Category	Environment
	Perception	Comfortable
	Frameworks	Affordance Theory: Comfort for adults
Evidence: "It has play features that encourages a visitor to try it and to push themselves a bit."	Key Words	Encourage, push
	Code	Challenge
	Category	Equipment
	Perception	Challenging, encouraging
	Frameworks	Social Cognitive Theory: Motivation to push oneself, payoff for trying something new
	Literature Review	Engaging at different levels, abilities (Stanton-Chapman et al., 2019)

Figure 4.1. Sample coding schema for questionnaire responses.

PlayGrand Adventures offers amenities beyond what is offered in traditional neighborhood playgrounds due to its' intention to serve all ages and ability levels. A much-appreciated amenity is a multi-stall, on-site bathroom with stalls large enough to accommodate a variety of mobility aids. Shade structures throughout the playground shield visitors from the bright, hot Texas sun and offer protection from precipitation. Benches line the perimeters of play areas, some sponsored by local schools and businesses, adding to the community investment and sense of personal connection to the playground. There are also plenty of picnic tables, all with space for a wheelchair, and seating opportunities that blend into the architecture, like stone steps and a swirling structure that doubles as play equipment, and a place to rest.

Amenities
- Plenty of shade
- Plenty of benches
- Bathrooms inside the playground

Design
- Outdoors
- Open
- Unique
- Colorful, visually appealing
- Inclusive

Layout
- Plenty of space
- Good sightlines
- Half walls
- Walking trail

Maintenance
- Clean

Surfacing
- Soft, bouncy
- Safe

Figure 4.2. Themes in questionnaire responses to the environment of PGA.

After much careful planning, the intentionality of PlayGrand Adventures' design has proven to attract and retain many visitors. The bright colors and tall structures visible from the street brought many visitors into the front gates, and the unique, intentionally inclusive design motivated families to keep coming back. One mother with two young children, one with a disability and one without, said "It addresses so many more types of physical disabilities beyond mobility. [I] love the bouncy surfacing and the way they use color not just to entice play and interest but also to visually guide visually impaired and others safely thru [*sic*] the play areas." The bouncy, forgiving poured-in-place rubber surfacing provides cushion and comfort; another mother pointed out that her child does not cry when he falls at PlayGrand Adventures like he does when playing on wood chips.

Questionnaire respondents mentioned the importance of getting kids outside and connecting with other parents in similar situations. With multiple play areas across three

acres, there is room for children to run and play throughout the playground while parents carry on socially distanced conversations: "Even when there is a full house, there are still plenty of play pieces available, and adequate room for all people." While the playground is larger, half walls offer partial enclosure without limiting visibility. This feature, coupled with the curving layout of the playground, affords a sense of safety for parents who watch their children play. Good sightlines help visitors relax as those utilizing the equipment run from place to place.

In addition to the enjoyable environment, the equipment offered at PlayGrand Adventures in unique, inclusive, and diverse. One respondent stated, "The sheer size is incredible, but I love how many different areas and structures there are for climbing. They allow kids to get great exercise while working on coordination and strength." Another added, "In addition to exercise in the fresh air, various activities and equipment offer different textures, challenges, sensory games, and stimulation." Parents noted that all kids can play together on a playground with engaging features for young kids, teenagers, and parents with various ability levels. Visitors appreciate the various climbing structures, unique swings, rand roller slides, and parents enjoy that features are designed so they can comfortably play with their children (Figure 4.3).

While many praised the variety and adaptability of the collection of equipment, a few particular pieces of equipment stood out for questionnaire respondents (Figure 4.4).

> One of the best features is the overwhelming abundance and variety of fun equipment. It sets the imagination free, especially for those who too often, never have such an opportunity. Beyond that, there is spinning, swinging, sliding, climbing, balancing, and rolling. The kid in me personally likes items that spin fast and roller slides.

Spinning is available for both groups and individuals, but the merry-go-round earned high praise for its' safety and inclusiveness. This feature lies flush with the ground, allowing ease of entry for visitors with mobility disabilities and removing the danger of injuries from falling under the equipment. The roller slides provide an unusual texture that has therapeutic benefits and a novel sliding experience, and it is built into a hillside so it can be accessed without climbing a ladder. A cube tower and towering net feature provide scaffolded challenges and a sense of danger for adventurous visitors who enjoy risky play. As one mother stated, "The more dangerous the better for my kiddos!" Finally, specialized swings, like the wheelchair swing and face-to-face swings, ensure everyone has an opportunity to play.

Accessible	Intentional Design	Variety
Age-Appropriate	Open	Bouncers
Big enough for adults	Unique	Climbers
Inclusive	Challenging	Gentle Play
Specialized	Engaging	Slides
		Spinners
		Swings
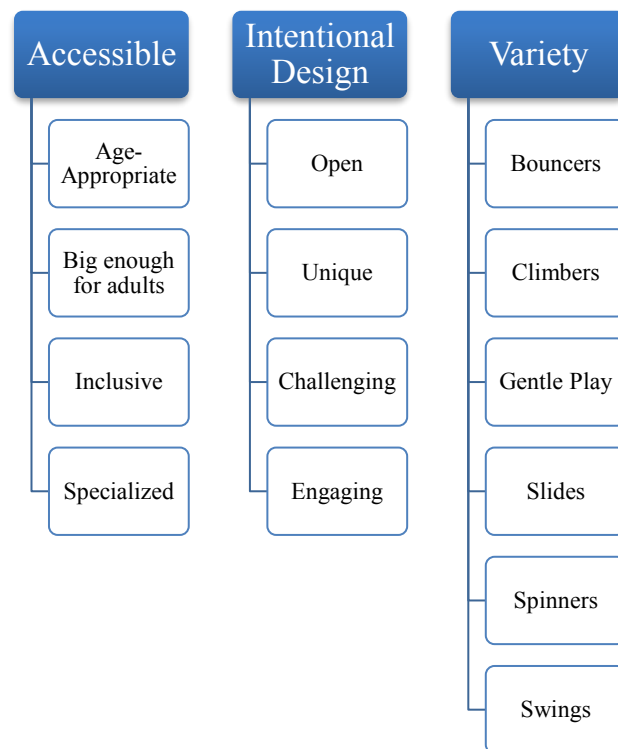
Figure 4.3. Questionnaire responses regarding equipment.

In summary, questionnaire respondents felt the equipment, amenities, and design of PlayGrand Adventures afforded a safe, comfortable environment for anyone to play. There was plenty of space for children to run and play, and the variety and diversity of equipment was engaging and unique. Evidence from semi-structured interviews supported and expanded on these findings.

Bouncers	Climbers	Gentle Play
Family Seesaw	Cube Tower (pictured) / Spider Web	Musical Instruments

Slides	Spinners	Swings
Roller Slide (pictured) / Central Feature with Tube Slide	Merry-Go-Round	Face-to Face Swing (pictured) / Wheelchair Swing

Figure 4.4. Equipment highlighted in questionnaire responses.

Follow-up semi-structured interviews. Following an analysis of question responses, I contacted respondents who indicated a willingness to participate in follow-up interviews to discuss their responses on the questionnaire and their experiences with PlayGrand Adventures. These interviews enriched the data pool while also allowing an opportunity for member checking and triangulation. Interview findings support and

contextualize the findings from the questionnaire. I conducted 16 interviews, ultimately

including those with participants who had already engaged with PlayGrand Adventures

as a visitor, donor, or member of the planning committee. I used the open coding schema

from questionnaire responses as a guide for interview transcripts, continuing to follow the

data spiral for analysis and pattern matching (Creswell & Creswell, 2018; Creswell &

Poth, 2018). A selection of this schema is depicted in Figure 4.5 and themes are depicted

in Figure 4.6.

Evidence: "There's also like a half wall, you know, some kids are little sprinters."	Key Words	half wall, little sprinter
	Codes	safety, design
	Category	environment
	Audience	young children, parents with young children
	Perception	safe
	Frameworks	Affordance Theory: environment affords barrier for children and perception of safety
Evidence: " I love the way that the the local kiddos feel connected, like my son goes to the school for the highly gifted and they have a couple benches up there. But it's really neat to see the kids other other people are like, Oh, that's my school. That's my bench."	Key Words	connected, my school, my bench
	Codes	connection, fundraising
	Category	environment, sustainability
	Audience	visitors
	Perception	personal connection to the playground
	Frameworks	Social Cognitive Theory: reinforcement for raising money; personal relevance

Figure 4.5. Sample coding schema for interview transcripts.

Two interview participants were parents of children with disabilities; one child

has Down Syndrome and temporary hip dysplasia and the other has epilepsy and is

possibly on the autism spectrum. These parents feel safe at PlayGrand Adventures due to

the soft and bouncy surfacing, their ability to keep their eye on their children from

78

various vantage points, and a design that intentionally includes people with disabilities

with gradual elevations, attention to size and space needs, and scaffolded challenges

(Figure 4.7). Their children have more opportunities to play at PlayGrand Adventures due

to the quantity and variety of features available. These sentiments were not exclusive to

parents of children with disabilities. The safety of the environment, both the design and

the locations, benefit all visitors, regardless of disability status.

PlayGrand Adventures offers amenities beyond what is offered in traditional

neighborhood playgrounds due to its' intention to serve all ages and ability levels. A

much-appreciated amenity is a multi-stall, on-site bathroom with stalls large enough to

accommodate a variety of mobility aids. Shade structures throughout the playground

shield visitors from the bright, hot Texas sun and offer protection from precipitation.

Benches line the perimeters of play areas, some sponsored by local schools and

businesses, adding to the community investment and sense of personal connection to the

playground. There are also plenty of picnic tables, all with space for a wheelchair, and

seating opportunities that blend into the architecture, like stone steps and a swirling

structure that doubles as play equipment, and a place to rest.

As depicted in Figure 4.6., and as previously mentioned in the questionnaire

analysis, visitors appreciate the proximity to the police station and the highly visible

location within the Epic Central entertainment and recreation area. The design of the

playground curves in a way that allows adults to see the children in their care from

multiple vantage points whether standing in the middle of the action or sitting on one of

the many benches lining the play zones. The attractive and practical border walls around

the zones provide a barrier without restricting the view (Figure 4.8). The feeling of safety

extends to the soft surfacing and intentionally adaptive equipment.
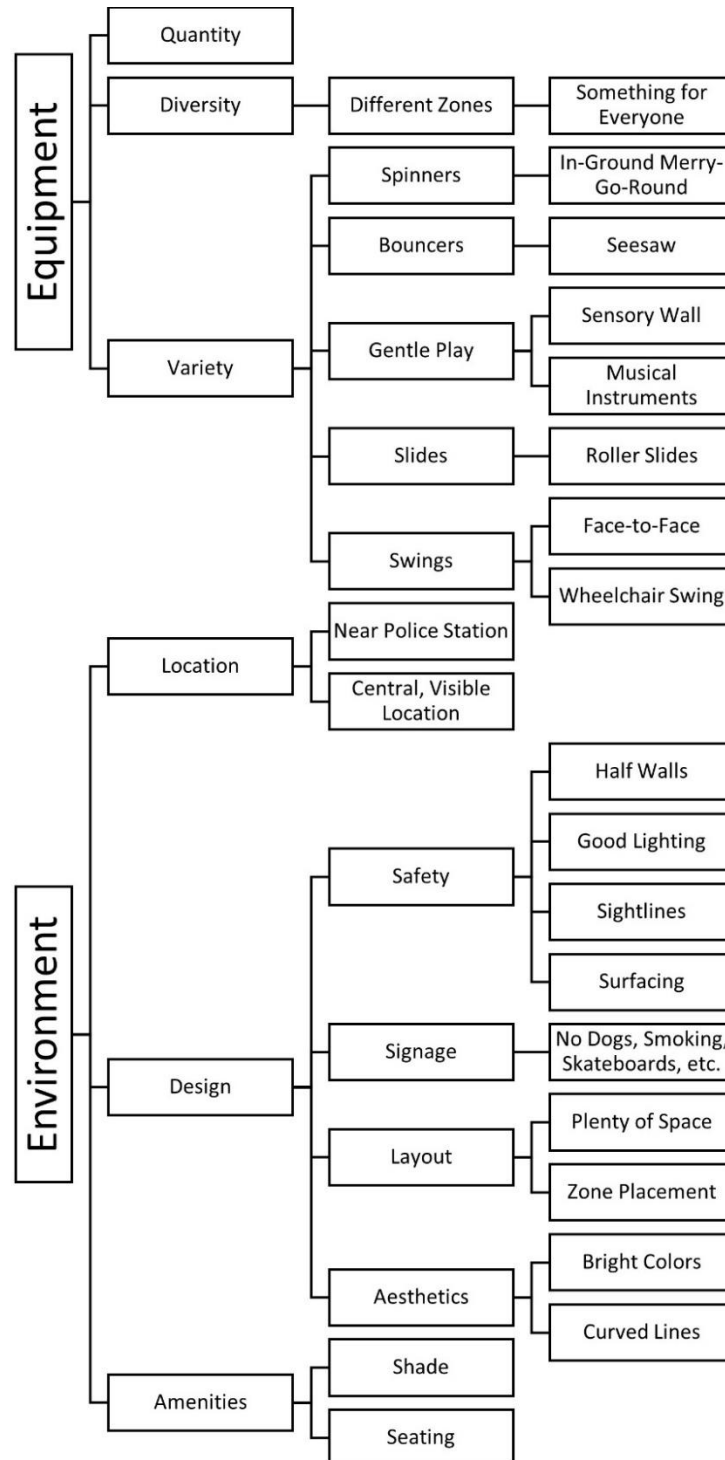
Figure 4.6. Trends in utilization-based interview responses.

Figure 4.7. Example of surfacing, gradual elevations, seating with multiple vantage points, and ample space between features in Adventure Tots zone. Photo taken by the author with the permission of PlayGrand Adventures.

Interview participants noted the impressive variety of swings at PlayGrand Adventures (Figure 4.9.). The harness swings, face-to-face swings, and wheelchair swing provide a safe, unique experience for children who might not have other opportunities to experience the sensation of swinging. One participant said of the wheelchair swing,

> I get goosebumps just thinking about that, because that's something that some of those children have never experienced, that sensation of swinging in a wheelchair, have never experienced the sensation of swinging. And when we can give them that opportunity to experience something that they've never experienced in their life is quite a thrill to me.

When a parent can provide new experiences for their child, both benefit (Ginsburg, 2007; Milteer et al., 2012; Movahedazarhouligh, 2018).

While parents were impressed with the quantity and variety of opportunities at PlayGrand Adventures, a few expressed needs stood out for further consideration. Some of the adaptive features provide unique opportunities for play, but there are still

restrictions due to the size. For example, the face-to-face swings are appealing, but they

are too small to accommodate a child in leg braces without removing the mobility aid.

Figure 4.8. Half wall for safety at PlayGrand Adventures.

One parent said,

> I love the swings that they have that had like the parent swing and then the child
> when we can face them. But for her to fit in the swing, we had to take her out of
> her brace… That may be something that would be nice to have some of the
> swings that are like a little bit wider. Or maybe you know, for older kids [that do]
> not have that mobility. That may be a good option for them, too. I know that's
> something that she loved, but that was a pain, like okay, in the swing out of the
> brace, out of the swing in the brace. You know, you can never do anything for an
> extended period of time because of the attention span.

There is also a need for an area in which children with disabilities can play away from the

hustle and bustle of the main playground on busy days. This supports the planned

implementation of the forthcoming Tranquil Adventures zone (Appendix A). Finally, the

stone steps and fireman's poles were deemed "headscratchers". The fireman's poles are

adjacent to small slides meant for young children. While it is nice to comingle equipment

for different age groups, the fireman's pole is underutilized by older children but disconcertingly enticing for young children who lack appropriate climbing capabilities.
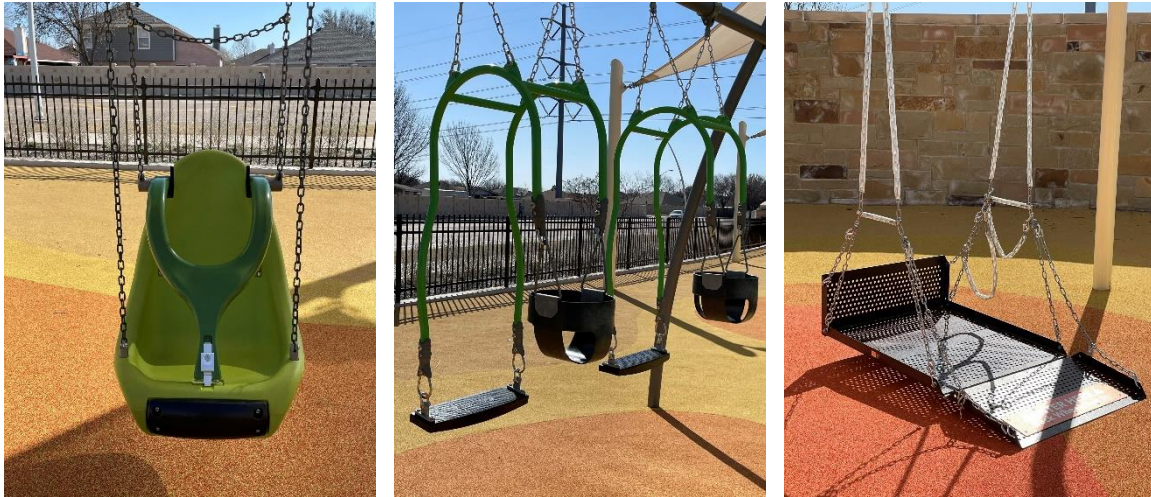
Figure 4.9. Adaptive swings at PlayGrand Adventures. Left to right: harness swing, face-to-face swing, wheelchair swing. Photos taken by the author with the permission of PlayGrand Adventures.

Likewise, the stone steps are an attractive architectural feature, but they are dangerous for climbing toddlers who do not differentiate between them and the safe play equipment that is meant to be climbed (Figure 4.10).

In summary, parents prized the unique equipment offerings and design choices that expanded play opportunities for themselves and their children. Adaptive equipment provided to children with disabilities, and size-inclusive equipment allowed parents to play with their children in more direct ways than at other playgrounds. While the playground is overall perceived as very safe, there were a few items that presented unnecessary risks for young children that might be reconsidered for future phases.

Figure 4.10. Fireman's pole and stone steps. Photos taken by the author with permission from PlayGrand Adventures.

On-site observations. On-site observations provided an opportunity to experience the natural environment and culture of the playground through my own eyes. Observation data supported much of what I learned through the questionnaires and interviews and also provided new connections and discoveries. I visited the playground 14 times between the end of October and middle of November, observing during different times and on different days of the week. I moved throughout the playground recording observations by hand. I then analyzed my field notes to identify codes related to visitor interactions and connections to my theoretical frameworks and existing literature (Figure 4.11.) This

section explains how visitors interacted with the equipment, environment, and other visitors at PlayGrand Adventures.

Figure 4.11 Sample observation field notes coding schema.

The climbing features were popular throughout the playground, supporting the need expressed by some questionnaire respondents and interviews participants for additional climbing features. Children climbed everything at the playground, regardless of whether objects were meant to be climbed: nets, fences, walls, slides, and even each other. Children of all ages could not resist the temptation of climbing up the inside of

slides and jumping of the way as quickly as possible when someone came down. This type of risky play in a safe, controlled environment is a critical part of childhood development, and PlayGrand provides many opportunities (Brussoni et al., 2012; Sandseter, 2009a, 2009b). Toddlers in Adventure Tots tested their strength and balance while climbing hills, crossing a bridge, and exploring the tunnel and playhouse. Older visitors, including teenagers and adults, tested their mettle on the central PlayGrand Adventures feature, a very tall climbing net that ends in a long, winding tube slide. On the other side of the playground, a colorful cube tower and two bright pods on a hill provided different ways to climb. The tower was much more popular, attracting larger crowds to enjoy the attached slide and nets (Figure 4.12.).

Figure 4.12. Selection of PlayGrand Adventures climbing features. Photos taken by the author with permission from PlayGrand Adventures.

Slides and swings, two other playground essentials, are scattered throughout the PlayGrand Adventures landscape, along with a variety of spinning features. Adults and children reacted to these items in different ways. Most of the children I observed seemed to relish the dizzy aftereffects of fast spinning, giggling as they stumbled to the next adventure. Adults who participated in play, however, tended to be the person making the equipment spin rather than the person enjoying the spinning. Likewise, adults and

children reacted differently to the roller slides. Children laughed at the bumps and ran back to the top for another try, often changing positions to slide down on their backs or try going face-first. Adults who went down the slide commented that the rollers felt funny or uncomfortable, some resorting to an "Ouch!" at the end of their trip down the slide. Swings proved to be the equalizer, providing enjoyment for children and adults alike. Some swingers gently swayed while having conversations or playing on their phones, while others pushed higher and higher until they could jump off into the air and land on the bouncy surfacing below.

Two popular features, the merry-go-round and seesaw, invited collaborative play at a higher level than other features (Figure 4.13). With more people, players bounce higher and spin faster; this increased entertainment value motivated visitors to bring others over to play with them. Children witnessed others playing on the features and organically joined in without needing an invitation. In one instance, an older child took the place of an adult as the designated spinner, running and jumping onto the merry-go-round as it picked up speed to the delight of the smaller children hanging on for dear life.

Figure 4.13. Seesaw and merry-go-round. Photos taken by the author with the permission of PlayGrand Adventures.

On the seesaw, children switched places as bouncers and riders to determine the best combination for maximum bounce. These features also invited imaginative play, with the merry-go-round serving as the base station for a few rounds of "the floor is lava" and the seesaw becoming a pirate ship attacked by sea monsters. If the goal is to bring people together, interactive features should be added to future phases to invite collaborative play.

The groups of visitors I observed at PlayGrand Adventures had different engagement styles. Some played with who they came with and some kids naturally befriended strangers. Some parents played, some followed along and coached from the ground, and some observed from a distance. These personalities stayed intact as visitors moved from feature to feature throughout the playground. The exceptions were with interactive equipment including large spinning features and the family seesaw, as discussed in the previous section. Table 4.1. illustrates the types of play personalities I observed across three categories: adults interacting with children, children interacting with children, and adults interacting with adults.

In summary, my observations supported many findings from the questionnaire and interview phases while also adding new discoveries. Visitors had different play styles at PlayGrand Adventures and utilized equipment in their own ways, demonstrating that PGA offers opportunities for all to enjoy. The variety of equipment kept lines short and visitors engaged, and some unique pieces of equipment encouraged collaborative play and inclusion.

Sub question 2: Donor Support of PlayGrand Adventures

This section focuses on the second research sub question, describing how donors support PlayGrand Adventures, highlighting data collected through the questionnaire and

follow-up semi-structures interviews. Responses indicate a willingness to support the

playground when opportunities are intuitive, timely, and easily accessible. However,

more support is needed, and funding continues to be a barrier to future expansion.

Table 4.1.

Human Interactions at PlayGrand Adventures

Adult and Child	Child and Child	Adult and Adult
Participant: The adult interacts with the child directly in a game or using a piece of equipment	Ringleader: The child actively recruits other children to join in games or engage with equipment	Players: Adult actively engage with the playground equipment without children present
Coach: The adult offers encouragement and guidance to the child but does not directly interact in the game or with the equipment	Joiner: The child joins a group of children to play a game or engage with a piece of equipment	Socializers: The adult actively converses with other adults
Observer: The adult watches the child but neither coaches nor directly engages	Helper: The child actively assists other children with playing a game or engaging with a piece of equipment	Observers: The adult notices other adults and exchanges a few pleasantries but does not actively engage in a conversation
Disengaged: The adult does not engage with the child unless the child is extremely persistent or needs immediate assistance	Observer: The child watches other children but does not join in a game or engage with a piece of equipment	Disengaged: The adult does not engage with other adults
	Disengaged: The child does not engage with other children	

All-abilities playgrounds require significant resources, including financial support

from community members. PlayGrand Adventures is managed by the city, but there is a

89

separate nonprofit organization to handle fundraising efforts. Money was raised for the first phase of the playground through corporate sponsorships, individual contributions, a tile-painting fundraiser, events, and an option to donate with water bill payments. While these methods have raised some funding, higher impact methods may be needed to secure the millions of dollars needed to complete and maintain the playground.

   Questionnaire. Twenty-nine of 72 questionnaire respondents donated to PlayGrand Adventures. Respondents who made donations online, by mail, and in person expressed that it was easy to donate once the options were known, but these types of donations require intrinsic motivation and action. There was some confusion around how to donate via water bills; clarifying this process could raise awareness and bring in more donors. The City of Grand Prairie team has added information about donating via water bill on the donation page on their website, but potential donors, again, must find the information on their own. Painting tiles brought in the most unique donors and helped people feel connected to the playground. This opportunity was engaging, creative, and immediately accessible to supporters through tile-painting stations at community events.
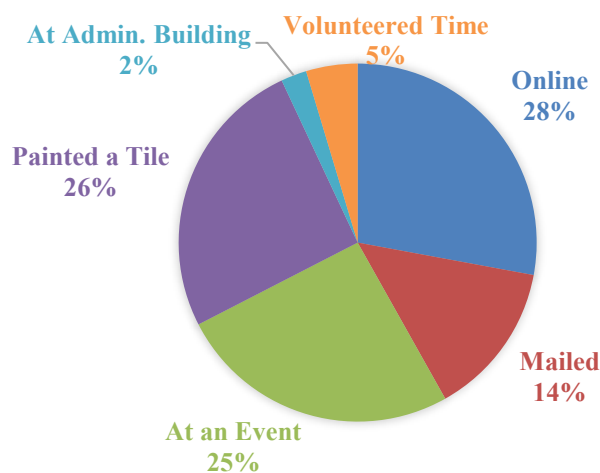
Figure 4.14. Types of donations.

Follow-up, semi-structured interviews. Semi-structured interviews provided an opportunity to learn more about fundraising opportunities and motivations for donating to PlayGrand Adventures. Most interview participants seemed to be at least moderately aware that donations could be made to PlayGrand Adventures, though most had not donated. Even with support from the community, funding has been and could likely continue to be a barrier to completing the remaining planned play zones.

Emotional connections and feelings of nostalgia drove several donors to contribute to PlayGrand Adventures. One participant shared that he learned about the playground through a friend and made a donation because he remembered spending summers playing on playgrounds with his sister. He said, "It's something I want to see keep going. And I know it takes nuts and bolts to keep a place like that going." Tile painting and a Miles for Smiles campaign with Grand Prairie Independent School District created significant community support and awareness while also raising some money to build the first phase of PlayGrand Adventures. In the Miles for Smiles campaign, students raised money through pledges; schools that raised the most were rewarded with a named bench at the playground (Figure 4.15.). One interview participant shared how her son built a lasting personal connection with PlayGrand Adventures through his work on the fundraising campaign, saying,

> I love the way that the local kiddos feel connected. [M]y son goes to the school for the highly gifted and they have a couple benches up there. But it's really neat to see the kids and other people are like, "Oh, that's my school. That's my bench. Oh, I remember that. It was at Miles for Smiles." Or like gluing and taping money to paper and whatever, you know, but years later for them being like, "Oh, we did this." So that's a creative way to get their little minds thinking about how would they fundraise in the future?

Another mother pointed out how much fun her family had searching for the tiles they painted when they visited PlayGrand Adventures (Figure 4.15.). She said, "You know it really did [make me feel connected]. And my son calls it his playground. So, I really like that, just the kind of sense of community and partnership in it."

Figure 4.15. Painted tiles and a named bench at PlayGrand Adventures. Photos taken by the author with the permission of PlayGrand Adventures.

Other donors expanded on the need for donation opportunities to be simple. I asked one man why he chose to send in a check by mail and he said, "Easy, right? Check!" This quick, get-it-done approach appealed to donors. I asked him about making a donation through his water bill and he said, "I doubt that very many people know that they can do that. To be quite honest with you, I don't know how to do it or I'd be doing it." He went on to say,

> We pay our water bill online and there's not like a little checkbox or something where it lets you make a check. It's all credit cards. I just pay with a credit card. But I've looked at that bill. And there's no place on that bill that that they send to me that there's a checkoff on there, or anything about PlayGrand Adventures. I think that there's something else in the city that you can donate to besides PlayGrand. It's not ideal either.

As mentioned in the earlier section on questionnaire responses, clarifying this process could lead to more donations. While there is now information on the PlayGrand Adventures website, instructions could be sent with water bills to make the process simpler.

Fundraising is challenging in the best of times, but the COVID-19 pandemic has made raising funds for playgrounds even harder. Donations that might have gone to PlayGrand Adventures went instead to relief initiatives. One interview participant familiar with the playground's financial needs said fundraising during COVID was difficult,

> Because there are a lot of people who right now are not eating. And so donation money tends to be going there, which I'm not, I'm not begrudging that for one minute. But that only means that there just aren't any bucks around. And that also means that the average mom and dad that might be giving ten or 15 dollars… a bunch of ten or 15 dollars can go a long way. But that's not going to be happening.

Another participant offered a different perspective. He agreed that COVID presented a fundraising challenge, but he felt the fundraising focus from the beginning should have been on opportunities to raise larger donations, such as a concert with a celebrity headline, rather than on grassroots efforts bringing in smaller donations.

As life gets back to normal and people start visiting the playground again, there is hope that fundraising efforts will be fruitful. Potential donors need to know that donations are needed, they need quick and easy ways to give, and they need to know that their donations make a difference. Raising this kind of support will take a committed team, including park board members. One member drew a comparison to a large park in another city, saying,

I think people know they can donate. I think that people need a little bit of help to donate. I think that they assume that the city is going to come up with that. And the city certainly has put forth a lot of time and effort and money toward it and I think they will continue to do so. But if you look at Klyde Warren Park, the city of Dallas did not build Klyde Warren Park. It takes private donations to get regional parks such as Klyde Warren Park and PlayGrand Adventures, to be the best it can be. But it can make such a difference in in so many people's lives. So there has to be a handful of people or groups of people who understand and want to do that, to donate. And our job, I think, is to find them. That's our job is to find those people who understand the need and are willing, have the discretionary funds and are willing and able to donate.

Now that the first phase has been built, she is hopeful the community will visit and be inspired to support the growth of PlayGrand Adventures.

On-site observations. While I could not observe donor behavior in the same way as visitor utilization, I did see evidence of the types of sponsorships available and the types of people and organizations who donated to PlayGrand Adventures (Figure 4.16.). As mentioned earlier, benches bore the names of a few local schools and individuals, several serving as memorials. A donor wall surrounding the playground features beautiful butterflies listing the names of individuals and corporations who sponsored PlayGrand Adventures. The sizes of the butterflies changed to reflect the size of the donation. I could see from the names that most donors were local businesses. Signs throughout the playground listed sponsors of various playscapes, pieces of equipment, and adventure zones. These donors reflected aligned interests to the work of PlayGrand Adventures, including medical facilities, like Baylor, Scott and White Orthopedic and Spine Hospital, general contractors like Hill and Wilson, and playground equipment manufacturers like Kompan. Several signs also listed "sponsorship available," alerting visitors to opportunities to support the playground financially.

94

Figure 4.16. *Donor recognition. Photos taken by the author with permission from PlayGrand Adventures.*

As mentioned in Chapter Two, donors respond to feeling a personal connection and seeing the benefit of their donations. PlayGrand Adventures built this connection by ensuring opportunities existed to be a part of the environment through tile painting and sponsorship opportunities. These fundraising initiatives are important for both financially sustaining the playground and encouraging visitation to see personalized benches, plaques, and tiles.

Sub question 3: Perception as a Driver of Engagement

This section focuses on the third research sub question, describing how perception drives engagement using data collected from the questionnaire, follow-up semi-structured

interviews, and select interactions and conversations collected during on-site observations. I scanned written responses and transcripts for perception words, coded them by hand, then sorted them into categories. I then connected these codes and categories to participant actions and behaviors to determine the impact of perception on visitation and donation decisions.

Questionnaire. The perception of PlayGrand Adventures is overwhelmingly positive (Figure 4.17), with questionnaire respondents describing it as "wonderful," a "game-changer," and "beautiful." Visitors are impressed and look forward to returning when the playground reopens after the COVID-19 pandemic. There is a sense of pride in the city for implementing such an innovative recreation space. This positive perception will certainly lead to increased visitation when people are once again able to visit PlayGrand Adventures.

Questionnaire respondents see PlayGrand Adventures as an excellent community resource for children and families. They appreciate that it is a free place to get outside and away from screens. Many celebrated that all ages and ability levels can play together at the playground, aiding social and cognitive development. Parents appreciate the opportunity for social interaction with each other and among their children. There is plenty of space, a good variety of features, and the playground is safe and convenient. There is also an opportunity to bring new visitors to the area, potentially increasing traffic to local businesses (Figure 4.17).
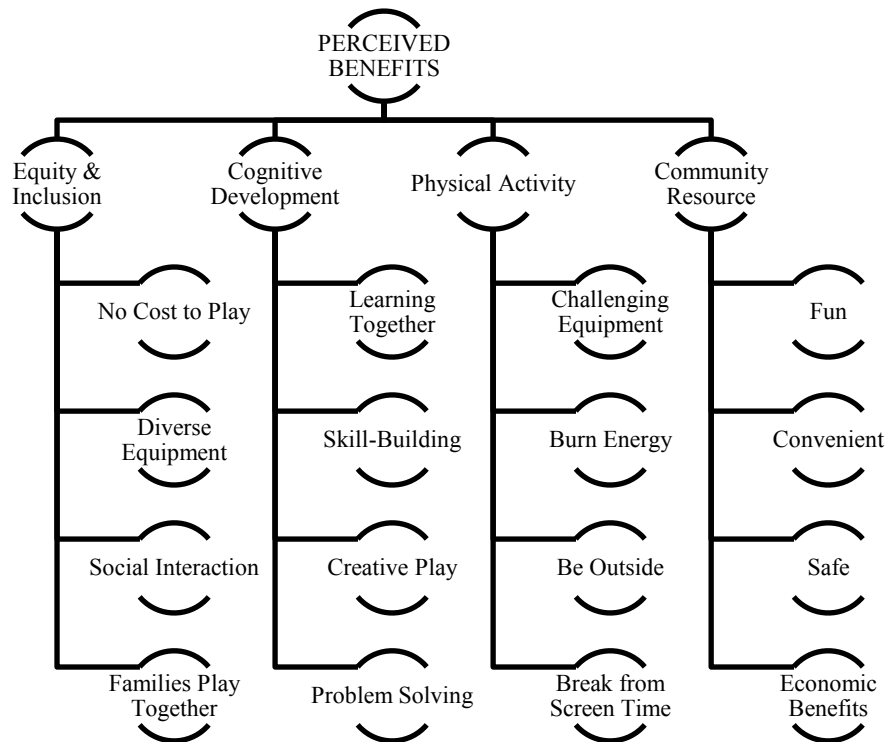
Figure 4.17. Perceived benefits of PlayGrand Adventures.

Follow-up semi-structured interviews. In semi-structured interviews, I asked questions about many of the perceptions I derived from the questionnaire responses. Playing together, the uniqueness of the design, and safety were themes that commonly bubbled up without prompting. While there are many places to play in Grand Prairie, PlayGrand Adventures is perceived as a better place to play safely. This positive perception motivated visitors to continue visiting PlayGrand Adventures.

Parents, especially mothers, commented frequently on how the equipment is designed so families can comfortably play together. One mentioned that PlayGrand Adventures is the only city playground that has equipment she can use with her toddler. Parents feel the equipment available allows them to bond with their children during play, an important step in childhood development (Milteer et al., 2012; Runcan et al., 2012).

This perception of bonding was felt even by playground visitors who did not still have young children. One man said,

> I think that face-to-face swing is, is something that someplace where a mother can interact with her child and, and when they're in that swing, and they're looking at each other, they're, they're smiling, and they're laughing, and they're talking back and forth. I just think it's a great bonding area for the children.

In addition to bonding, the ability to play with their kids allows parents with young children to run, play, and burn energy with their children. We all benefit from physical activity outdoors, and parents feel PlayGrand Adventures has the space and equipment to help tire busy children.

The positive perception of social interaction extended from parent-child interactions to more general social interactions outside the home. Participants mentioned words including "community," "interactive," "cooperative," and "social" many times when describing how PlayGrand Adventures differs from other playgrounds. One mother with a young son said, "I think that there's more opportunity for him to interact with different people" at PlayGrand because there is more space for him to run and more equipment he can use. Another mother echoed this sentiment, noting how the design and equipment offer motivate children to play together and socialize.

> I feel like because of the way it's designed, they do play a little more. A little more hands-on with other kids. It's like you've got for kids and two pushing [the merry-go-round]. Like, that's a lot different than being my myself at a regular park or just climbing. A lot of the stuff they have fosters a whole lot more, like, "come over here and push us" or that type of thing.

While merry-go-rounds and seesaws can be found at other playgrounds, interview participants specifically mentioned how much safer and more inclusive they perceived these features to be at PlayGrand Adventures.

Safety was a concern expressed by many parents, ranging from the locations of playgrounds, the surfacing and design, and the other people at the playground. Overall, PlayGrand is perceived as a safe place to play. Being in the Epic Central complex near the police station was important to several single mothers who participated in interviews. One said, "It's kind of nice being next to like a municipal space, where you know you're safe, right? Like, next to Prairie Paws, the police station, and everything. You just have that presumed higher level of, you know, safety." While the location felt safe to most, adults did express some worry about how they were perceived by other adults at the playground. One man did not use any of the equipment during his visit because he did not know if he was "supposed to." Another woman noted that although she could play with her children at PlayGrand Adventures, she did not do so when other children were using the same equipment. She saw this as a sign of respect for the other family, implying that you cannot automatically trust other adults. While feeling safe is a atter of perspective, all participants could agree on the safety of PlayGrand's design and surfacing. The poured-in-place rubber, low entry points, and scaffolded challenges helped children and parents feel comfortable. One mother said of her toddler, "I was feeling comfortable letting her loose at the playground with the higher slides. I definitely feel that the ground is safer for her." Children must take risks to learn boundaries and limits, and PlayGrand Adventures was perceived as a safe place to take those risks.

On-site observations. Much of what I perceived from my on-site observations of PlayGrand Adventures mirrored what I learned from the interviews and questionnaires. In regards to safety, parents seemed to feel comfortable letting their children play, fall, and get back up, and the children often recovered quickly from hitting the soft ground. A few

commented on how bouncy it felt. As participants noted, the merry-go-round and seesaw were indeed the items that invited the most collaboration. Children quickly learned they could spin faster and bounce higher with more people, so they joined others or invited others to join them. These interactions did not happen with slides, swings, or climbing structures. In fact, children lost interest in these items when they were too crowded or they had to wait in line, moving on to items they could enjoy immediately. The children moved quickly from item to item throughout the playground, seeming to me that they had a feeling of "so much to do, so little time". There was a sense of fun and happiness at PlayGrand Adventures. The only tears I saw were from children who were not ready to go home.

Perception motivates how individuals engage with situations, locations, and other individuals. Participants in this study valued safety, inclusiveness, and physical activity in the fresh air, all of which can be found at PlayGrand Adventures. The positive perception of PGA will surely motivate supporters to continue visiting the playground, encouraging others to visit, and making donations to support future developments.

Discussion

The purpose of this study was to understand community engagement at PlayGrand Adventures all-abilities playground through the lenses of Affordance Theory (Gibson, 1977) and Social Cognitive Theory (Bandura, 1986). Analyzing data on visitor utilization, donor support, and perception of the playground uncovered themes that will help playground leadership guide future development and sustainability. This section explores themes in each research sub question, emergent themes, connections to the theoretical frameworks and existing literature, and recommendations for multiple

audiences. While these discoveries are focused on engagement at PlayGrand Adventures, the implications reach outside of the playground and its supporters. All-abilities playgrounds benefit all ages, all abilities, and all locations.

Interpretation of the Data

The central research question in this study was designed as a response to two key barriers facing all-abilities playgrounds uncovered in my review of existing literature: engaged utilization and funding. My central research question was, "How do community members engage with PlayGrand Adventures?" It was supported by three sub questions:

1. How do visitors utilize PlayGrand Adventures?

2. How do donors support PlayGrand Adventures?

3. How does perception drive engagement?

All-abilities playgrounds are very expensive to build and are often misunderstood or underutilized (Stanton-Chapman & Schmidt, 2019). Understanding how and why community members engage as visitors and donors could provide valuable information as PlayGrand Adventures develops in the future.

The central question: How do community members engage with PlayGrand Adventures? While data analysis uncovered multiple engagement roles and styles, the overall theme of the findings is that community members engage as supporters of PlayGrand Adventures. Community participants in this study included City of Grand Prairie leadership, Parks Department board members, Grand Prairie residents, and PlayGrand Adventures visitors and donors. Every participant reported a positive perception of PlayGrand Adventures. Even those who offered specific criticisms were not

deterred from engagement and indeed offered suggestions out of love for the playground and a desire to see it grow and thrive.

While I embarked on this study defining engagement as visitation and financial support, as indicated by the first two sub questions, other themes emerged through the data collection and analysis processes. Both the visitors and donors also engaged as advocates and marketers of PlayGrand Adventures by telling their friends about the playground and inviting them to play. All instances of engagement were driven by the positive perception of PlayGrand Adventures as a safe, fun, inclusive place to connect and play outside. Community engagement through visitation, donation, and advocacy support PGA's continued development and sustainment by expanding the base of potential supporters. These themes are elucidated in the following sections.

Themes in sub question 1: How do visitors utilize PlayGrand Adventures?
Analysis of the data collected through multiple strategies uncovered several themes in visitor utilization:

- The environment is perceived as comfortable and safe.

- Inclusive equipment affords an opportunity for all visitors to play together.

- More parking, more bathrooms, and a place to purchase food would improve the visitor experience.

- Future phases should include new ways to play, not more of the same.

PlayGrand Adventures is a comfortable, safe environment for socialization, stimulation, and physical activity. Participants love the inclusive, safe design of PlayGrand Adventures. Parents can see their children no matter where they are in the playground, there is plenty of light, and the playground is visible from the street in a

well-developed part of town rather than being hidden away in more remote parts of the city. The large size of the playground provides plenty of space for groups to spread out and run around. Different areas ensure there is something for everyone to enjoy without spending too much time waiting for access to specific items. The playground is colorful, clean, and well-maintained, providing an inviting environment for sliding, swinging, spinning, and climbing. It is no wonder the environment of PlayGrand Adventures inspires repeat visits.

PlayGrand Adventures' intentional focus on inclusivity encourages all ages and ability levels to play together. Features like the family seesaw, merry go round, and face-to-face swing are favorites due to how they bring people together for collaborative play. The musical instruments are unique offerings for children to enjoy low-intensity creative play, and the cube tower and climbing nets provide a fun element of danger for those who prefer risky play.

Most participants love PlayGrand as it is, but amenities such as more parking, more bathrooms, and a place to purchase refreshments, a splash pad, more climbing features, and more features for preschool and early elementary children would improve the playground in future phases. These requests are not specifically inclusive; rather, they would improve any traditional playground.

Another suggestion is to diversify offerings for different age groups at PlayGrand Adventures. Amenities such as sports courts and fields, fitness trails with exercise equipment, and even more challenging equipment could entice older visitors, such as teenagers and adults. Teenagers currently play on the same equipment as younger kids, which can be overwhelming for little ones and their parents. Parents of younger children

appreciate Adventure Tots and the scaffolded challenges in other areas, but they noted there is not much for late preschool or early elementary children. Equipment offerings seem to jump from toddlers to older, more independent children, leaving a gap for those who want a bit more adventure and challenge in a confidence-building setting.

Likewise, parents of children with disabilities would appreciate an area that includes the same types of equipment in the existing areas in a separate, calmer space where their children can enjoy the amenities more comfortably. Two expressed needs for people with disabilities stand out for further consideration. Some of the adaptive features provide unique opportunities for play, but there are still restrictions due to the size. For example, the face-to-face swings are appealing, but they are too small to accommodate a child in leg braces without removing the mobility aid. There is also a need for an area where children with disabilities can play away from the hustle and bustle of the main playground on busy days. This supports the planned implantation of the forthcoming Tranquil Adventures zone.

Themes in sub question 2: How do donors support PlayGrand Adventures? Analysis of the data collected through multiple strategies uncovered several themes in donor behavior: Opportunities must be easy to understand to elicit donations.

- Grassroots community fundraisers can build personal connections.
- Large donors seek relevance.

Opportunities must be easily understood by potential donors. For example, it is very likely more people would make donations through their water bills if the process were clarified in both the online bill pay system and in paper bills. When prompted to make a donation, potential donors must be able to act with immediacy. Another theme is

104

that grassroots fundraising efforts, such as the tile-painting opportunities, are not likely to bring in large amounts of money, but they are very important in building personal connections to the playground that bring in visitors. People who painted tiles at events, for example, were excited to go hunt for their tiles at the playground. Likewise, donors who earned naming rights or recognition on the donor wall could go find their names in person. Finally, relevance matters to large donors.

Themes in sub question 3: How does perception drive engagement? Analysis of the data collected through multiple strategies uncovered several themes in perception as a motivator for engagement:

- PlayGrand Adventures is perceived primarily as safe and inclusive.

- These traits were valued by participants, thus motivating their support of PlayGrand Adventures.

Visitors and donors alike were impressed with PlayGrand Adventures. When I analyzed perception words across data sources, the two that sprang forward were "inclusive" and "safe" (Figure 4.18.). Similarly, "community," "different," "exciting," "fun," "unique," "diverse," and "accessible" reflect the perceptions of inclusion and engagement. Based on these themes, I can comfortably say that PlayGrand Adventures is meeting its goal of providing a safe, engaging place for people of all-abilities to play together.

Emergent Themes Beyond the Research Questions

Two additional themes emerged that speak to relevant issues beyond the initially stated research questions. However, the importance of these themes warrants devoting time to their discussion in this chapter. The first emergent theme relates to the impacts of

marketing efforts and visitation and sustainability. Themes in awareness indicate that the

design of PlayGrand Adventures created a positive perception that brought in as many

visitors as traditional marketing efforts and word-of-mouth in the community. The second

emergent theme relates to the impacts of COVID-19 on playgrounds and play habits.

Themes in the impact of COVID-19 indicate a strong desire for outdoor playgrounds as

spaces for safe socialization and escapism.

Figure 4.18. Perception words across data sources.

Creating awareness through marketing efforts. Before community members can

engage with an all-abilities playground, they must know it exists. While creating

awareness of PlayGrand Adventures was not a focused research question in this study,

participants provided information about how they learned of the playground in

questionnaire responses and follow-up interviews. Participants learned about PlayGrand Adventures through human connection, technology, outreach and marketing efforts, and proximity to the playground. These themes are detailed in Figure 4.19.

Many feel that people in Grand Prairie are aware of PlayGrand Adventures, but they are not sure how far awareness reaches outside of the city. There is a perception that PlayGrand Adventures is very beneficial to the local community with some protectiveness; residents love the playground and see the benefit for people with disabilities everywhere, but they like that it is not currently too crowded for their own children to play comfortably. If the goal is to be a destination playground, bringing in people from other locations, marketing efforts should reach outside the Dallas-Fort Worth metroplex.

Play in the time of COVID-19. The COVID-19 pandemic affected the spaces people played, their comfort levels in public spaces, and their perceptions of the necessity of closures. Most people understood why PlayGrand chose to close during the pandemic, noting how challenging it was to avoid others and keep your hands clean when using public equipment. Young children do not understand boundaries the same way older children and adults do. Others were angry about the closure, expressing that the public should be allowed to choose whether to attend based on their own comfort levels and fear of COVID-19. One believed that children were not at risk of contracting the virus, so it did not make sense to disallow them from the benefits of playing outside with others. Finally, there was a bit of confusion over why PlayGrand Adventures was closed for an extended period of time when other city playgrounds had reopened, but those with closer

ties to people with disabilities recognized the increased risk of death or permanent

symptoms of COVID-19 in this population (Gleason et al., 2021).
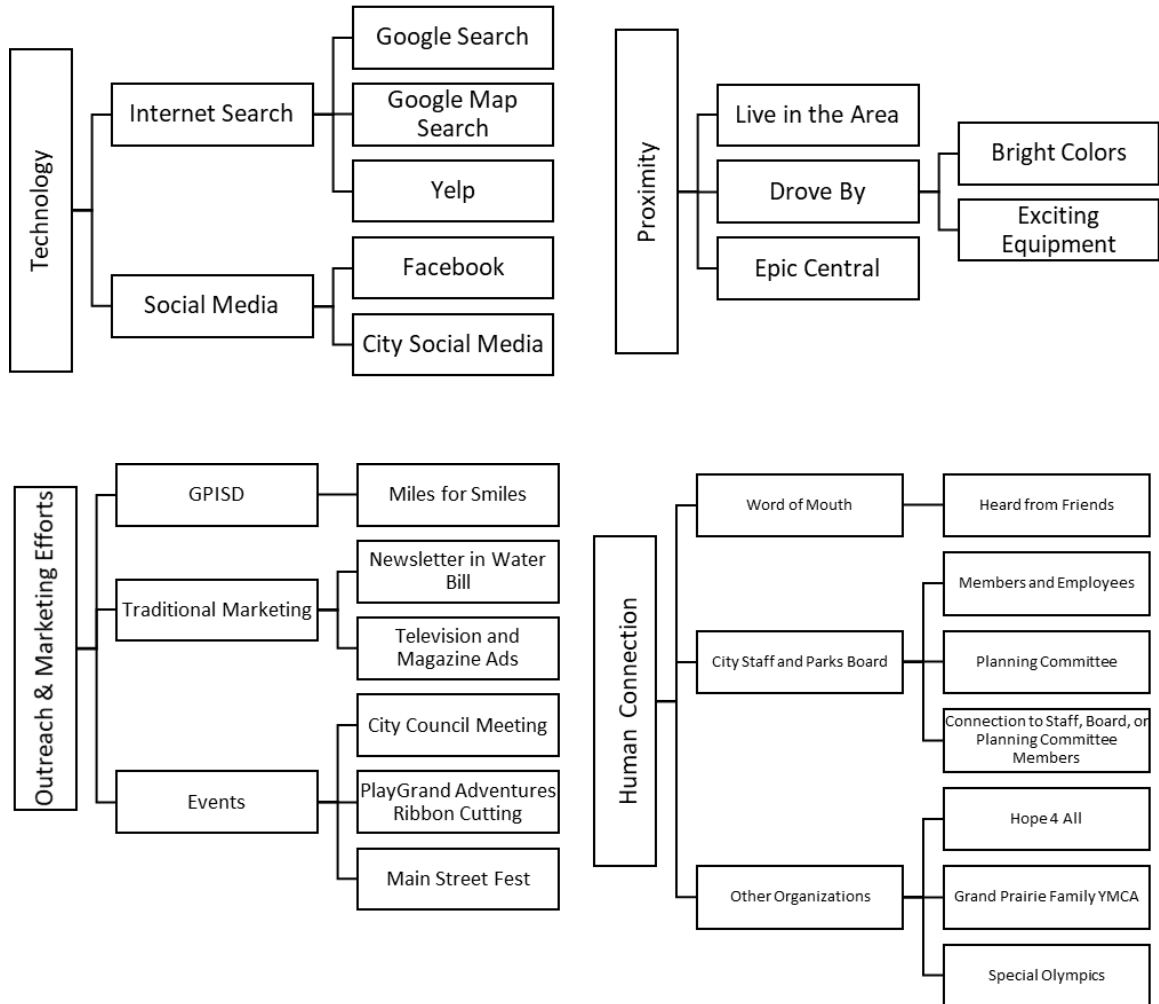
Figure 4.19. Themes in Marketing Awareness of PlayGrand Adventures.

Some parents worried their children were losing out on the social and cognitive

development from interacting with others. One mother expressed concern about the

lasting effects of the lockdown on her child's development and, indeed, her own, social

development.

[COVID] is a big stressor. But then at the same time, like, I also worry about her being at home and not being around other kids. Three is like a critical year, right? So like, missing out on all these, like, development milestones socially. So then it's like, okay, well, let's just go to the playground. You know, it's cool. It's outside. So there's like, balance.

I asked her if she felt these impacts were permanent, and she said,

I think there's permanently an impact. I think there's shift. I think my, at least for me, you know, even going to playgrounds and talking to other moms. I don't do that anymore. Because I don't want to get close to you. And now I almost feel like I've lost the skill. I think playgrounds, life will look a lot different. And I see parents standing on the edge way more now. Because just to be away from each other where we used to be all up in there with our kids. I think that's gonna stay. I think that's totally gonna stay.

She and other parents were glad to have PlayGrand as a place to enjoy in the times it was open for play, and they figured out how to keep their children engaged to the greatest extent possible. Some spent a lot of time playing in their yards, some took daily walks, and other visited playgrounds and recreation spaces that stayed open. All look forward to a time they can get back to normal, whatever that may look like in the future.

Framework Analyses and Existing Literature Connections

The findings from my data analysis aligned to Gibson's Affordance Theory, Bandura's Social Cognitive Theory and findings from my review of existing literature. While the design and offerings are static, people respond to these affordances in different ways based on perception, needs, and consequences. Increasing the variety of offerings for a diverse set of potential visitors ensures the greatest variety of affordances and increases positive perceptions, but there is a high financial cost to playgrounds striving to engage visitors of all ages and abilities.

Key themes and connections mentioned in this section are visualized in Figure 4.20. In addition to these themes, the figure depicts potential connections and

109

opportunities across categories. Evidence of Affordance Theory is in bolded and italicized font, evidence of Social Cognitive Theory is in bolded purple font, and evidence supporting both theories is bolded, italicized, and purple. Solid blue lines depict connections to themes, broken green lines with arrows depict opportunities, and broken red lines depict potential connections that could be explored through further research. Opportunities and potential connections are discussed in the *Implications* section.

Connections to Affordance Theory. Affordance Theory was evident in how visitors responded to the environment while visiting the playground. For example, design features such as handles and levers prompted even the youngest visitors to spin the wheels on the sensory wall. Likewise, the presence of mallets attached to the xylophones prompted visitors to play music. This evidence supports the argument that design influences perception and responsive action (Gibson, 1977; Gibson, 2015; Maier at al., 2009; Norman, 2013).

Equipment afforded different experiences for different users. As mentioned in a previous section, the unique sensation afforded by the roller slides was enjoyable for children but uncomfortable for adults. While meant to be slid down, many children also took advantage of the slides' usefulness as climbing ramps to other sections of equipment. Swings were used in various positions to suit the preferences and desired experiences of the user. Some sat on the swings as traditionally intended, some stood up with their feet on the seat for a different experience, and same lied on their bellies and used their feet to wind and unwind themselves for a spinning sensation. Benches were climbed on and jumped over during races and games and sometimes served as beds for

110

afternoon naps (Gibson, 1977; Gibson, 2015). These adaptations reflect both perceptible and hidden affordances (Gaver, 1991).

The relative size of equipment afforded different experiences. The best example of this is the central climbing structure. This structure is much easier to climb for taller users who can easily reach for the next support. It is still possible for smaller people to use, but they have to approach it in a different way. I witnessed one boy, who was about ten years old, spend several minutes helping smaller children up to the top of the structure. He had mastered his path and began coaching others based on his experience so they could join in on the fun. While the physical composition of the structure is static, affordances vary based on visitor characteristics and visitors observed during this study responded to the environment in different ways (Bandura, 2001; Gibson, 1977; Gibson, 2015).

Affordance Theory was also evident in the donor experience. As mentioned earlier, the most successful donation opportunities were easily understood and could be acted on with urgency. Opportunities that were confusing were quickly abandoned, while those that afforded a personal connection to the playground were embraced. The behaviors in this group of participants reflected existing findings in philanthropy research related to user experience, tangibility of altruism, and place attachment (Choy & Schlagwein, 2016; James, 2017; Swanson, 2013).

Connections to Social Cognitive Theory. Playgrounds are full of opportunities for people to test their limits and learn from consequences. Interacting with equipment and other people can be motivating or demotivating depending on the experience. I witnessed many children learning from their interactions at PlayGrand Adventures.

111

Benefits of Play for All Children

- **Aids in relationship-building** (Brown, 2010)
- Appropriate physical, social, and emotional development (Bundy et al., 2008; Deaver & Wright, 2018; Siu et al., 2017; Yılmaz & Soyer, 2018)
- **Autonomy and freedom help children learn how to take careful risks** (Bundy et al., 2008; Brussoni et al., 2012; Gill, 2018; Misra, 2018; Sandseter, 2009a; Sandseter, 2009b)
- Creates neural pathways critical for executive functioning and expression of emotion (Brown, 2010; Panskepp, 2007)
- Increases academic achievement, sleep, and attention (National Resource Center, 2018; Reimers & Knapp, 2017)
- **The presence of physical activity increases individual levels of physical activity in children** (Reimers at al., 2018)

Benefits of Play for People with Disabilities

- *Increased engagement and inclusion* (Roberts, 2005; Zahl et al., 2014)
- **Healthy development, destigmatization, positive relationship-building** (Frederick, 2017; Jones, 2004; Milteer et al., 2012; Runcan et al., 2012)
- **Shows students how to engage with their non-disabled peers** (Buchanan & Johnson, 2009, Hartzell et al., 2015; Movahedazarhouligh, 2018)

Barriers and Challenges

- *Efficiency is prioritized over inclusive elements in playground design* (Brussoni et al., 2012; Christensen & Morgan, 2003; Siu et al., 2017)
- *Exclusion of children with disabilities from play with other children due to unfamiliarity or anxiety* (Buchanan & Johnson, 2009)
- **Fear of litigation over playground injuries** (Siu et al., 2017)
- Inclusive playgrounds are more expensive and require more space (Roberts, 2005; Stanton-Chapman & Schmidt, 2019)
- *Misunderstanding and misuse of specialized equipment* (Siu et al., 2017)
- *More attention is given to physical disabilities in children due to visibility and design norms* (Fraser, 2018)
- Replication and innovation are challenging due to the lack of a roadmap and limited academic scholarship (Roberts, 2005; Zahl et al., 2014)

Community Engagement Opportunities

- *Corporate Social Responsibilty opportunities are plentiful and can lead to inclusive innovation and idea-sharing, but a framework is lacking* (George et al., 2012)
- **Educating the community about playgrounds leads to more engagement and correct utilization of equipment** (Deaver & Wright, 2018; Roberts, 2005; Siu et al., 2017; Zahl et al., 2014)
- **Engaging donor support through fundraising in the community** (Roberts, 2005; Zahl et al., 2014)
- **School partnerships raise awareness, build buy-in and involve the end user in decision** (Menconi & Grohmann, 2018; Siu et al., 2017)
- **Volunteers and donors must see the benefit to engage** (Swanson, 2013)

Legal and Moral Rights

- *ADA provides minimum standards that focus on physical disabilities, allow for inequitable resources, and have been historically favorable to employers and resource providers* (ADA of 1990; Roberts, 2005;)
- *ADA revisions provide more clarity around discrimination and implementation* (ADA of 2008)
- **Equipment manufacturers have a responsibility to educate and create inclusivie options** (No Fault, 2018; Stanton-Chapman & Schmidt, 2019)
- Rest, leisure, free participation in culture and society (U.N. Commission on Human Rights, 1990)
- *There is a difference between accessibility and inclusion, reflected in various playground designs* (Stanton-Chapman & Schmidt, 2019)

Affordance Theory   **Social Cognitive Theory**   Connection   Potential Connection   Opportunity
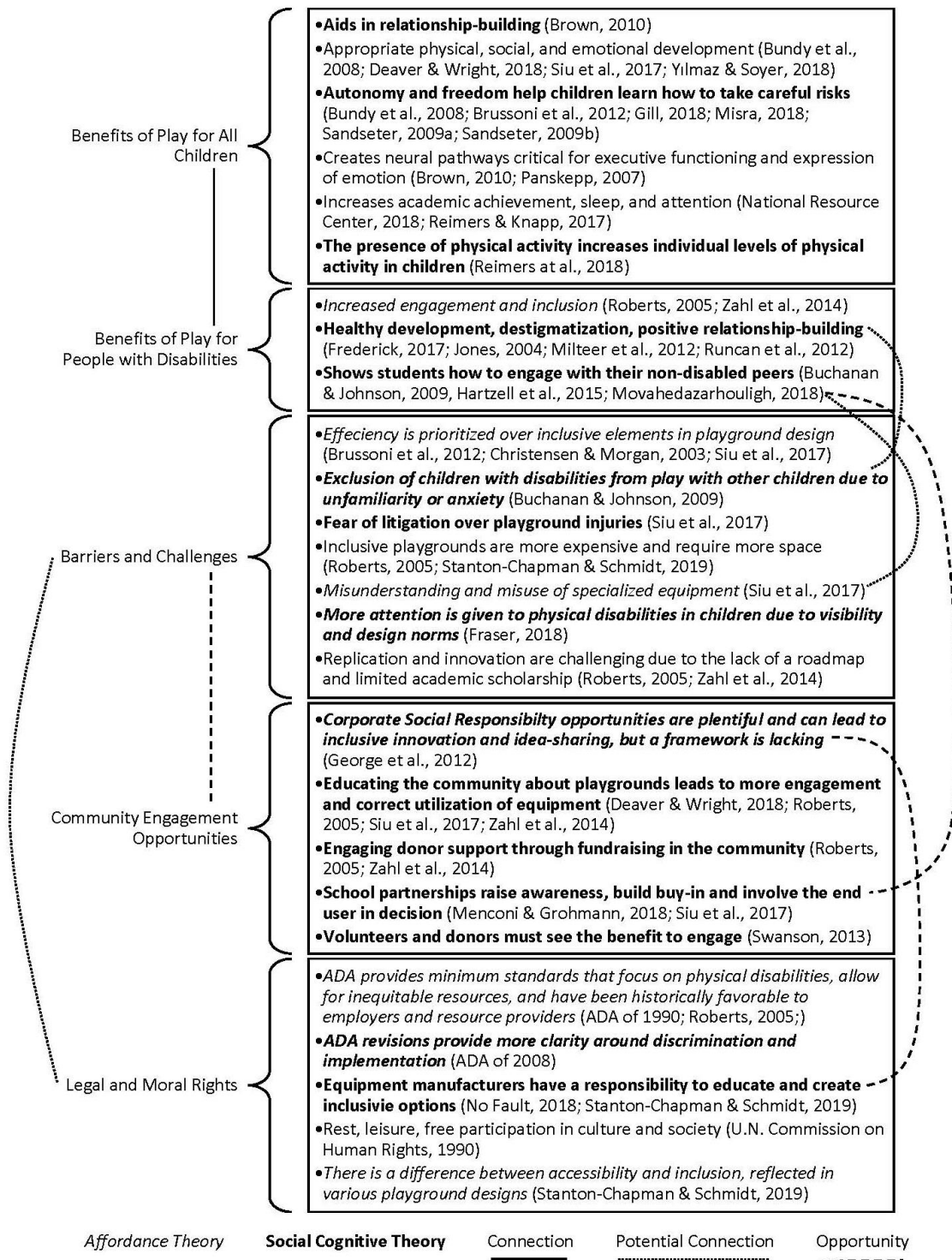
Figure 4.20. Connections to theoretical frameworks and existing literature.

Children had different experiences to falling when playing on the playground. While the surfacing is forgiving, some children moved on from certain pieces of equipment immediately after falling, while others adjusted their approach and tried again to master their task. Children had similar responses to the difficulty of certain challenges. Some children were not motivated to keep trying something if they were not quickly successful, while others tried again and again. I witnessed two young girls attempting to climb the hill to the Adventure Tots roller slide for several minutes. The first tried walking but did not make it very far, as the hill is relatively steep for a toddler. They then tried using their hands and feet, but with nothing to grip, this was not successful. Finally, the older girl succeeded by getting a running start and using momentum to propel herself up the hill. She then reached down to pull the other girl up the hill. After mastery, they slid down the slide and ran up the hill multiple times. This demonstrates their motivation to make it to the top of the hill, indicating they felt a payoff from their success (Bandura, 1989; Bandura, 2001; Merriam & Bierema, 2013; Ormrod, 2020).

I also witnessed Social Cognitive Theory in interactions between people at the playground. This was especially evident in adult-child interactions. In one instance of an adult serving as a coach for a child, a grandmother watched her granddaughter attempt to balance on a wobbly disk. The child tried jumping up and down but quickly fell off. When the child was unsuccessful in balancing after following her grandmother's prompts to change her strategy, she climbed down and began to move to another feature. Her grandmother got on the disk to model how to balance, then her granddaughter successfully repeated the action. Modeling is a hallmark of Social Cognitive Theory (Ormrod, 2020).

In a less positive example, I witnessed a very young toddler give up on getting his mother's attention after several attempts. He wanted to go down the roller slide but could not make it to the top on his own. He climbed up the hill as far as he could and went down the slide, smiling and vocalizing for his mother to watch; she did not look up from her phone. He stopped sliding and sat near her feet to play, still vocalizing and looking up at her, asking for attention. She still did not engage with him. After learning that his actions were not receiving the positive reinforcement he wanted, his mother's attention, the boy gave up and sat quietly on the bench beside his mother while she kept her attention on her phone. Learning from consequences is another hallmark of the theory (Ormrod, 2020).

Connections to existing literature. One of the key themes I uncovered when reviewing existing literature was that the benefits of play for people without disabilities were the same for people with disabilities, though people without disabilities do not have the same opportunities. By the same token, the benefits for people with disabilities were also benefits for people without disabilities. PlayGrand Adventures recognized this moral gap in services and created a place everyone can freely enjoy an opportunity to rest and play (U.N. Commission on Human Rights, 1990). The design team went well beyond the minimum standards of the law, focusing on inclusion rather than mere accessibility (National Center for Education Statistics, 2019; Stanton-Chapman & Schmidt, 2019; youth.gov, n.d.). The increased opportunities for inclusion and engagement allow all PlayGrand Adventures visitors to experience the developmental, physical, and social benefits of play. Children with and without disabilities can play together, decreasing stigmatization and "otherness" (Brown, 2010; Buchanan & Johnson, 2009; Bundy et al.,

2015; Deaver & Wright, 2018; Gill, 2018; Hartzell et al., 2015; Movahedazarhouligh, 2018; National Resource Center, 2018; Roberts, 2005; Siu et al., 2017; Yılmaz & Soyer, 2018; Zahl et al., 2014). Due to the size and design of features, parents can play together with their children, bonding and building strong relationships (Brown, 2010; Ginsburg, 2007; Milteer et al., 2012; Runcan et al., 2012). These milestones and growth opportunities are critical for all people, regardless of their abilities.

While providing the same benefits as other all-abilities playgrounds, PlayGrand Adventures also experienced many of the same challenges. Inclusive playgrounds are more expensive than traditional playgrounds and require more space (Roberts, 2005). PlayGrand has plenty of space, boasting a full ten acres, but funding has been a challenge. They have opted to build in phases while continuing fundraising efforts to complete the playground. Continuing to take a grassroots approach to building community support should help PGA build a base of engaged supporters, but targeting relevant corporate sponsors with opportunities to support the playground financially and with volunteers could lead to larger donations and increased awareness (City of Fort Wayne Parks & Recreation, n.d.; Deaver & Wright, 2018; George et al., 2012; Menconi & Grohmann, 2018; Roberts, 2005; Siu et al., 2017; Swanson, 2013; Zahl et al., 2014). Finally, safety is a priority at all-abilities playgrounds and some research indicated a hesitancy to incorporate all abilities due to the fear of injury and resulting litigation (Siu et al., 2017). PlayGrand Adventures has prioritized shared adventures while attending to safety through cushioned surfacing and signage on equipment that poses risks, such as the wheelchair swing.

Conclusion

PlayGrand Adventures exemplifies what is possible when playgrounds are intentionally designed for visitors of all ages and abilities. The PGA team mitigated some common challenges to creating all-abilities playgrounds by providing plenty of space, prioritizing inclusivity, and learning from existing inclusive playgrounds and equipment manufacturers (Brussoni et al., 2012; Christensen & Morgan, 2003; PlayGrand Adventures, 2020; Roberts, 2005; Siu et al., 2017; Zahl et al., 2014). This careful planning and research-based design created a place where every child has an opportunity to experience the social, emotional, and cognitive developmental benefits of play (Bundy et al., 2015; Deaver & Wright, 2018; Gill, 2018; National Resource Center, 2018; Siu et al., 2017; Yılmaz & Soyer, 2018). This individual development is critical, but PGA also allows opportunities for parent-child bonding, empathy-building, and destigmatization of disabilities as visitors of different ability levels and families play together (Buchanan & Johnson, 2009; Frederick, 2017; Hartzell et al., 2015; Jones, 2004; Milteer et al., 2012; Movahedazarhouligh, 2018; Runcan et al., 2012).

Participants highlighted these opportunities for collaborative, interactive play and unique inclusive equipment as strengths of PlayGrand Adventures, along with the perception of safety due to the design and location. Still, they recommended expanding features for five- to ten-year-old children as well as older teenagers and adults to provide even more opportunities for engagement. A separate tranquil zone would encourage play for those with sensory issues or aversions to noise and rambunctiousness. The playground us poised for expansion as long as funding becomes available; based on this group of participants, the community appears ready to support future growth.

116

Implications

Based on findings, PlayGrand Adventures has met a community need, but there are still opportunities to expand its' reach and offerings. The strengths, weaknesses, opportunities, and threats identified from the findings are depicted in the SWOT analysis in Figure 4.21. In general, the internal strengths provide a foundation on which to build and the internal weaknesses highlight needs to consider in future expansion. These strengths and weaknesses, along with external factors, lead to threats that should be considered in any expansion plan and opportunities to engage external stakeholders for the betterment of the whole community. Implications based on these factors extend to other playgrounds and into the community.

STRENGTHS
- Perception of safety
- Variety, diversity, and inclusiveness of equipment
- Interaction and Collaboration

WEAKNESSES
- Potential dangers
- Lacking equipment for 5-10 year olds
- Lacking equipment for older visitors
- Lacking quiet space

THREATS
- COVID-19
- Sustainability and Maintenance
- Competing recreation opportunities

OPPORTUNITIES
- Space rental
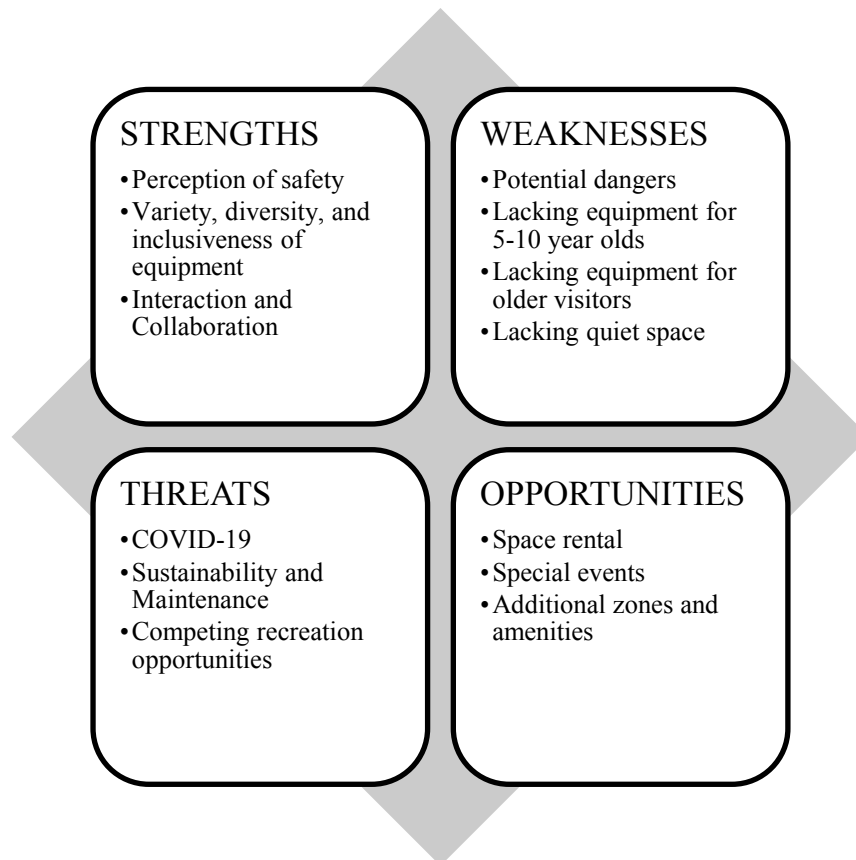- Special events
- Additional zones and amenities

Figure 4.21. PlayGrand Adventures SWOT analysis based on findings.

117

For PlayGrand Adventures

The perception of PlayGrand Adventures is overwhelmingly positive. It is seen as a safe, inclusive, collaborative place to play that is not like other playgrounds. There are plenty of amenities, such as shade and places to sit. The variety of equipment pleases many different ages and play styles while also providing opportunities for families to play together on the same equipment.

Initial participants in this study enjoy the playground environment in its current state, though there are a few trends to consider for future development. Forthcoming zones should continue to include a variety of features that engage people of all ability levels without calling attention to differences. However, new zones should not simply replicate what already exists; participants want new opportunities for climbing, swinging, sliding, and spinning. Designers should consider specifically engaging older visitors with sports, fitness, and intense challenge opportunities such as basketball hoops, an annotated fitness trail, or an obstacle course. Likewise, participants with elementary-aged children noted a gap in features for this population; they are too old for Adventure Tots but a bit young for some of the more challenging features in other play zones. Additional scaffolded challenges, such as tiered climbing features and zip lines, and all-ages equipment, including an overhead harp or mirror maze, would add opportunities. These features engage a new audience and also provide appropriate engagement for people seeking these experiences out on existing features.

Maintenance and sustainability must be considered for PlayGrand Adventures to continue to thrive. To maintain and sustain, PGA needs visitation and funding. This will require multi-pronged, thoughtful marketing and financial strategies that showcase the playground as a destination, demonstrate relevance, and build personal connections.

COVID-19 was the most significant threat to visitation due to extended closures and fear of transmission. Now that PGA has reopened, this fear could be mitigated with the addition of sanitization stations and a mask requirement to sustain visitation. Planned fundraising initiatives should continue, but leadership should also consider playground-based income generation. Several participants expressed a desire for somewhere to purchase refreshment, opportunities to rent picnic tables or play zones for parties, and special events for different communities including parents with toddlers, people with hearing or vision loss, singles nights, and fitness and enrichment classes. These opportunities create potential income streams. Finally, increasing communications about PlayGrand Adventures in new markets and media could bring in visitors and donors who are not aware of the playground and the opportunities to sustain and support its development. When potential visitors and donors are reached, they should be able to act quickly to make a donation or find more information about the playground, potentially through technology like QR codes that link to the PlayGrand Adventures website. Convenience is key in attracting and retaining the necessary support for continued growth and impact.

For Other Playgrounds

In considering the data from PlayGrand Adventures, there are a few key strategies other playgrounds could follow to design, fund, and attract visitors to their own inclusive offerings. First, there are a few key features that provide benefits everyone who visits a playground regardless of their ability level. The first is high-quality, forgiving surfacing such as poured-in-place rubber. Good surfacing is more expensive, but it prevents injury and provides a more comfortable experience for all visitors. The second is the in-ground

merry-go-round. This feature is inclusive for people who use mobility devices, but it is also safer for users without disabilities. Since it is flush with the ground, there is no risk of users falling off and under it, preventing injuries. Finally, building slides into hills or as connections between two levels removes the need for a ladder. This creates an opportunity for people who use mobility devices, but it also makes it easier for visitors who are very young or very old and for parents who no longer need to carry small children up ladders or stairs.

Raising and sustaining support for playgrounds requires engagement through both funding and visitation. Partnering with schools and businesses is one way to increase both awareness and donations. Many large corporations have Corporate Social Responsibility programs that provide funding and volunteers for projects like all-abilities playgrounds, and school partnerships build direct connections with likely visitors. For example, PlayGrand Adventures partnered with Grand Prairie Independent School District on Miles for Smiles to raise funds, build awareness, and create personal connections to the playground. New projects should be mindful of balancing the need for large donations with the need for creating grassroots support in the community.

Finally, while the all-abilities playground movement is growing, there is still a gap in understanding the problem and the potential solutions. PlayGrand Adventures wisely sought out exemplar playgrounds when planning their design. I recommend that others wishing to build new all-inclusive playgrounds, or those wishing to make existing playgrounds more inclusive, learn from those that have gone before them. Many are willing to help others learn from their experiences.

For Other Communities

This study focused on a large city playground, but play spaces are found in schools, churches, airports, libraries, doctors' office, and more. These locations do not exist primarily as places for play, but they demonstrate an awareness of the need for play spaces when adding them to their buildings. Often, the equipment and toys offered are for very young children, with opportunities disappearing as children leave elementary school. While these private spaces are not held to the same legal standard as city parks and public spaces, adding even one piece of inclusive or all-ages equipment would show support for people with disabilities and invite them to play (McGovern, 2015). In outdoor spaces, this might mean replacing traditional merry-go-rounds with in-ground versions or adding a harness swing. In smaller or indoor spaces, sensory wheels, instruments with responsive lights, and funhouse mirrors can be enjoyed by anyone.

Outside of playground design and construction, there are many opportunities for businesses, schools, and other communities to partner with playgrounds. PlayGrand has partnered with Grand Prairie Independent School District to develop curriculum to use on the playground and other schools have contributed to playground design. Including children's ideas in design ensures equipment is engaging and relevant. In the same vein, engineering, architecture, and landscape design students could benefit from opportunities to help design real playground projects (Menconi & Grohmann, 2018; Roberts, 2005; Siu et al., 2017). At all-abilities playgrounds, medical professionals could utilize the spaces for physical, recreational, occupational, or play therapy (Bundy et al., 2008; Wilson & Ray, 2018). Fitness professionals could even take exercise out of the gym and onto the playground for fresh air and to remind adults of the joy of playgrounds (Cohen et al., 2007; Frumkin et al., 2017; Twohig-Bennett & Jones, 2018)! Social Corporate

121

Responsibility programs at large corporations provide funding and volunteers for playground clean-up and maintenance, as do smaller groups like churches, community volunteer clubs, and scout troops. These partnerships build personal connections that lead to further support (City of Fort Wayne Parks & Recreation, n.d.; George et al., 2012; Swanson, 2013). Finally, families without disabilities can play together with visitors with disabilities to learn how to engage together, increase empathy, and build positive relationships (Buchanan & Johnson, 2009; Frederick, 2017; Hartzell et al., 2015; Jones, 2004; Milteer et al., 2012; Movahedazarhouligh, 2018; Rubin et al., 2014; Runcan et al., 2012). Community engagement at all levels helps sustain and expand play opportunities, while also introducing opportunities for further study to deepen academic understanding of all-abilities playgrounds.

Further Research

This playground study has certainly left me with more questions than answers; there is always more to uncover through inquiry and research. Evolving research questions could explore different angles, more playgrounds, and other challenges facing people with disabilities as they navigate a world designed for people without the same challenges. Understanding how the community interacts with the playground was the first step in what could be the development of a complete roadmap to replicating the design and implementation of all-abilities playgrounds in cities across the country. People want to give others opportunities, but they need to experience the benefits themselves and see a practical way to make things happen (Inclusion Matters by Shane's Inspiration, 2019; Zahl et al., 2014). Further research is recommended to expand deep understanding of inclusive playgrounds including additional case studies in other geographical locations,

convergent or explanatory mixed methods designs to expand understanding of frequencies and significance of variables, and exploratory mixed methods designs to contribute evaluation tools to measure the impact of inclusive playgrounds in different settings (Creswell & Plano Clark, 2017). Opportunities also exist to explore the impact of community engagement initiatives on playground sustainment, playground partnerships, and therapeutic recreation on playgrounds. With more research available to interested readers, the practicality of designing and building inclusive playgrounds may seem within reach for more cities.

Expanding this case study into a larger body of work will require additional research such as case studies in other geographical locations, convergent or explanatory mixed methods designs to expand understanding of frequencies and significance of variables, and exploratory mixed methods designs to contribute evaluation tools to measure the impact of inclusive playgrounds in different settings (Creswell & Plano Clark, 2017). The iterative research process in this study was informed by learnings along the way, and the participants guided some of the process, hinting at a participatory social justice design that could develop in follow-up studies (Creswell & Plano Clark, 2017). With more research available to interested readers, the practicality of designing and building inclusive playgrounds may seem within reach for more cities, moving towards increased equity in our cities and improving academic understanding of an important emerging field.

Conclusion

This research design culminates in recommendations influenced by the data, existing literature, participant perspectives, and my own evidence-based perceptions. This

research shines a light on the specific themes emerging from this playground to recommend future development strategies, but addressing the common challenges could begin an excavation of universal solutions. While the scope of this case study is limited to PlayGrand Adventures, recommendations and findings could prove useful to other city leaders interested in conducting their own studies or building their own inclusive playgrounds.

CHAPTER FIVE

Distribution of Findings

Executive Summary

This illustrative qualitative case study seeks to understand how the community

engages with and perceives PlayGrand Adventures all-abilities playground in Grand

Prairie, Texas. I answer the central research question, "How do community members

engage with PlayGrand Adventures?" by exploring three sub questions: (1) How do

visitors utilize PlayGrand Adventures?", (2) How do donors support PlayGrand

Adventures?", and (3) How does community perception of PlayGrand Adventures drive

engagement?" These questions uncover information that will help PlayGrand Adventures

continue responding to community needs, raising funds for development and sustainment,

and proving a place everyone can play together regardless of ability level.

People with disabilities are often stigmatized, underserved, and left out of

experiences including opportunities to fully enjoy public playgrounds. Inclusive

playgrounds address these issues by providing equitable play opportunities for everyone.

Play helps all children develop physically, socially, emotionally and intellectually and

builds confidence, creativity, and empathy (Clarke, 2018; Deaver & Wright, 2018;

Yılmaz & Soyer, 2018). Inclusive playgrounds address gaps in services for people with

disabilities, but they are limited, expensive, misunderstood or misused, and often do not

invite play among people with all ability levels, (Stanton-Chapman et al., 2020; Sui et al.,

2017). There is little scholarship on inclusive playgrounds in the United States that goes

beyond examining how children play. No thorough case studies incorporating utilization,

perception, and engagement were found during the literature review; therefore, this illustrative case study addressing perception and engagement fills a gap in the literature and provides a guide for replication in other cities.

Overview of Data Collection and Analysis Procedures

This case study utilizes a qualitative design to explore one playground, offering thick description and contextual explanation of how visitors, donors, and other supports interact with the playground, both in person and virtually (Creswell & Poth, 2018). This in-depth exploration is limited to one location, bound by time, and utilizes multiple qualitative data collection and analysis strategies (Yin, 2017). I approached this study as an outsider with no formal connections to PlayGrand Adventures or the city of Grand Prairie. The pragmatic constructivist design provided a problem-centered, real-world orientation within the playground to better understand the reality of participants' utilization, perceptions, and experiences.

Gibson's Affordance Theory (1979) and Bandura's Social Cognitive Theory (1986) provide frameworks for data collection and analysis, specifically the roles of perception and reciprocal causation in decision making, resource utilization, and engagement behaviors. In his Affordance Theory, Gibson posited that our perception of environmental clues leads to certain actions (Gibson, 2015). Bandura's Social Cognitive Theory addressed the impact of motivation, personal agency, and reciprocity on self-efficacy, self-regulation, social comparisons, and how we change—or influence others to change—our actions and environments (Schunk & DiBenedetto, 2019). Both theories were observed on the playground and through discussions about playground utilization, donations, and perceptions.

I collected data through three methods: an online questionnaire, follow-up semi-structured interviews, and on-site observations at PlayGrand Adventures. The questionnaire was posted on the PlayGrand Adventures website and Facebook pages, eliciting responses from individuals who had some connection to or knowledge of the playground. I contacted questionnaire respondents who indicated a willingness to participate in an interview to learn more about their utilization and support of PlayGrand Adventures. Finally, I conducted observations at the playground on various days and times to note how visitors interacted with the equipment, as well as other visitors.

I followed Creswell and Poth's data spiral to analyze the data (2018). I transcribed and organized the data by collection strategy and question, noted key words and evidence, and open coded by hand to discover emergent themes. I then visualized the themes for each data collection strategy to identify overarching themes across categories. These big ideas informed recommendations for PlayGrand Adventures and other playgrounds wishing to be more inclusive.

Summary of Key Findings

Through my data collection and analysis process, I uncovered several key findings about PlayGrand Adventures. Firstly, visitors with and without disabilities share many values: safety, inclusion, and socialization. Secondly, donors respond to opportunities that are easily understood, immediately actionable, relevant, and offer a personal connection. Finally, PlayGrand Adventures is perceived as an engaging, safe, unique playground that motivates support via visitation and donation.

Sub question 1: How do visitors utilize PlayGrand Adventures? Visitors to PlayGrand Adventures are satisfied with the equipment and amenities at the playground,

127

praising the quantity, variety, and intentional inclusivity of features. The most-mentioned equipment were the family seesaw, in-ground merry-go-round, and inclusive swings. Visitors noted the unique experiences provided by these features, especially the ability for families to play together due to the size- and ability-inclusive designs. Safety was another important factor. Parents, especially mothers, appreciated the soft, cushioned surface for injury prevention and the thoughtful design and arrangement of features to promote high visibility from multiple vantage points. This attention to detail made PlayGrand Adventures stand out as a great place for families to play.

Sub question 2: How do donors support PlayGrand Adventures? The key themes in donor motivation proved to be relevance and connection. During on-site observations, I noticed that many of the large donors shared an affinity with PlayGrand Adventures, including location, healthcare, engineering, or design. On the other hand, less lucrative, tile-painting opportunities provided a direct connection between donors and PlayGrand Adventures, prompting visitation. All-abilities playgrounds are expensive to build and maintain, so PlayGrand Adventures was wise to diversify donation opportunities to attract and reward different levels of engagement. Both large and small donors are needed to maintain and sustain large, innovative playgrounds like PlayGrand Adventures.

Sub question 3: How does community perception of PlayGrand Adventures drive engagement? Common words used to describe PlayGrand Adventures were "safe," "fun," "inclusive", and "different." These words show what visitors and donors value in the playgrounds they visit and financially support. The perception of safety applied to every aspect of PlayGrand Adventures, including the location, the surfacing, the sightlines, the

well-lit parking lot, and the vast majority of equipment. Parents were comfortable letting their children play at PlayGrand Adventures. In addition to safety, participants valued PlayGrand Adventures as a place everyone could have fun playing together, setting the playground apart from other places to play in the area. This was critical for families impacted by disabilities, but families with typically-developing children also noted the importance of exposure to different people and collaborative play in building empathy for others and decreasing the stigma associated with differences.

Informed Recommendations

While this study focused on PlayGrand Adventures the aforementioned findings have implications that extend to other stakeholders. These include communities aspiring to build similar playgrounds, families who visit playgrounds, and potential playground partners. These implications informed recommendations on design, funding, community engagement, and future research.

PlayGrand Adventures. Based on findings, PlayGrand Adventures is on the right track with the design, features, and amenities. Continuing the expansion as planned will offer new zones to accommodate new age groups and sensory needs that did not receive attention in the first phase. Participants noted that children love to climb, so adding additional climbing features will satisfy that desire. Participants also loved the collaborative, inclusive equipment that encouraged collaborative play and features that could be enjoyed by the whole family regardless of age or ability level. Some specific suggestions included a laser harp, splash pad, and mirror maze. These features could be enjoyed by everyone and diversify the offerings at the playground.

As support continues to grow, the PlayGrand Adventures team should strive to balance the attention given to grassroots efforts and targeting larger corporate donors. Large donations are necessary for funding the expensive equipment, but peer-to-peer fundraising opportunities and creative campaigns like painting tiles build critical community-level support. Playgrounds need both large donors and community visitors to thrive. With PlayGrand's goal of becoming a destination, keeping supporters engaged at all levels will encourage individuals to spread awareness about the playground, in turn bringing in more visitors and financial supporters.

Finally, PlayGrand Adventures should consider increasing opportunities for community engagement outside of general visitation and sponsorships. This could include volunteer opportunities such as playground clean-ups, playground information providers, or Best Buddies-type play partners. Other opportunities include educational presentations on topics related to all-abilities playgrounds, social events for affinity groups, or city-sponsored events and festivals.

Communities aspiring to build similar playgrounds. There are significant hurdles to building all-abilities playgrounds including space, funding, and ensuring the design is engaging for multiple audiences. Cities wishing to replicate Grand Prairie's vision of PlayGrand Adventures would be wise to learn from those who have come before them. The PlayGrand team visited several inclusive playgrounds and consulted inclusive playground equipment manufacturers when planning their own playground, which informed their design and implementation.

While seamlessly integrated all-abilities playgrounds might be impractical for smaller parks and private spaces, there are a few changes existing playgrounds could

make that would benefit visitors with and without disabilities. Based on findings at PlayGrand, upgrading to poured-in-place rubber surfacing in place of wood chips or other surfacing would prevent injuries and increase perceptions of safety. Likewise, in-ground merry-go-rounds are not only accessible, but also safer than traditional counterparts. Finally, there are many playground equipment options that can be enjoyed by everyone including spinning sensory wheels, musical instruments with responsive lights, funhouse mirrors, and splash pads. Investing in these items could prove to have a higher return on financial and space investment than highly-specific inclusive equipment.

Families who visit playgrounds. Playgrounds can be a place of bonding and learning for families. I observed parents engaged with their children at different levels, but research indicates child-parent interaction is critical for appropriate attachment, development, and learning. There are many activities parents can enjoy with their children on any playground like pushing them on the swings, spinning them on the merry-go-round, helping them climb, or simply racing or playing catch. However, all-abilities playgrounds with family-sized equipment makes these opportunities more accessible and comfortable for adults. In addition to playing together, playgrounds provide a real-life classroom for teaching children empathy, how to appropriately interact with others, and how to understand disabilities.

Potential playground partners. Playgrounds can exist without external partnerships, but engaging through formal connections can increase awareness, sustainability, and growth opportunities. School partnerships might include fundraising opportunities or curriculum development for field trips as in the case of PlayGrand

131

Adventures. Corporate Social Responsibility programs and community clubs could be sources of funding and volunteers. Partnerships with medical providers could lead to greater awareness, educational opportunities, and treatment in a novel location. While these partnerships help day-to-day playground operations, they can also build relationships and personal connections that develop lifelong supporters.

Future research. Continued research on PlayGrand Adventures and other topics is necessary to increase the depth of academic scholarship on all-abilities playground. As they say, knowledge is power. Next steps with PlayGrand Adventures could include comparisons to other all-abilities playgrounds or comparisons between how visitors engage at PlayGrand Adventures versus other Grand Prairie municipal playgrounds. Both would deepen understanding of how citizens utilize these spaces. Other opportunities that emerged through my data collection and analysis processes were understanding why adults stop playing, play preferences of different groups, the efficacy of school-designed playground-based curriculum, how empathy is learned on all-abilities playgrounds, and the impact of COVID-19 on play habits.

Proposed Distribution of Findings

While the immediate distribution of findings focused on the PlayGrand Adventures leadership team and Grand Prairie, Texas community, this study has implications for a wider audience. I plan to target multiple audiences and venues to share the success of PlayGrand Adventures in hopes of inspiring other cities to replicate the inclusive design, creating more opportunities for people of all abilities to play together.

My primary target audience is the PlayGrand Adventures leadership team. This includes City of Grand Prairie Parks, Arts, and Recreation Department staff and board members, city leaders including the City Manager and Deputy City Manager, and PlayGrand Adventures Phase 2 planning committee. Secondary target audiences include PlayGrand Adventures visitors, Grand Prairie residents, leaders in neighboring cities, school leaders, and organizations, like the YMCA, that have playgrounds that could be made more inclusive. Finally, there are implications of this study that reach into other fields, such as developmental psychology, health and wellness, and landscape architecture. While not the target audience, the information could be valuable, especially if further developed with additional research. Potential audience members include academic researchers, playground equipment manufacturers and designers, healthcare professionals, special education educators, and nonprofit organizations.

Proposed Distribution Methods and Venues

I have previously distributed the findings via multiple venues. First, I shared interim reports with Parks Department leaders in November 2020 and January 2021. I then presented interim findings in a presentation at the Baylor Emerging Research Conference in February 2021. Next, I created a brief video about PlayGrand Adventures and my study that was published publicly on social media channels for nonprofit organization Hope 4 All, a supporter of PlayGrand Adventures. At the end of April, I facilitated a panel discussion with a PlayGrand Adventures' board member and a mother with disabilities at the Southeastern Universities Graduate Research Symposium. Finally, an article focused on the visitor utilization component of this study was published as

"Fair Play: A Qualitative Exploration of Visitor Behavior at PlayGrand Adventures All-Abilities Playground" in the X issue of X volume of *Impacting Education: Journal on Transforming Professional Practice* (Bunn et al., 2021). I plan to formally present my findings to PlayGrand Adventures leadership in May 2021 and hope to follow this with a presentation at a city council meeting. I will also continue to seek out opportunities for professional presentations and publications in relevant venues such as the American Therapeutic Recreation Association, *Journal of Outdoor Recreation and Tourism, Journal of Park and Recreation Administration,* National Recreation and Park Association, *Parks and Recreation Magazine, Therapeutic Recreation* Journal, U.S. Play Coalition, and state and local parks and recreation societies.

Distribution Materials

    I created two interim reports for PlayGrand Adventures leadership, a PowerPoint presentation for the Baylor Emerging Research Conference, the aforementioned journal article, and the aforementioned video published on social media. These materials will serve as models and templates. For upcoming opportunities, I will create a final report, an updated slide deck, and targeted journal articles.

<div align="center">

Conclusion

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    I believe providing inferior play opportunities to people with disabilities inhibits their development and contributes to stigmatization. I also believe that people want to and will help others when there is a clear and practical pathway to do so. People who encounter inclusive playgrounds often become interested in replicating the designs, but there is a lack of consistency in classifications, information, and a clear process for building such playgrounds (Roberts, 2005; Stanton-Chapman & Schmidt, 2019). This

study leads to specific recommendations that will enable the PlayGrand Adventures leadership to understand and address the needs of the community in future implementation phases while also providing guidance for other cities who wish to create all-abilities play opportunities.

Recently, my friend Katie shared the difficulties she has playing with her three-year-old at the playground. Katie is a twentysomething entrepreneur raising an only daughter in rural Texas. There are not many other little girls her daughter's age in her neighborhood, so Katie is her primary playmate. Katie also has multiple sclerosis. She has begun using a cane and will eventually need a wheelchair. Her disability has forced her to give up things she loves like running and being on her feet all day selling her homemade hand pies at festivals. Now, it is robbing her of her ability to play with her daughter. She said,

> I can only take Adeline to the park for an hour or so because I can't stand very long and everything to sit on is painful. I usually sit on a swing but that means I can't follow Adeline around and interact like I want to. And if I bring a wheelchair or walker it still doesn't do me any good because it's not accessible. Disability just overall affects human interaction in our society and it shouldn't be that way.

Katie deserves to play with her daughter and at playgrounds like PlayGrand Adventures she can. As she said, these all-abilities playgrounds are not just providing places for children to play. They are places of human interaction, socialization, and engagement. What would it be like for Katie to play with her daughter like any other parent? What would it be like for Katie to meet with a group of other mothers with disabilities to engage in conversations and connect while their children play together? What would it be like for others to learn from Katie how disability affects her life but has not robbed her of

135

her ambition, success, or joy? Katie and I cannot wait to find out. PlayGrand Adventures

and other all-abilities playgrounds are making this vision a reality.

APPENDICES

APPENDIX A

PlayGrand Adventures Play Zones

Table A.1

PlayGrand Adventures Play Zones

Zone	Description
Adventure Zone	Adventure Zone provides the highest intensity play for all ability levels, featuring vibrant and whimsical play equipment and a wide variety of play opportunities, such as climbing, swinging, and spinning. Abundant shade and areas to socialize are spaced throughout the play area. This zone includes a play area specifically designed for toddlers with separated activities on a miniature scale.
Adventure Challenge	Adventure Challenge provides extreme challenge and discovery levels for visitors. Elevated play events that bridge between towers encourage cooperation between peers to promote success. Flying through the air on a zip-rail will give the sense of freedom and exhilaration, the opportunity to challenge one's self, and return to their original starting point. Younger visitors will be challenged with unique play equipment that enhances balance, spin control and agility.
Adventure Hill	Adventure Hill provides visitors of all abilities the opportunity to experience varying heights and physical challenges at new levels. The playground will accommodate spinning, sliding, climbing and learning activities in ways traditional playgrounds cannot offer. Challenging opportunities expand as one climbs the "Hill".
Adventure Sports	The Adventure Sports zone is a recreational hub for a variety of sports and activities. Its' miniature fields will accommodate all things sports, from basketball, baseball and softball to soccer and football with unstructured, imaginative play. A Challenge Course encourages "ninjas" to compete against each other, train and rehabilitate.
Adventure Stars	Adventures Stars provides a unique venue for creative performances for children and adults of all abilities, with a variety of quality outdoor musical instruments producing outstanding tones, beats and harmonies. An outdoor accessible stage and seating area provides a venue for performers to showcase their talents.

138

Zone	Description
Adventure Village	Adventure Village will reflect daily life in Grand Prairie. With miniature sponsored everyday life destinations, city landmarks, streets and sidewalks. Visitors to this zone can learn and practice general bicycle and pedestrian transportation safety in a realistic, miniaturized and controlled environment.
Natural Adventures	Natural Adventures connects an existing lake and interactive water features where children and adults will interact and learn hydrology, biology, and environmental awareness. The Natural Adventures play area will be an extension of Woodland Adventures and Wild Adventures and its use of the natural environment as play opportunities.
Tranquil Adventures	Tranquil Adventures will offer a passive place intended for gathering and repose; where over stimulation and excitement can be calmed with imaginary play, while maintaining a social atmosphere that might encourage personal interaction. This zone offers whimsical playhouses, a sensory art wall, spinning and a play hill enclosed in a separated but open zone, that will allow an individual to maintain their attention to their tasks which is so important in play.
Woodland Adventures	Located on the edge of a protected stream corridor, Woodland Adventures focuses on connecting children and adults to nature. Woodland emphasizes natural materials and includes play features of stone, wood, and sand. A treehouse-like structure adjacent to the natural creek corridor provides elevated views for children and adults alike. With access to natural surface trails users will "Explore", "Identify" and be "Conscious" of their natural environment.

Note. All text is reprinted directly from www.playgrandadventures.com.

APPENDIX B

Questionnaire Questions

1. You are invited to participate in a web-based online questionnaire on PlayGrand Adventures. This is a research project being conducted by Taylor D. Bunn, a doctoral candidate at Baylor University. It should take around 10 minutes to complete.Your participation in this questionnaire is voluntary. You may refuse to take part in the research or exit the survey at any time without penalty. You are free to decline to answer any particular question you do not wish to answer for any reason. You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about community engagement at PlayGrand Adventures, specifically how visitors and donors interact with the playground. There are no foreseeable risks involved in participating in this study. Your questionnaire answers will be sent to a link at SurveyMonkey.com where data will be stored in a password-protected electronic format. Survey Monkey does not collect identifying information such as your name, email address, or IP address. Therefore, your responses will remain anonymous. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study.At the end of the questionnaire, you will be asked if you are interested in participating in an additional virtual interview. If you choose to provide contact information such as your phone number or email address, your survey responses may no longer be anonymous to

the researcher. However, no names or identifying information would be included in any publications or presentations based on these data, and your responses to this survey will remain confidential. ELECTRONIC CONSENT: Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that: *You have read the above information *You voluntarily agree to participate *You are 18 years of age or older.

    a. Agree: 72 responses

    b. Disagree: 0 responses

    c. Skipped question: 0

2. How did you hear about PlayGrand Adventures?

    a. Answered: 70 open-ended responses

    b. Skipped question: 2

3. Have you visited PlayGrand Adventures?

    a. Yes: 55 responses

    b. No: 16 responses

    c. Skipped question: 1

4. Do you plan to visit in the future?

    a. Yes: 70 responses

    b. No: 1 response

    c. Skipped question: 1 response

5. How often do you visit other Grand Prairie parks, playgrounds, or recreation centers?

a. A few times a week: 10 responses

b. About once a week: 19 responses

c. A few times a month: 14 responses

d. About once a month: 6 responses

e. A few times a year: 10 responses

f. About once a year: 5 responses

g. Never: 7 responses

h. Skipped question: 1

6. Have you donated to PlayGrand Adventures?

a. I donated online: 12 responses

b. I mailed a donation: 6 responses

c. I donated at the ribbon-cutting or another event: 11 responses

d. I painted a tile: 11 responses

e. I have not donated: 42 responses

f. Other: 7 responses

g. Skipped question: 1

7. How do you think PlayGrand Adventures benefits the community?

a. Answered: 70 open-ended responses

b. Skipped question: 2

8. What are the best features, amenities and/or play equipment at PlayGrand

Adventures?

a. Answered: 70 open-ended responses

b. Skipped question: 2

9. What features, amenities, and/or play equipment would improve PlayGrand Adventures?

    a. Answered: 69 open-ended responses

    b. Skipped question: 3

10. List the ages, genders, and relationships of people living in your household.

    a. Answered: 68 open-ended responses

    b. Skipped question: 4

11. Does anyone in your household have a physical, intellectual, or developmental disability?

    a. Answered: 70 open-ended responses

    b. Skipped question: 2

12. What is your 5-digit zip code?

    a. Answered: 70 open-ended responses

    b. Skipped question: 2

13. What is your household income?

    a. Under $15,000: 0 responses

    b. Between $15,000 and $29,999: 5 responses

    c. Between $30,000 and $49,999: 10 responses

    d. Between $50,000 and $74,999: 13 responses

    e. Between $75,000 and $99,999: 8 responses

    f. Between $100,000 and $150,000: 19 responses

    g. Over $150,000: 12

    h. Skipped question: 5

14. Are you willing to be contacted for a follow-up interview? If so, please enter your

contact information. Responses will be anonymous and used solely for

informational purposes.

    a. Provided information: 43

    b. Skipped question: 29

APPENDIX C

Semi-Structured Interview Questions and Topics

Awareness of PGA:
- Do people know about PGA?
- What does PGA mean to you?
- What made you want to visit?

Challenges:
- Did you feel safe at playgrounds during COVID?
- How did you keep your child active during COVID?
- What challenges does PGA face?
- What are the primary barriers to completing the playground?

Donations:
- Do people know they can donate?
- Why/how did you donate?

Equipment/Amenities/Design:
- Do you/your children have favorite equipment?
- How does PGA benefit the community?
- How does PGA compare to other playgrounds?
- Is the playground comfortable for adults?
- Is there enough for adults and teenagers to do?
- What should PGA add next?

Human interaction:
- Do children need to be taught empathy?
- Do your children have different play styles?
- Do you children play differently at PGA than other playgrounds?
- How can playgrounds be places of learning?
- How do you play with your child?
- Why do adults stop playing?

Other:
- How did PGA get started?
- Is PGA meeting its goals?
- What does PGA need to be successful?
- Why are playgrounds important?

APPENDIX D

Instructional Review Board Exemption

From: Trevino, Jessica <Jessica_L_Trevino@baylor.edu>
Sent: Monday, June 8, 2020 9:57 AM
To: Bunn, Taylor <Taylor_Bunn1@baylor.edu>; Holland, Deborah
<Deborah_L_Holland@baylor.edu>
Cc: Talbert, Tony <Tony_Talbert@baylor.edu>; Howell, Leanne <Leanne_Howell@baylor.edu>
Subject: Re: IRB Approval Process

Hello Taylor,

Thanks for reaching out. Your study does not qualify as human subjects research
because the results would not be generalizable to a broader population due to your
focus on one specific playground. Attached is our guidance booklet if you have more
questions about determinations. Let me know if you have any questions.

Best regards,
Jessica Trevino

APPENDIX E

Permission to Use PlayGrand Adventures Visuals

From: Kelly Eddlemon
Sent: Sunday, March 7, 2021 7:59 PM
To: Taylor Bunn
Subject: RE: Permission to use photos and renderings from your website

Yes… welcome to use any of the images of the park that are on the website. There may be a few purchased stock images floating around that I'd ask for you <u>not</u> use, but I doubt you would anyways.

If you need anything in a different size/format, or if you need anything in addition to what you can find, please let me know.

Thanks!
Kelly

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