

LANDSCAPE'S ROLE IN CHILD DEVELOPMENT: OUTDOOR SPACE DESIGN
GUIDELINES FOR CHILD AND FAMILY-FOCUSED NONPROFITS

by

PENGLING XIA

(Under the Direction of KATHERINE MELCHER)

ABSTRACT

This study investigates how outdoor spaces can play a role in child and family-focused nonprofits that wish to establish design guidelines for their outdoor spaces. This study fills a gap in research on outdoor spaces at child and family-focused nonprofits and nonprofit outdoor space design. Utilizing qualitative methods, the study formulates design guidelines based on literature review and expert interviews, including considerations for outdoor space design and suggestions for potential design elements. The guidelines emphasize budget, volunteer involvement, and maintenance which foster feasible and sustainable outdoor spaces for nonprofit organizations. This study contributes to the field by offering a framework that integrates child development theories with landscape design and provides resources to meet children's developmental needs at nonprofit educational settings.

INDEX WORDS: OUTDOOR SPACE DESIGN, DESIGN GUIDELINES,
NONPROFIT, CHILD DEVELOPMENT, LANDSCAPE
DESIGN

LANDSCAPE'S ROLE IN CHILD DEVELOPMENT: OUTDOOR SPACE DESIGN
GUIDELINES FOR CHILD AND FAMILY-FOCUSED NONPROFITS

by

PENGLING XIA

BLA, Beijing Forestry University, China, 2023

A Thesis Submitted to the Graduate Faculty of The University of Georgia in Partial
Fulfillment of the Requirements for the Degree

MASTER OF LANDSCAPE DESIGN

ATHENS, GEORGIA

2024

© 2024

Pengling Xia

All Rights Reserved

LANDSCAPE'S ROLE IN CHILD DEVELOPMENT: OUTDOOR SPACE DESIGN
GUIDELINES FOR CHILD AND FAMILY-FOCUSED NONPROFITS

by

PENGLING XIA

Major Professor: Katherine Melcher
Committee: Brad Davis
Amy Kay Powell
Sallie Starrett

Electronic Version Approved:

Ron Walcott
Vice Provost for Graduate Education and Dean of the Graduate School
The University of Georgia
May 2024

DEDICATION

This thesis is lovingly dedicated to my parents, whose boundless love and unwavering support paved the way for me to explore the vastness of the world.

ACKNOWLEDGEMENTS

First, I extend my sincere appreciation to my major professor, Prof. Melcher, for her kind guidance and patience. My gratitude also extends to my thesis committee members, Prof. Davis, Dr. Powell, and Mrs. Starrett, for their precious time, careful consideration, and insightful feedback. Lastly, I would like to thank Dr. Lee from the College of Education, University of Georgia, and Prof. Berglund from the College of Environment + Design, University of Georgia, who directly contributed to my research.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	V
LIST OF TABLES	X
LIST OF FIGURES	XI
CHAPTER	
1 INTRODUCTION AND PROBLEM STATEMENT	1
Relevance and Importance	1
Background Overview	2
Research Objectives.....	3
Problem Statement	3
Thesis Structure	4
The Definition of Child and family-focused nonprofit.....	5
Specificities and Differences of the Design Guidelines	6
Explanation of the Use of Translation Software in the Thesis	7
2 RESEARCH METHODS	8
Introduction.....	8
Literature Review.....	8
Literature Search Strategies and Inclusion Criteria	9
Summary of Literature Review Results.....	10
Interviews.....	11

Selection of Interview Participants	11
Interview Process	12
Ethical Considerations and Participant Consent	12
Summary of Interview Results.....	13
Development of the Design Guidelines	13
Prior to Design Guidelines Generation	13
The Creation of the Design Guidelines.....	14
Limitations	14
3 LITERATURE REVIEW	16
Introduction.....	16
The Characteristics of Nonprofit Organizations	17
Introduction.....	17
The Definition of Nonprofit Organizations	17
The Vision and Goal of Nonprofit Organizations.....	18
Activities and Programs Conducted by Nonprofit Organizations	19
Community Engagement	20
Partnership and Collaboration.....	21
Funding and Sustainability	22
Volunteer Involvement	23
Summary	24
Children’s Development Needs	32
Introduction.....	32
Physical Needs in Child Development	32

Cognitive Needs in Child Development	33
Emotional Needs in Child Development	33
Social Needs in Child Development.....	34
Moral Needs in Child Development	34
Safety Needs in Child Development.....	35
Special Needs in Child Development	36
Summary	37
The Role of Outdoor Space in Child Development	40
Introduction.....	40
The Role of Playgrounds in Child Development.....	40
The Role of Nature Play in Child Development.....	42
The Role of Outdoor Learning in Child Development	44
The Promotion of Sensory Landscape in Child Development.....	46
Special Focus: The Role of Community Gardens in Child Development	47
Summary	48
Summary	51
4 INTERVIEWS WITH EXPERTS	59
Summary and Analysis of the Interviews	59
Overview.....	59
Theme Words 01: Holistic and Integrated Development	60
Theme Words 02: Safety, Privacy and Support.....	60
Theme Words 03: Inclusive Design.....	61
Theme Words 04: Budget Consideration and Fundraising Challenges	62

Theme Words 05: Natural Play and Loose Parts Playground.....	63
Theme Words 06: Sensory Engagement.....	64
Theme Words 07: Developmental Milestones.....	65
Theme Words 08: Family Resilience.....	66
Summary	66
5 OUTDOOR SPACE DESIGN GUIDELINES	68
Introduction.....	68
Outdoor Space Design Guidelines for Child and family-focused nonprofits	69
Outdoor Spaces Design Considerations (Recognized Information)	70
Potential Design Elements for Outdoor Space (Recognized Information).....	72
Outdoor Spaces Design Considerations (Important Information)	75
Potential Design Elements for Outdoor Space (Important Information)	77
Summary	82
6 CONCLUSIONS.....	84
Overview.....	84
Critical Findings.....	85
Holistic Development	85
Safe, Inclusive and Challenging Outdoor Spaces	85
Alignment with the Organizations’ goals	85
Family Engagement and Resilience.....	85
Practical Design Considerations	86
Limitations and Recommendations for Future Research Directions	86
Limitations	86

Recommendations for Future Research Directions	87
Examples of Practical Application of Selected Guidelines	88
Conclusion	91
REFERENCES	92
APPENDICES	
A Interview Summary with Theme Words and Original Text	97

LIST OF TABLES

	Page
Table 1: Characteristics of Nonprofit Organizations	27
Table 2: The Developmental Needs of Children	38
Table 3: The Role of Outdoor Spaces Design Elements in Child Development	49
Table 4: The Potential Design Elements and The Implementation Challenges.....	54

LIST OF FIGURES

	Page
Figure 1: The Guideline Creation Process, Pengling Xia, 2024	69
Figure 2: “Creative” Nature Play Facility in Sandy Creek Nature Center, Athens, GA, Pengling Xia, 2024.....	73
Figure 3: Paulding County’s Children’s Sensory Garden, Dallas, GA, Pengling Xia, 2024.....	74
Figure 4: “Cheese” Children Playground in Centennial Olympic Park, Atlanta, GA, Pengling. Xia, 2024.....	78
Figure 5: “Family Meeting”, Children Playground at Sandy Creek Nature Center, Athens, GA, Pengling. Xia, 2024	78
Figure 6: “Bee House and Bird Nest” Outdoor Learning at Sandy Creek Nature Center, Athens, GA, Pengling. Xia, 2024.....	80
Figure 7: Winterville Community Garden, Winterville, GA, Pengling. Xia, 2024.....	81
Figure 8: One of the Rendering for the Entrance Area of Brightpaths, Pengling Xia, 2024.....	90
Figure 9: Volunteer DIY Plan for the Mural on the Wall, Pengling Xia, 2024.....	90

CHAPTER 1

INTRODUCTION AND PROBLEM STATEMENT

Relevance and Importance

Seven in ten American children under six years of age receive care outside the home when their parents work (Marks 2017). Also, an analysis by the Childcare Aware of America website found an increase in childcare centers. Between 2021 and 2022, the number of licensed childcare centers increased by approximately 3% (Child Aware of America 2022). In addition, in the 2012 Child Trends analysis of the 2012 National Survey of Early Care and Education Household Public-Use Survey, 11.9 percent of infants used center-based care (Paschall 2019). All the statements above show a massive market for center-based childcare services in the United States.

In recent years, as the result of the development of electronic technology, passive activities, such as watching TV and playing video games have gradually overwhelmed children's time, which has resulted in a gradual decrease in outdoor playtime. However, the role of children's active, unstructured, and initiative-taking outdoor play should be considered, and its benefits are reflected in the promotion of children's physical, emotional, and social development (Burdette and Whitaker 2005). Therefore, it is important to study the design of outdoor spaces at child and family-focused nonprofits, especially regarding how outdoor spaces promote children's development.

Moreover, research on outdoor space design at child and family-focused nonprofits or nonprofit organizations in the existing literature base needs to be more extensive. This study can

provide immediate guidance and a theoretical foundation for the design of outdoor spaces at child and family-focused nonprofits. Overall, this study also provides ideas for research in relation to the design of outdoor spaces at nonprofit organizations, research in relation to the design of outdoor spaces that promote child development, and research in relation to the outdoor spaces of child development centers (or day care centers).

In short, it is important to study the space design of child and family-focused nonprofits from the perspective of market demand, child development, and the perspective of filling gaps in the literature.

Background Overview

The author of the thesis worked on the outdoor space renovation project of the Brightpaths, a family resource center in Athens, Georgia, in the fall of 2023, in a design studio in the University of Georgia's College of Environment + Design, which led to an interest in researching the design of outdoor spaces at child and family-focused nonprofits. While searching for a theoretical basis for the design, the author found that there needs to be more research about outdoor spaces at child and family-focused nonprofits and even at all kinds of nonprofit organizations. In order to address this lack, the study will attempt to provide a theoretical basis for the design of outdoor spaces at child and family-focused nonprofits by exploring the connection between nonprofit organizations, child development, and outdoor spaces.

Research Objectives

The main objective of this study is to use the theoretical basis of relevant literature and the insights of professional experts to develop design guidelines for outdoor spaces at child and family-focused nonprofits. The study has the following objectives:

- Determine the main characteristics of nonprofit organizations and how they operate and establish the impact of their characteristics on the design of outdoor spaces.
- Examine the developmental needs of children and establish how these needs can be met through the design of outdoor spaces.
- Develop a set of design guidelines based on the theoretical basis of the literature review and the summarized results of interviews with experts.

Problem Statement

The research objective of this study is to develop design guidelines for outdoor spaces at child and family-focused nonprofits. The development of the design guidelines requires answering the following question: how can the design of outdoor spaces contribute both to nonprofit organizations and child development? However, the problem is that not much literature relates directly to this research question. Therefore, the author proposes solutions.

The first solution is to break down the research question above into three, more specific questions: “What are the characteristics of nonprofit organizations?” “What are the needs of child development?” and “What is the role of outdoor space in relation to child development and nonprofit organizations?” These new questions are more likely to find a theoretical basis in the existing literature. Afterward, the author integrated and summarized answers to these three

questions in order to answer the research question based on his educational background and experience.

Expert interviews were used as the second research method. The author collects experts' opinions on various issues that relate to the research question through interviews. The author then filtered and distilled these interviews based on the interviewees' educational backgrounds and experience. The result of the distillation will be as a supplement to answering the research question.

Finally, the author cross-referenced the results to develop design guidelines that have both recognized design elements and information and important design elements and information. The author defined recognized design elements and information as those mentioned in the interviews with experts and in the literature. The author defined important design elements as those design elements and information that the author felt designers needed to know based on the author's educational background and experience, which were identified in the interviews with experts and in the relevant literature.

Thesis Structure

The study comprises six main chapters: introduction and problem statement, research methods, literature review, interviews, design guidelines, and conclusion. The introduction and problem statement chapters focus on the background, relevance, research objectives, the structure of the thesis, and the research question. The research methods chapter outlines the research methods that are used in the study, including the reasons for the chosen research methods and the steps to implement the research methods. This literature review chapter explores the characteristics of nonprofit organizations, child developmental needs, and the role of outdoor

spaces in relation to child development in the current literature. The interview chapter analyzes the author's interviews professionals, and theme words were extracted from the interviews and presenting them to provide insights for the subsequent construction of the design guidelines. The design guidelines chapter presents the design guidelines that reflect both the literature review and insights from experts. The last chapter, the conclusion, summarizes the findings, contributions from this study to the field related to the research topic, and recommendations for future research.

The Definition of Child and family-focused nonprofit

This subsection aims to define the term “child and family-focused nonprofit,” a new word created by the author. The services such organizations provide are similar to, but more detailed, extensive, and in-depth than, those provided by “child development centers” and “childcare centers”, and the services are free of charge and not profit-oriented. A research team from Cornell University defined the term “child development center” as a facility and the utilities that support the facility, the function of which is to support the child’s daily care which is to support the daily care of children six weeks to five years of age in full-day, half-day, and hourly services (Wex Definition Group 2006).

Based on this definition and the characteristics of organizations such as Brightpaths, the authors attempt to define “child and family-focused nonprofits” as organizations that prioritize the overall well-being of children and their families and are not primarily motivated by profit. These nonprofit organizations include a variety of entities dedicated to providing comprehensive support and services to children and families in their communities. They are mission-driven and aim to meet the diverse needs of children and families through various programs and activities.

These organizations typically provide early childhood education, childcare, family support services, parent education and community outreach.

Specificities and Differences of the Design Guidelines

What sets these design guidelines apart from others is that these guidelines are intended to place outdoor space design within the context of a nonprofit organization. It discusses how landscape architects can adapt to this situation, designing outdoor spaces that are best suited for nonprofit organizations that support community children and family services outdoor spaces.

Before drafting this article, the author read design guidelines called *Play for All Guidelines: Planning, Design and Management of Outdoor Play Settings for All Children* edited by Robin C. Moore, Susan M. Goltsman, and Daniel S. Iacofano. The *Play for All Guidelines* is an industry standard for planners, designers, and managers of outdoor play settings (Moore, Goltsman, and Iacofano 1997). It is a comprehensive design resource available for integrating children of all abilities in the same play area. It addresses the full range of play-related issues: safety and risk management, accessibility and integration, maintenance, and child development. While there has been considerable research on the design process, design criteria and the subsequent maintenance and management of the design, this study will focus on the design needs of children's activity spaces in the context of nonprofit outdoor spaces. Also, the *Play for All Guidelines* is recommended for readers interested in more detailed design content.

In addition, it is undeniable that outdoor space design elements such as fundraising pop-up markets, lawns, and landscaped pavilions that can host charity dinners and concerts, as well as school gardens and healing gardens, may work at a child and family-focused nonprofit. However, this article focuses on examining outdoor spaces that support nonprofit community

child and family services and, therefore, does not address other design elements that may be successful in the child and family-focused nonprofits.

Explanation of the Use of Translation Software in the Thesis

As an international student, the author used native language for the first draft of the thesis. After that, the author used the translation applications Google Translate and DeepL Translate to translate the first draft into English. Finally, the author's editing and revisions formed the thesis's final draft.

CHAPTER 2

RESEARCH METHODS

Introduction

This chapter delineates the methods that were employed in the development of outdoor space design guidelines for child and family-focused nonprofits. In order to answer the research question, how can the design of outdoor spaces contribute both to nonprofit organizations and child development, the study used two qualitative research approaches: literature review and interview. Then, the author drew upon insights from both literature review and interviews while also utilizing this educational background in landscape design to selectively synthesize these elements into comprehensive design guidelines.

Literature Reviews

Literature reviews are often used by researchers to establish a baseline of existing knowledge on any given topic, which helps the researcher to understand what has been studied, what the results of these studies are, and gaps or inconsistencies that need further investigation (Deming and Swaffield 2011). In this study, the author explores the literature on three research topics: the characteristics of nonprofit organizations, child developmental needs, and the role of outdoor spaces in child development.

Literature Search Strategies and Inclusion Criteria

The first step in conducting the literature review was to perform searches with the UGA libraries and Google Scholar databases. Initial searches with the critical terms “nonprofit,” “child development,” and “outdoor space” revealed very few studies specifically focused on outdoor design in relation to child and family-focused nonprofits and even fewer concerning the broader category of nonprofit organizations' outdoor spaces. Consequently, the author reevaluated, recombined these critical words, and conducted further searches.

Searching only with the critical term “nonprofit organization,” the author found a large amount of literature, including an introduction to the operation and management methods of nonprofit organizations, instructions about how to set up a nonprofit organization, laws and regulations regarding nonprofit organizations, and the strategies and challenges of maintaining a nonprofit organization. The author believes that this type of literature provides an understanding of nonprofit organizations' basic characteristics and operational methods, which in turn provides important background information and professional guidance for designing outdoor spaces for such organizations. Therefore, from this literature, the author chose to refer to a few books that are on the top of the search list, with more citations, about the challenges of maintaining a nonprofit organization and insights as to how to operate a nonprofit organization.

A search with “child development” uncovered research on the developmental needs of children, and the literature broadly categorized these needs into physical, cognitive, emotional, social, and moral dimensions. The author selected several seminal articles within each category for thorough analysis and summary and also selected literature in relation to children's safety needs and those of children with disabilities.

The combination of “child development” with “outdoor space” in a search query produced many studies that highlighted the beneficial effects of specific types of landscape on children's development which significantly enriched the focus of this study. The author extracted critical landscape elements, such as nature play, children's playgrounds, and outdoor learning environments as focal points for the later development of design guidelines (detailed in Chapter 3: Literature Review).

Attempts to combine “nonprofit” with “outdoor space” for a comprehensive search yielded limited relevant literature, which, unfortunately, diverged significantly from the context of child and family-focused nonprofits and thus were not incorporated in the literature review. Additionally, the author concluded that literature that was found by searching with the term “outdoor space,” despite its general relevance to design guidance, was not sufficiently aligned with this paper's thematic core and was therefore excluded from the literature review.

Summary of Literature Review Results

Importantly, because of the lack of available literature in relation to both “nonprofit organization” and “child development,” the author separated the research question “How can the design of outdoor spaces contribute both to nonprofit organizations and child development?” into three subsidiary questions: “What are the characteristics of nonprofit organizations?”; “What are the developmental needs of children?”; and “What role do outdoor spaces play in child development?”. The authors analyzed these questions through the literature and provided an answer and theoretical rationale in response to each question. Ultimately, the author's background and experience in landscape education were combined to answer the overall research

question. Based on the theoretical grounding of the literature, this answer set the stage for integrating the design guidelines in later phases.

Interviews

Next, the author conducted interviews to supplement the literature review. The selection of interview subjects who are familiar with the topic should yield rich and relevant data (Deming and Swaffield 2011). So, the author engaged professionals who had experience in child development, outdoor space design, and the management of child and family-focused nonprofits in order to capture rich and relevant insights that are important for formulating of the final design guidelines.

Selection of Interview Participants

Interviewees were selected based on their connection to the study's focus on outdoor spaces at child and family-focused nonprofits and their availability to the author for in-person interviews. The goal was to gather relevant, firsthand information from child and family-focused nonprofit directors, landscape architects, and education experts in order to assist the construction of the design guidelines. The selected interviewees included Sallie Starrett, a director of a local nonprofit organization related to child development who had a relevant educational background and extensive experience in the nonprofit sector and child welfare system; Kyunghwa Lee, a professor at the University of Georgia who specializes in preschool child development; Cameron Berglund, a licensed landscape architect and lecturer at the University of Georgia, who is known for his work on the design of the Alice H. Richards Children's Garden at State Botanical Garden of Georgia; and Brad Davis, professor and licensed landscape architect at the University of

Georgia, who focuses on plant landscape application and design. These interviews provided perspectives on the challenges and opportunities that relate to implementing outdoor space projects, integrating outdoor spaces for child development, and principles for creating inclusive, educational, and engaging landscapes, including the role of planting design.

Interview Process

Each interview was customized to the participant's ability and utilized a semi-structured format. This approach eased focused discussions on outdoor spaces at child and family-focused nonprofits and allowed flexibility for the exploration of emerging themes. Topics of discussion encompassed:

1. Operational challenges and opportunities in implementing outdoor space programs at child and family-focused nonprofits.
2. Strategies for integrating outdoor spaces for child development.
3. Principles for creating inclusive, educational, and engaging landscapes.
4. The impact of planting design on enhancing sensory experiences and fostering child development.

Ethical Considerations and Participant Consent

The author's research process received IRB approval through the University of Georgia's Human Subjects Office. The IRB ID is PROJECT00008456. This research was determined to not fit the criteria of research involving human subjects as defined by DHHS and FDA regulations. The activity was limited to subject matter expert interviews and observation of public behavior (no intervention or interaction, and the behavior was not considered private).

Summary of Interview Results

The interview findings were synthesized by selecting statements that were mentioned by more than one interviewee (about outdoor spaces of nonprofit organizations or those promoting children's development) or unique insights that were deemed constructively significant by the author. This compilation of interviews, alongside the literature review, informed the development of the later design guidelines.

Development of the Design Guidelines

Prior to Design Guidelines Generation

A synthesis approach merged the insights from the literature review with the themes that were identified in the interviews. The synthesis encompassed a theoretical framework development, cross-referencing, abstraction process, and continuous reflection:

- **Theoretical Framework Development:** The establishment of a theoretical context that positions the guidelines within the design process and is informed by a literature review and existing research evidence (Prominski 2016).
- **Cross-referencing:** The findings from the literature were cross-referenced with interview insights to discern areas of consensus, divergence, or novel discoveries that were important for the melding of theoretical insights with practical experience.
- **Abstraction Process:** The abstraction of design principles, strategies, or measures from the literature review and summary of the interviews to create coherent and comprehensive guidelines that address the research question (Prominski 2016).
- **Continuous Reflection:** Reflection of the guidelines against the theoretical

framework and the interviews to ensure that they are robust and relevant (Prominski 2016).

The Creation of the Design Guidelines

This section is about to show the approaches used in the creation of the guidelines, which includes:

- Evidence-based Recommendations: Documentary and interview evidence were provided for each guideline to strengthen the validity of the recommendations.
- Special Recommendations: If guidance appeared solely from literature or interviews, and deemed pertinent by the author, such recommendations were considered for inclusion with appropriate notation.
- Adaptability and Flexibility: The adaptability of the guidelines to different environments is emphasized, recognizing the versatility of outdoor spaces at child and family-focused nonprofits and the need for design practices to evolve with their changing environment.

Limitations

This subsection elucidates the thesis's methodological constraints, illustrating its limitations while offering insights for future research in outdoor spaces at child and family-focused nonprofits:

1. Literature Scope Limitations: Few studies address outdoor spaces at child and family-focused nonprofits, which created a challenge for the author to conclude from direct literature. The author collected theories in relation to these search terms, “child development,” “the relationship between child development and outdoor space,” and

“characteristics of nonprofit organizations” in connection to the topic: “outdoor space at child and family-focused nonprofits.” “The theoretical basis of “characteristics of nonprofit organizations” was combined with the author’s educational background and personal reflections and then filtered, summarized, and combined to form the final design guidelines for “outdoor spaces at child and family-focused nonprofits, which may have had a subjective impact on the finalized landscape design guidelines and a lack of direct evidence.

2. Interview Limitations: With only four interviewees, the breadth of perspectives was limited, which potentially affected the generalizability and empirical robustness of the conclusions. Also, all the interviewees live in the Southeast of the US, which likely means that what they said heavily reflects the situation in that part of the US. Other cultures and climates may require additional consideration.

3. Integration Challenges: The author’s landscape education background might introduce bias in critical word extraction, literature review, and the integration process of design guidelines.

4. Methodological Limitations: The qualitative research approach introduces a degree of subjectivity to the thesis's conclusions.

CHAPTER 3

LITERATURE REVIEW

Introduction

The design of outdoor spaces for child and family-focused nonprofits is intricate and demands a comprehensive understanding of various interconnected elements. In order to inform effective design strategies, this chapter explores and addresses three fundamental areas: the nature of nonprofit organizations, the developmental needs of children, and the impact of outdoor spaces on child development. Discussion around these areas is helpful to shape an environment that optimally supports a child’s holistic growth. First, we need to design outdoor spaces with the unique needs and goals of nonprofits in mind. So, an understanding of the characteristics of nonprofit organizations is important in relation to the design of outdoor spaces. Second, recognizing and addressing the developmental requirements of children as the primary beneficiaries of these spaces is helpful for these spaces’ effectiveness. Third, this review delves into research and case studies that highlight the proven benefits of outdoor environments in relation to nurturing child development. Ultimately, a synthesis of these insights employs qualitative research methodologies to unravel the question: “How can outdoor space support the mission and goals of child and family-focused nonprofits?”

The Characteristics of Nonprofit Organizations

Introduction

In the realm of child and family-focused nonprofits, the characteristics of nonprofits should influence how a landscape is designed. An understanding of nonprofit organizations' operational methods and characteristics is helpful to the crafting of landscape design guidelines for these centers. This subsection will use a literature review approach to examine the characteristics of nonprofit organizations from the definition of nonprofit organization, the vision and goal of a nonprofit organization, activities and programs that are conducted by nonprofit organizations, community engagement, partnership and collaboration, funding and sustainability, and volunteer involvement to explore the characteristics of nonprofit organizations. Literature is drawn from several guidebooks on the operation of nonprofit organizations. The primary texts used include: *“Five Life Stages of Nonprofit Organizations”* by Donovan and Simon (2001), *“Nonprofit Kit for Dummies”* by Hutton et al. (2010), *“Strategic Planning for Public and Nonprofit Organizations”* by Bryson and John (2018), *“Forces for Good: The Six Practices of High-Impact Nonprofits”* by Crutchfield and Heather (2012), *“Nonprofit Management 101: A Complete and Practical Guide for Leaders and Professionals”* by Heyman et al. (2019), and *“The Nonprofit Sector: A Research Handbook”* by Powell and Walter (2020).

The Definition of Nonprofit Organizations

Within the United States, a nonprofit organization is organized for social benefit other than generating profit (Wex Definitions Team 2023). No part of the organization's income is distributed to its members, directors, or officers. Nonprofit corporations are often termed “non-stock corporations.” They can take the form of a corporation, an individual enterprise (for

example, individual charitable contributions), unincorporated association, partnership, foundation (distinguished by its endowment by a founder, it takes the form of a trusteeship), or condominium (joint ownership of common areas by owners of adjacent individual units incorporated under state condominium acts). Officially designed nonprofit organizations may only pursue purposes that are permitted by statutes for nonprofit organizations. Nonprofit organizations can include churches, public schools, public charities, public clinics and hospitals, amateur sports organizations, political organizations, legal aid societies, volunteer services, organizations, labor unions, professional associations, research institutes, museums, and some governmental agencies (Wex Definitions Team 2023).

The Vision and Goal of Nonprofit Organizations

According to Donovan and Simon (2001), Hutton et al. (2010), and Bryson and John (2018), the vision and goal of a nonprofit organization are intricately woven into its mission and operational strategies. The executive director is usually motivated by an enthusiastic commitment to making a tangible impact on a significant social issue, such as world peace (Sharken Simon and Donovan 2001). This commitment is matched by a strategic focus on enhancing the organization's capabilities, such as perfecting configurations, expanding staff, and developing distinct operational areas. The maintaining of a clear identification of roles and responsibilities between the board and staff, which ensures effective governance and operational clarity, can support the organization's mission.

At the heart of the nonprofit's vision lies the aspiration to transform the future positively. This transformation is envisioned through goals and desired impacts, particularly in addressing social, environmental, or community needs. A nonprofit's mission is not merely a statement of

purpose and serves as a guiding star for all organizational activities, from resource allocation to program planning (Hutton and Phillips 2010). A nonprofit's mission informs fundraising efforts, drives decision-making, and ensures that the organization aligns with the overarching goal of creating public value. In essence, the goal of a nonprofit is to transcend organizational self-interest by focusing instead on addressing root causes and generating positive change for the public good (Bryson 2018). Through strategic planning and committed leadership, a nonprofit looks to fulfill its mission and venture into new initiatives, increase its earned income, and establish a comprehensive, well-packaged organizational image for sustained impact and achievement.

Activities and Programs Conducted by Nonprofit Organizations

Nonprofit organizations engage in various activities and programs that are important for their development and impact. Donovan and Simon (2001) categorize these activities into seven critical areas: governance, staff leadership, financing, administrative systems, staffing, products and services, and marketing. These activities vary depending on the organization's life stage, with each stage presenting specific situations, opportunities, and challenges that require tailored approaches and activities.

As Crutchfield and Heather (2012) highlight, nonprofit organizations typically engage in direct service and offer assistance and support to individuals or communities through food distribution and healthcare services. Advocacy plays a significant role and involves activities that influence public policy and raise awareness of social issues. Organizing involves the mobilization of communities towards common goals, including social justice and environmental conservation. Policy research is conducted to shape public policies and support evidence-based

decision-making. Capacity-building activities strengthen organizational effectiveness through training programs and leadership development. Network strategies involve collaboration with other nonprofits to build alliances and mobilize collective action.

In addition to this direct service, nonprofits participate in raising funds, increasing organizational profile, launching new programs, engaging in advocacy, and lobbying, providing community support and services, hosting events and galas, partnering for collaboration and alliances, managing staff and volunteers, and promoting diversity and inclusion (Heyman and Brenner 2019). These diverse activities and programs reflect the multifaceted ways in which nonprofits work to fulfill their missions and create a positive impact in their communities.

Community Engagement

Nonprofit organizations engage with communities through various strategies to achieve their social missions and create a positive impact. These organizations focus on creating deep and lasting relationships with supporters by effectively communicating their mission, vision, and values and mobilizing individuals as advocates (Crutchfield and Grant 2012). These organizations invest in sustaining large communities of supporters and provide opportunities for active participation; as a result, these organizations build a solid support base and increase their power and influence.

Community engagement activities include telephone surveys, written questionnaires, interviews with local officials, social events, partnerships with schools and churches, and utilization of online volunteers (Hutton and Phillips 2010). These methods help leaders of nonprofits to understand community needs and involve community members in their initiatives. Additionally, nonprofits host community events, partner with local businesses, collaborate with

other organizations, offer volunteer opportunities, provide educational programs, and conduct outreach and advocacy efforts (Heyman and Brenner 2019). These activities establish strong connections with the community and build support for their cause.

Nonprofits also engage with communities through local outreach, involving youth, building strong relationships, engaging the community as an ally, and focusing on the root causes of social problems (Bryson 2018). These approaches enable nonprofits to effectively engage with communities, address local needs, and create public value, which prove the multifaceted nature of community engagement in the nonprofit sector.

Partnership and Collaboration

Nonprofit organizations engage in various partnerships and collaborations to support their missions and enhance their effectiveness. These organizations form partnerships with volunteer recruiting sources, financial consultants, funders, and communication experts to address varying organizational needs, such as recruitment of volunteers, financial management, funding negotiations, and crisis communication (Sharken Simon and Donovan 2001).

Collaboration with government, businesses, and other entities is important for nonprofits as these processes allow them to leverage their partners' resources, expertise, networks, and business practices, which leads to amplified impact, increased visibility, and enhanced sustainability (Crutchfield and Grant 2012). These partnerships enable nonprofits to achieve collective goals and access resources, including funding, knowledge, and support.

Additionally, nonprofits engage in strategic alliances, joint programs, coalitions, shared services agreements, and research and development partnerships. These collaborations involve working with businesses, government agencies, other nonprofits, academic institutions, and

research organizations. For example, a nonprofit that focuses on environmental conservation might partner with a local government for community clean-up events, or a public health nonprofit might collaborate with a university to study community health interventions (Hutton and Phillips 2010).

By engaging in these partnerships and collaborations, nonprofits can broaden their impact, access added resources, and work more effectively towards achieving their missions. These cooperative efforts are important for addressing complex societal challenges and enhancing the overall effectiveness of the nonprofit sector.

Funding and Sustainability

Nonprofit organizations employ various strategies to secure funding and ensure sustainability. These strategies include the developing of an operating reserve, reviewing, and expanding fundraising plans, considering hiring for fund development, creating multiyear budgets, exploring new funding sources, adding fundraiser positions, and strategizing for future financial needs (Sharken Simon and Donovan 2001).

Successful nonprofits integrate fundraising into their overall strategy and diversify funding sources to mitigate financial risks. Building long-term relationships with funders, investing in infrastructure, leveraging foundations as mainstay funders, and generating earned income through mission-aligned activities are critical to the sustainability of nonprofits. (Crutchfield and Grant 2012). Additionally, pursuing growth through alliances and mergers, carefully planning the mix of programs and funding, eliminating non-core activities, and tapping into community resources are important for maintaining relevance and responsiveness to community needs (Bryson 2018).

Moreover, nonprofits may secure funding through corporate partnerships, such as sponsorships or cause-related marketing initiatives. Nonprofits also generate revenue through fee-for-service activities, social enterprise ventures, and the sale of goods or services. Fundraising events, such as galas and charity runs, are common methods for raising funds from supporters and the community. In-kind contributions, including donated goods, services, or volunteer labor, also significantly support nonprofit operations (Powell and Bromley 2020).

These diverse funding and sustainability strategies enable nonprofit organizations to stabilize financial resources, explore new financial sources, and develop financial plans that will support their long-term goals and missions.

Volunteer Involvement

The involvement of volunteers is a pivotal aspect of nonprofit organizations as highlighted by Donovan and Simon (2001), Crutchfield and Heather (2012), and Heyman et al. (2019). For many nonprofit organizations, the bulk of work at nonprofits is conducted through the donations of time and energy from a broad network of volunteers. The need to develop contacts with volunteer recruiting sources, expand the volunteer base, and refine volunteer management functions is emphasized along with the challenge of finding appropriate board members who will be actively involved in the agency's development (Sharken Simon and Donovan 2001).

Nonprofit organizations recognize the strategic value of engaging individuals as volunteers, providing opportunities for volunteer labor, and creating meaningful experiences that align with the organization's mission. These experiences extend beyond traditional volunteering roles, involving individuals in experiential events and mission-related volunteer opportunities and seeing the organization's work firsthand. Successful nonprofits nurture their communities over

time through active alum programs, fostering the continuing involvement of participants even after they have graduated from the program (Crutchfield and Grant 2012).

Effective engagement of volunteers involves communicating the mission and impact of programs, providing meaningful roles that align with volunteers' skills and interests, setting up clear expectations, offering adequate training and support, and recognizing and appreciating their efforts. Creating a sense of community and belonging among volunteers is also important, as it enhances their engagement and fosters a supportive and inclusive environment (Heyman and Brenner 2019).

In summary, volunteer involvement is integral to the success of nonprofit organizations. First, they provide valuable labor and skills that align with the organization's mission, which helps conduct the nonprofit's goals without incurring significant labor costs. Secondly, effective volunteer engagement strategies—including clear communication of the organization's mission, offering meaningful opportunities that match volunteers' interests and abilities, setting clear expectations, and offering adequate support and training—ensure that volunteers' contributions are maximized. Additionally, recognizing and appreciating the efforts of volunteers is important for fostering a sense of community and belonging, which not only enhances their commitment and involvement but also creates a supportive and inclusive environment. These strategies collectively enable nonprofits to harness the full potential of volunteer contributions, making volunteer involvement an indispensable aspect of their success.

Summary

Nonprofit organizations are multifaceted entities characterized by their commitment to social missions, diverse activities, strategic community engagement, collaborative partnerships,

sustainable funding, and active volunteer involvement. The vision and goals of nonprofits are deeply connected to their mission, driving organizational strategies and decision-making processes. Their activities range from direct service to advocacy, ability building, and policy research, adapting to various stages of organizational development. Community engagement is achieved through meaningful relationships, participation opportunities, and local outreach efforts. Partnerships and collaborations with various stakeholders amplify their impact and resource base, including government, businesses, and other nonprofits. Funding and sustainability are reached through diversified sources, strategic fundraising, and investment in infrastructure. Lastly, volunteer involvement is vital, with nonprofits offering strategic opportunities for engagement and nurturing ongoing relationships with volunteers. Collectively, these elements underscore the characteristic of nonprofit organizations as dynamic, responsive, and impactful entities in the pursuit of the public good.

In the case of child and family-focused nonprofits and their outdoor space design, several characteristics of nonprofit organizations are relevant and instructive for outdoor space design.

- **Alignment of Vision and Goals:** The development of child and family-focused nonprofits is aligned with vision and goals. The design of the outdoor space of a nonprofit children's center must support the developmental goals of the nonprofit children's center, which are to provide an environment that is safe, stimulating, and conducive to the development of children.
- **Activities and Programs Conducted by Nonprofit Organizations:** Child and family-focused nonprofits often conduct various activities and programs, and the design of outdoor spaces should consider this by designing spaces that support such activities or programs.

- **Community Involvement:** Community involvement is important to the development of child and family-focused nonprofits. The needs and involvement of families in the surrounding community, who are important clients of child and family-focused nonprofits, profoundly affect the development of child and family-focused nonprofits. When considering outdoor space design, the surrounding community should be surveyed to consider and meet the community's needs for outdoor space so that the outdoor space can be designed to reflect the community's values and needs.
- **Partnerships and Collaborations:** Child and family-focused nonprofits need partnerships and collaborations like other nonprofit organizations. For example, they are partnering with neighboring educational, environmental, and health organizations to develop broader and more specialized activities through the ability found in those organizations. Moreover, in outdoor space design considerations, the designer should consider the partnerships and potential partnerships of the child and family-focused nonprofit to give unique design input, such as artist collaborations (potential for mural design), builders' waste materials (potential for loose part playground), and playground manufacturers (potential for fancy playground sponsorships).
- **Funding and Sustainability:** Like other nonprofit organizations, child and family-focused nonprofits must consider funding and sustainability. Funding considerations are important when designing sustainable and cost-effective outdoor spaces. Incorporating low-maintenance landscaping can perfect resources. At the same time, if there is a specific need, outdoor space design can consider flexibility and multiple functions to meet multiple needs at the same time, both in terms of preparation like charity dinners

and concerts and to promote children's development such as loose part playground and natural learning.

- Volunteer participation: The development and operation of a child and family-focused nonprofit also depends on the volunteers' contribution. In the construction of their outdoor space, volunteers and later users may exist as part of the construction. Based on the organization's goals and vision, the designer needs to consider the difficulty of construction after design and the needs of volunteers before design (to enhance the volunteers' sense of belonging and make their efforts more valuable).

All the characteristics of nonprofit organizations have some relevance to nonprofit child development spaces, and these considerations should be used as guidelines to incorporate the characteristics of nonprofit organizations when planning, designing, and using outdoor spaces in child development centers. However, each nonprofit organization's goals, vision, and operations are focused and different. In addition to the primary considerations (specific to the nonprofit organization), the designer should analyze the characteristics of the specific child and family-focused nonprofit and find the particularities to design an outdoor space that meets the characteristics of the center.

Here is a table to illustrate the summary of the subsection:

Characteristics of Nonprofit Organizations	Especially for Child and family-focused nonprofits	Landscape Design Takeaways
Alignment of Visions and Goals	The goals and visions of child and family-focused nonprofits are varied,	The landscape designer needs to investigate and understand the goals and visions of the child and family-

	including but not limited to providing an environment that is safe, stimulating, and conducive to the development of children.	focused nonprofit before designing. During the landscape design process, the landscape designer should keep in mind the goals and visions of the development center to ensure that the designed results are consistent with them.
Activities and Program	Child and family-focused nonprofits often conduct varied programs and activities.	The landscape designer needs to ask the stakeholders of the child and family-focused nonprofit and learn about the programs and activities that are happening or are likely to happen at the child and family-focused nonprofit. After understanding its development intentions, during the design process, landscape designers can consider supporting or promoting outdoor activities and programs in the design of outdoor spaces.
Community Involvement	The surrounding community is an important	In addition to understanding and meeting the goals and visions of the

	<p>service target for the child and family-focused nonprofit. Likewise, community involvement is important in developing and expanding child and family-focused nonprofits.</p>	<p>nonprofit development center, the landscape designer should survey the needs of nearby residents. During the design process, the landscape design can also incorporate the opinions and needs of nearby residents into the design, which will have a positive effect on the enthusiasm of subsequent residents to participate in the outdoor space of the center, the enthusiasm for volunteer recruitment, and the sense of community honor and belonging.</p>
<p>Partnerships and Collaborations</p>	<p>Like other nonprofit organizations, child and family-focused nonprofits need partnerships and collaborations. For example, they are partnering with neighboring educational, environmental, and health organizations to develop broader and more</p>	<p>Landscape designers need to be aware of existing or potential partnerships and collaborations with child and family-focused nonprofits and other organizations or play a role in advising on potential relationships. Landscape designers should consider these partnerships and collaborations when designing, such as whether the outdoor space can promote the activities of the</p>

	<p>specialized activities through the ability found in those organizations.</p>	<p>child and family-focused nonprofits and the cooperative organization in the child and family-focused nonprofits, whether the components of the outdoor space are likely to be sponsored by the cooperative organization, and whether the cooperative organization can sponsor the outdoor space. The space design process can receive the participation and support of local artists to decide whether the type and number of volunteers from the child and family-focused nonprofits are sufficient to meet the subsequent landscape construction needs.</p>
<p>Funding and Sustainability</p>	<p>Like other nonprofit organizations, child and family-focused nonprofits must consider funding and sustainability.</p>	<p>The landscape designer needed to understand the child and family-focused nonprofit's future maintenance plans and development expectations for the outdoor space and provide budget estimates, construction guidance, and maintenance plans for the design plan. Aspects that landscape designers need</p>

		<p>to pay special attention to include whether the development center has fundraising needs such as charity dinners, charity sales, and concerts; whether the outdoor space design can promote or satisfy such activities; the level of the center's outdoor space design budget determine the level of the outdoor space and future maintenance plan, such as luxury playground or loose parts playground/nature play, high or low maintenance plan; who will be mainly responsible for the future construction of the center, contractor or volunteer.</p>
<p>Volunteer Participation</p>	<p>The development and operation of a child and family-focused nonprofit also depend on volunteers' contributions.</p>	<p>When the landscape designer has more time, he or she can consider the needs of volunteers, enhancing volunteers' sense of belonging to the center. In addition, the landscape designer should inquire about the level of involvement of volunteers during the maintenance and construction of outdoor spaces later</p>

		in the landscaping design and adjust the landscape design plan through this.
--	--	------------------------------------------------------------------------------

Child Developmental Needs

Introduction

Creating outdoor spaces for child and family-focused nonprofits needs a deep understanding of children's developmental needs. A literature review on this topic helps inform the design process, supporting that these spaces cater effectively to children's diverse and complex requirements. This review explores various aspects of child development, including physical, cognitive, emotional, social, moral, safety, and special needs. By examining scholarly works and research findings, the review aims to provide insight into children's developmental stages and needs. This knowledge helps design outdoor spaces that are not only safe and functional but also conducive to the overall growth and development of children at child and family-focused nonprofits.

Physical Needs in Child Development

Children's physical requirements are important during the complex phase of childhood growth. Their bodies undergo rapid and significant transformations as they grow, needing proper nutrition, regular exercise, and adequate rest. As Walker (2011) asserts, inappropriate nutrition, such as iodine deficiency and iron-deficiency anemia, can prevent many young children from reaching their developmental potential. Also, as Eime et al (2013) affirm, consistent adherence to the suggested physical activity levels for children and teenagers can lead to improved physical

well-being, decreased body fat, better heart and metabolic health, stronger bones, and fewer signs of depression and anxiety.

Cognitive Needs in Child Development

Cognitive development pertains to how children perceive, think, understand, and process information as they grow and interact with their environment. As Piaget (1964) asserts, knowledge is not merely a representation of reality; for genuine understanding, children must interact with and transform objects, a process he terms “operation,” which are internalized, reversible actions, form logical structures like classification and counting. Piaget finds four stages of cognitive development, ranging from the sensory-motor stage in early infancy to the formal operations stage, where children can reason using hypotheses. He also highlights four factors influencing cognitive development: maturation, physical environment experience, social transmission, and self-regulation. Lastly, Piaget (1964) distinguishes between two types of experiences: physical experiences, which involve direct interaction with objects, and logical-mathematical experiences, where knowledge stems from actions on objects rather than the objects themselves.

Emotional Needs in Child Development

As Saarni and Carolyn mention (1999), preschool children almost instinctively construct coherent understandings about their own and others' feelings. As they grow, preschoolers can articulate what would make them feel certain emotions, especially when encouraged to do so within the context of play. Finally, Saarni and Carolyn recommend that caregivers take part in intervention programs that improve emotion awareness and regulation. As a reasonable

extension, to help children meet their emotional needs, caregivers should take children's emotions seriously and listen attentively, offer reassuring explanations, and promise protection, encourage children to talk about their emotions and confirm their feelings.

Social Needs in Child Development

“Mind in Society: The Development of Higher Psychological Processes” by L. S. Vygotsky and Vera (1979) provides insights into the social needs of children and how to support these needs. They explore this through an examination of children's play. In their play, children depend on and imaginatively transform socially produced objects and behaviors in their environment. Also, they mentioned that play is highlighted as a significant means through which children project themselves into the adult activities of their culture and rehearse their future roles and values. Through play, children get the motivation, skills, and attitudes necessary for social participation. Besides, they assert that language serves children primarily as a means of social contact with other people.

Overall, children have inherent social needs that are important for their development. Play, social interactions, and language are vital to meeting these needs. Caregivers and educators can encourage play, help social interactions, and promote language development to support children's social needs.

Moral Needs in Child Development

Children face moral issues within their families from an early age. The tensions between a child's desires and needs, as well as issues of control, discipline, reciprocity, justice and rights, obligation, and the welfare of others are daily experienced and negotiated with other family members. This daily interaction plays a significant role in shaping a child's moral understanding

(Killen and Smetana 2014). Also, Killen, Melanie, and Smetana (2014) mentioned that during the second and third years of life, concurrent with other advances in self-representation, young children begin to exhibit psychologically self-referential emotions: pride, shame, guilt, and embarrassment. Guilt has been studied extensively. Overall, they recommend that be caregivers, encouraging children to actively participate in family interactions, allowing them to practice and develop their moral understanding, recognizing morally relevant emotions in children, and helping them understand and navigate feelings like guilt, shame, and pride are important in meeting child moral needs.

Safety Needs in Child Development

Safety is a fundamental aspect of child development, as discussed by Deb (2022), Brussoni et al. (2012), and Dubowitz (2014). Safety needs encompass protection from various risks, including physical and sexual violence, psychosocial distress, association with armed forces, child labor, and ensuring the well-being of unaccompanied or separated children. It also involves ensuring justice for children as an integral part of humanitarian action (Deb 2022).

Balancing safety with developmental opportunities is important, particularly in outdoor risky play. While injury prevention is important, overly restrictive measures can hinder child development. Safety efforts should aim to keep children “as safe as necessary,” allowing them to recognize challenges and make decisions. This approach supports healthy child development alongside safety considerations (Brussoni et al. 2012).

Additionally, the safety paradigm must extend beyond traditional measures like smoke alarms and car seats to encompass other environmental hazards, such as parental substance abuse. There is a model called SEEK (Safe Environment for Every Kids). SEEK is an evidence-

based, practical model for improving primary healthcare for children and their families (SEEK Leadership Team 2023). SEEK helps primary healthcare professionals (PCPs) address common psychosocial problems, such as parental depression and substance use. SEEK aims to strengthen families, support parents and parenting, promote children's health, development, well-being, and safety — and help prevent child abuse and neglect. The SEEK model emphasizes identifying and addressing risk factors for neglect and abuse in families with young children, underscoring the broader scope of safety in child development. This approach stresses the significance of promoting children's health, development and safety and preventing neglect and abuse (Dubowitz 2014).

Briefly, ensuring safety in child development involves a comprehensive approach that protects children from various risks and balances safety with developmental needs. It addresses broader environmental factors that impact children's well-being.

Special Needs in Child Development

Addressing children with special educational needs is a complex and multifaceted process, as Tilstone, Christina, and Lyn (2004) describe. These children require comprehensive support tailored to their unique developmental needs, encompassing social interaction, communication, cognition, learning, behavior, sensory, and physical development. It is important to recognize that all individuals strive for personal autonomy regardless of physical capabilities or sensory status. Developmental processes are intricate, and understanding the interplay between different developmental areas is challenging yet meaningful.

Creating an environment that encourages and supports social development is important to supporting children with special needs. This environment should foster a sense of value and

achievement, promote personal responsibility, and provide appropriate resources for both human and physical needs. Royston, a success story in the Tilstone, Christina, and Lyn's book, diagnosed with learning needs in primary school, was successfully included in mainstream secondary education with the necessary support. The book also emphasizes the importance of considering various theoretical perspectives on behavioral, emotional, and social development. These perspectives provide a foundation for developing specific and appropriate support strategies for children with special educational needs, ensuring their development is holistic and addresses all aspects of their growth and learning.

Summary

In conclusion, the literature review on children's developmental needs underscores the importance of considering these needs in the design of outdoor spaces for child and family-focused nonprofits. Physical needs highlight the importance of proper nutrition, exercise, and rest for children's growth. Cognitive development stresses the need for environments that encourage exploration and learning. Emotional needs focus on understanding and expressing emotions, while social needs emphasize the role of play and interaction in social development. Moral needs reveal the significance of family interactions in shaping a child's moral understanding. Safety needs highlight the importance of balancing safety with developmental opportunities and addressing broader environmental factors. Special needs call for tailored support for children with special educational needs. Understanding these multifaceted needs is important for designing outdoor spaces that support the holistic development of children, contributing positively to their physical, cognitive, emotional, social, moral, and overall well-

being. This comprehensive approach ensures that outdoor spaces at child and family-focused nonprofits are safe, functional, nurturing, and enriching for all children.

Here is a table to illustrate the summary of this subsection:

The Developmental Needs of Children	Landscape Design Takeaways
Physical Needs	Outdoor spaces could be designed to promote regular exercise and improve physical activity levels for youth.
Cognitive Needs	Outdoor spaces could provide and encourage children to interact independently with their environment, facilitating the process by which children learn to perceive, think, understand, and process information.
Emotional Needs	The emotional needs of growing children are primarily guided and met by the caregiver, and the design of the outdoor space does not primarily help (Caregivers encourage children to talk about their emotions or express them in play). The design of the outdoor space can meet this need by facilitating interaction between children and caregivers or by facilitating play.

Social Needs	Outdoor spaces need to be designed to encourage children’s play and promote social interaction and language development through play.
Moral Needs	Children’s moral needs as they grow are primarily guided and met by their caregivers, and the design of the outdoor space does not help (Caregivers can encourage children to participate actively in family interactions and help children understand and manage emotions such as guilt, shame, and pride). Outdoor space design can meet this need by facilitating interaction between children and caregivers.
Safety Needs	Outdoor spaces could be designed to provide a supportive, private, safe environment, not in the narrow sense of safety. However, one that meets safety standards and challenges children, giving them the freedom to make choices and decisions.
Special Needs	Outdoor spaces could be designed with inclusive design in mind. Landscape designers need to work

	towards an environment that encourages and supports children's development, which all children can enjoy equally.
--	-------------------------------------------------------------------------------------------------------------------

The Role of Outdoor Space in Child Development

Introduction

This literature review section explores the multifaceted contributions of outdoor environments—ranging from playgrounds and nature play to outdoor learning settings and sensory landscapes—to child development. Reviewing these aspects is important for formulating practical outdoor space design guidelines for child and family-focused nonprofits. By understanding the positive impacts of well-designed outdoor spaces, we can create environments that not only support the diverse needs of children but also comprehensively foster their development.

The Role of Playgrounds in Child Development

The significant role of children’s playgrounds in fostering the holistic development of young individuals is a theme extensively discussed in educational and psychological literature. This subsection draws upon the insights presented in seminal works by Frost (1997) and Solomon (2014), offering a comprehensive overview of how playgrounds contribute significantly to children’s physical, cognitive, social, and emotional development.

As delineated by Frost (1997), playgrounds are vital spaces supporting children’s spontaneous, creative, and joyful exploration of the world. The essence of play, characterized by spontaneity, freedom, creativity, discovery, and joy, is integral to the multifaceted development of children, encompassing physical, psychological, and social dimensions. By incorporating

diverse materials, equipment, and spaces designed to accommodate various forms of play—including exercise play, dramatic play, constructive play, and organized games—playgrounds are important environments promoting children’s holistic development. Introducing loose parts such as water, sand, lumber, tires, and spools in playground settings fosters cognitive and social development through imaginative play, highlighting the importance of designing playgrounds that enhance all forms of play (Frost 1997).

Building on these foundations, Solomon (2014) emphasizes the significance of playgrounds as public settings that facilitate social interaction, problem-solving, creativity, and physical activity. These environments are not merely places for children to engage in play but important arenas for developing lasting bonds, cooperative skills, and inclusive play opportunities. The document underscores the necessity of creating play spaces that function as sanctuaries—safe, welcoming, inspiring, and supportive environments that cater to the developmental needs of children across different age groups. This emphasis on providing diverse and engaging playground environments reflects an understanding of the pivotal role of these spaces in supporting children's cognitive, emotional, and social development (Solomon 2014).

The collective insights provided by Frost and Solomon underscore the complex and dynamic relationship between playgrounds and child development. Playgrounds are not merely physical spaces but foundational to fostering an environment where children can grow, learn, and develop holistically. The design and implementation of playgrounds should thus be guided by principles that prioritize enhancing physical, cognitive, social, and emotional development, ensuring that these spaces are inclusive, diverse, and supportive of the myriad ways children engage with the world around them.

In conclusion, the role of children's playgrounds in developmental processes is profound, offering the necessary support for young individuals' physical, cognitive, social, and emotional growth. The evidence presented by Frost and Solomon provides a compelling argument for the thoughtful design of playgrounds that embrace the full spectrum of play and developmental opportunities. As such, the development of playgrounds should be approached with an understanding of their significant impact on the well-being and holistic development of children, reinforcing the need for spaces that are not only fun and engaging but also nurturing and growth-promoting.

The Role of Nature Play in Child Development

The significance of nature play in the developmental journey of children has been increasingly highlighted in recent academic literature, drawing attention to its numerous benefits. This subsection explores the pivotal role that nature plays hold in fostering physical, cognitive, social, and emotional development in children, as evidenced by systematic reviews and research findings in the field.

The systematic review conducted by Dankiw et al. (2020) meticulously analyzes the impacts of unstructured nature play on the health and developmental outcomes of children aged 2-12 years. The findings from this review underscore the consistent positive effects of nature play on physical activity outcomes and cognitive play behaviors, particularly emphasizing the enhancement of imaginative and dramatic play. Nature plays mirror the benefits derived from traditional outdoor play spaces in boosting physical activity and surpassing these traditional modalities by significantly enriching children's cognitive development through the facilitation of imaginative play. The review posits that the behaviors manifested by children during outdoor

activities are important in drawing distinctions between nature play and conventional play spaces, highlighting the unique advantages of engaging with nature.

Complementing the insights provided by Dankiw et al. (2020), research conducted by Herrington and Mariana (2015) elaborates on the broader implications of natural play spaces on children's health and developmental trajectories. The research suggests that natural play spaces are instrumental in increasing physical activity among children, which could potentially mitigate the risk of childhood obesity. These spaces are characterized by their capacity to offer more diverse forms of play, catering to children of different ages and competencies. This diversity is important, as play areas designed solely for physical exertion may not effectively engage fewer active children. Beyond physical development, natural play spaces foster cognitive, social, and emotional growth. By incorporating natural elements such as trees, shrubs, water, boulders, and sand, these play spaces make play more engaging and encourage unstructured play, which is important for developing creativity, problem-solving abilities, and social skills. Including natural elements enriches children's sensory experiences and nurtures their connection with the natural environment, further underscoring the comprehensive benefits of nature play.

In conclusion, the collective findings from the literature underscore nature's role in children's development. Through its ability to enhance physical activity, cognitive development, and sensory experiences, nature play provides a holistic approach to child development. It fosters a deeper engagement with the natural world, encouraging creativity, social interaction, and emotional well-being. As such, integrating natural elements into children's play spaces emerges as a fundamental strategy for supporting the comprehensive development of children, affirming the need for educational and developmental policies to prioritize the inclusion of nature play in childhood experiences.

The Role of Outdoor Learning in Child Development

Incorporating outdoor learning environments into early childhood education programs serves as an effective method to support the holistic development of young learners. This subsection draws upon the foundational work of Cooper (2015) and the practical applications observed in the preschool education program of the Turkish Ministry of Education, as documented by Yıldırım and Güzin (2017), to articulate the multifaceted benefits of outdoor learning on children's cognitive, physical, and emotional well-being.

Outdoor learning environments, characterized by incorporating climbing structures, looping pathways, gardening areas, and natural elements representative of local flora and fauna, are meticulously designed spaces extending learning beyond traditional classroom settings. Cooper (2015) emphasizes that such environments are instrumental in promoting structured and unstructured physical activity, play, and nature-based experiential education. The significance of outdoor learning extends to various dimensions of child development, including cognitive development, academic performance, self-regulation, physical fitness, and overall well-being. Features like wheeled toys, outdoor water sources, and diverse plant life play an important role in integrating nature into the daily experiences of young learners, thereby enriching their educational journey (Cooper 2015).

The research highlighted by Cooper (2015) elucidates the substantial impact of exposure to natural outdoor environments on child development. These natural settings stimulate cognitive development, enhance academic outcomes, foster self-regulation, advance physical fitness, and contribute to nutritional awareness. Importantly, outdoor learning environments bolster self-confidence, encourage a deeper understanding of ecosystems, and cultivate an appreciation for

environmental processes. Such rich and varied settings are instrumental in stimulating brain development, improving concentration, and fostering an enduring environmental ethic among children.

Illustrating the practical application of outdoor learning, Yıldırım and Güzin (2017) describe activities integrated into the preschool education program of the Turkish Ministry of Education. Activities such as making nature albums, where children collect, classify, and analyze natural objects based on different criteria, serve to develop cognitive and observational skills while promoting outdoor exploration. Similarly, engaging children in observation and interaction with diverse plant and insect species enhances their understanding of the natural world and hones their observational abilities. These activities exemplify the potential of outdoor learning to enrich educational curricula by embedding experiential learning within the natural environment (Yıldırım and Akamca 2017).

In conclusion, the role of outdoor learning in children's development is profound, offering a comprehensive framework for enhancing cognitive, physical, and emotional growth. As evidenced by the research of Cooper and the practical examples from Yıldırım and Güzin, outdoor learning environments provide invaluable opportunities for children to engage with and learn from nature. These environments foster academic and cognitive skills and contribute to physical well-being, self-confidence, and environmental stewardship. Therefore, integrating outdoor learning into early childhood education represents an important strategy for nurturing well-rounded, healthy, and environmentally conscious individuals.

The Role of Sensory Landscapes in Child Development

The integration of sensory landscapes, mainly through the design of sensory gardens, plays a pivotal role in supporting and enhancing child development. This subsection draws upon the research and insights presented by Nikraves, Reihane, and Seyedeh (2016) and Henderson-Wilson (2022) to explore the significance of sensory gardens in fostering an enriching environment that promotes physical, mental, and social growth in children.

Sensory gardens are meticulously designed spaces that stimulate the five basic senses—touch, sight, sound, smell, and taste—through various elements and features. These gardens incorporate diverse plants with different textures, colors, and scents and pathways with tactile surfaces, interpretive signs, and interactive elements to create a multi-sensory experience. Nikraves, Reihane, and Seyedeh (2016) emphasize such environments' therapeutic and developmental benefits, highlighting how sensory gardens contribute to the learning process by developing children's perceptual skills through interaction with their surroundings. These gardens provide a rich array of stimuli, encouraging children's active participation and exploration, which influences their overall physical and mental health.

The role of sensory gardens extends beyond mere physical activity and sensory stimulation. According to Henderson-Wilson (2022), these environments also offer new play opportunities for children and their families, fostering exploration and interaction with nature. This interaction is particularly beneficial for children with special needs, including those who are blind, as sensory gardens provide a secure and engaging space for exploration and learning. The therapeutic design of sensory gardens aims to improve the quality of care for children and their families, offering a supportive environment that nurtures health and well-being.

Moreover, sensory gardens are important in promoting mental activities, creativity, and imagination among children. Using patterns and textures to stimulate sight and touch senses, as discussed by Nikravesh, Reihane, and Seyedeh (2016), can enhance children's cognitive development. However, the design of sensory gardens must be carefully considered to avoid overwhelming children with too many visual patterns, which could lead to difficulty in concentration. Thus, the appropriate and varied use of patterns and textures is important in creating an environment that is stimulating and conducive to children's concentration and creativity.

In conclusion, the promotion of sensory landscapes through the design of sensory gardens represents a significant advancement in creating therapeutic and stimulating environments for children's development. These gardens support physical activity and sensory stimulation and foster mental well-being, creativity, and social interaction. The research conducted by Nikravesh, Reihane, and Seyedeh (2016) and Henderson-Wilson (2022) underscores the importance of sensory gardens in providing a rich, engaging, and supportive environment that caters to the diverse needs of children, including those with special needs. As such, the inclusion of sensory gardens in urban and educational settings should be prioritized to enhance child development and foster a deeper connection with the natural world.

Special Focus: The Role of Community Gardens in Child Development

The role of community gardens in enhancing child development has garnered increasing attention in recent years. A pivotal study by González-Fernández et al. (2020) underscores the significant benefits of integrating community and home gardens into the developmental landscape of children. This research provides valuable insights into how these green spaces

contribute to improved caregiver-child interactions, a fundamental aspect of nurturing healthy developmental trajectories.

González-Fernández et al. (2020) report notable improvements in parenting skills among both intervention and control communities, as measured by a novel checklist specifically designed to assess caregiver-child interactions. The interventions, encompassing the establishment of community and home gardens alongside workshops focused on conscious nutrition and meal preparation, were instrumental in fostering positive developmental outcomes. Critical impact areas included enhanced food security, accelerated language development, and the adoption of healthier feeding practices. These areas are important for the holistic development of children, underpinning their physical, cognitive, and emotional growth.

In summary, the research conducted by González-Fernández et al. (2020) illuminates the important role of community gardens in supporting child development. By improving caregiver-child interactions, enhancing food security, fostering language development, and encouraging healthier feeding practices, community gardens emerge as vital contributors to the developmental well-being of children. Additionally, their role in facilitating indirect benefits further cements their value as an integral component of community-driven child development initiatives.

Summary

This section underscores the role of outdoor spaces in child development. As highlighted by Dankiw et al. (2020), nature play offers significant benefits in enhancing physical activity and cognitive play behaviors, emphasizing the importance of imaginative play. Herrington and Mariana (2015) further elaborate on natural play spaces' capacity to boost physical activity and support diverse play forms, which is important for children's holistic development. Frost (1997)

and Solomon (2014) contribute to our understanding by detailing how playgrounds, through their design and the inclusion of various play elements, support children’s spontaneous, creative exploration and development. Cooper (2015) and Yıldıırım and Güzin (2017) discuss the transformative potential of outdoor learning environments in extending educational experiences beyond the classroom, promoting cognitive, physical, and emotional well-being. Additionally, the work of Nikraves, Reihane, Seyede (2016) and Henderson-Wilson (2022) on sensory gardens reveals the therapeutic and developmental benefits of sensory-rich environments for children. Finally, González-Fernández et al. (2020) highlight community gardens’ role in enhancing caregiver-child interactions and supporting child development through improved food security and healthier feeding practices.

Reviewing these contributions, it becomes evident that the design of outdoor spaces is an important component in supporting child development. These spaces provide opportunities for physical activity and interaction with nature and play a pivotal role in fostering cognitive, social, and emotional growth. Therefore, educational, and developmental policies must prioritize the inclusion and thoughtful design of outdoor environments in child development centers. By doing so, we can ensure that children can access enriching outdoor experiences that comprehensively and holistically support their development.

Here is a table which represents the critical content of this subsection.

Landscape Elements	Which development needs are	How does the design element promote child development?
---------------------------	------------------------------------	---------------------------------------------------------------

	promoted ?	
Playground	Physical, cognitive, and social needs	<ul style="list-style-type: none"> • Introducing loose parts such as water, sand, wood, tires, and spools into the playground can promote children’s cognitive and social development through imaginative play. • Playgrounds need to be a safe, welcoming, inspiring, and supportive environment. • Playgrounds could provide engaging and diverse facilities to meet the needs of all children of different ages. • Playgrounds need to support children’s desire to explore spontaneously and creatively.
Natural Play	Physical, cognitive, social, and emotional needs	<ul style="list-style-type: none"> • Play areas explicitly designed for physical activity may need to be more effective in engaging fewer active children. • By incorporating natural elements such as trees, shrubs, water, boulders, and sand, these play spaces make play more engaging and encourage unstructured play, which is important for developing creativity, problem-solving, and social skills. • Integrating natural elements enriches children’s sensory experience and cultivates their connection with the natural environment.
Outdoor Learning	Physical and cognitive needs	Featuring a blend of climbing structures, circular paths, gardening areas, and natural elements representing local flora and fauna, outdoor learning environments are thoughtfully designed spaces that extend learning beyond the traditional classroom setting.
Sensory Garden	Cognitive	Sensory gardens are carefully designed spaces that stimulate the five basic senses – touch, sight, sound, smell, and taste – through various elements and features. The gardens incorporate

		<p>various plants with different textures, colors, and scents and pathways with tactile surfaces, interpretive signage, and interactive elements to create a multi-sensory experience.</p> <p>The importance of sensory gardens in providing a rich, engaging, and supportive environment is to meet children's diverse needs, especially those with special needs.</p>
Community Garden	Physical, cognitive, social, and moral needs	<p>Community gardens play a significant role in improving interactions between caregivers and children. In addition, community gardens can promote areas including food security and accelerate children’s language development.</p>

Summary

The literature review covers a wide range of topics, from the characteristics of nonprofit organizations and the developmental needs of children to landscape forms that have been proven to facilitate child development. Each topic contributes to a deeper understanding of the design of outdoor spaces at child and family-focused nonprofits, thereby assisting landscape designers in creating landscapes that not only meet the operational needs and philosophies of nonprofit organizations but also promote child development, thus addressing the research question “How can outdoor spaces design contribute both to nonprofit organizations and child development?”

Initially, the review delves into the characteristics of nonprofit organizations, including their definitions, visions, operational strategies, and community engagement activities. Critical insights include:

- Each nonprofit organization has a unique development vision, and the design of outdoor spaces must align with this vision.
- Nonprofit organizations often organize activities and programs, requiring outdoor space designs to actively support and facilitate these, such as outdoor nature awareness courses for children, outdoor sketching, and small outdoor seminars for new parents.
- The primary service targets of nonprofit organizations are the surrounding communities. Therefore, it is important to conduct surveys to understand community needs in considering outdoor space design while aligning with the organization's future vision.
- Nonprofit organizations engage in various forms of partnerships and collaborations. Before designing outdoor spaces, considerations should include the possibility of obtaining donated building materials, collaborations with philanthropic artists, and the involvement of volunteers from surrounding educational organizations.
- The operations of nonprofit organizations often rely on fundraising. In considering the design of outdoor spaces, understanding the organization's future vision for these spaces, their functions, and the amount of funding available is important, as well as the future functions of the site, its complexity, and the level of luxury.

- The operations of nonprofit organizations frequently depend on volunteer participation. In designing outdoor spaces, the needs of volunteers and staff can also enhance volunteer cohesion and ownership.

In summary, as the backdrop for designing outdoor spaces, understanding, and leveraging the characteristics of nonprofit organizations lays the foundation for conceptualizing and implementing environments for child development centers.

Subsequently, the study turns to a detailed exploration of children's developmental needs, including physical, cognitive, emotional, social, moral, and safety considerations, and the specific requirements of children with special needs. These needs dictate the requirements for outdoor environments that support comprehensive child development, such as spaces that promote physical activity, cognitive stimulation, emotional expression, social interaction, moral understanding, safety, and inclusivity. Understanding the developmental needs of children is important for creating supportive, safe outdoor spaces conducive to child development.

Finally, the study explores existing literature discussing the role of outdoor spaces in facilitating child development, finding that outdoor spaces play a multifaceted role in child development through natural play, playgrounds, outdoor learning, sensory landscapes, and community gardens. Natural play enhances physical activity and imagination, benefiting cognitive development. Playgrounds provide an environment for spontaneous exploration and creative play, supporting physical, cognitive, social, and emotional growth. Outdoor learning environments extend educational experiences beyond the classroom, promoting cognitive, physical, and emotional health. Sensory gardens offer therapeutic and stimulating experiences, fostering mental health, creativity, and social interaction, especially for children with special needs. Community gardens strengthen interactions between caregivers and children, food

security, language development, and healthier feeding practices, contributing to the overall developmental well-being of children.

Here is the table about integrating the study results from the literature review, which discusses the potential landscape elements in the child and family-focused nonprofits and the implementation challenge in four ways: cost, volunteer engagement, maintenance plan, and site scale.

Landscape Element	Which development needs are promoted?	Budget Consideration
Playgrounds	Physical, cognitive, social needs	The playground’s budget is very flexible. When considering the playground’s budget, designers need to consider the future development goals and vision of the child and family-focused nonprofit and the center’s potential or existing partnerships. For example, if the designer has a low budget, he or she may consider a loose-part playground; if the designer has a high budget, he or she may consider purchasing a complete children’s playground facility.
Nature Play	Physical, cognitive, social, and emotional needs	Nature play is generally considered low-cost, especially when the designer discovers that the center has extraordinary cooperation with specific local organizations, such as material

		dealers and builders (donations of loose part materials can be obtained).
Outdoor Learning	Physical and cognitive needs	The budget for outdoor learning can be high or low and is closely related to the center's vision. It can be as simple as a sign describing the flora and fauna, or it can be a grand circular walk or a carefully designed gardening area.
Sensory Garden	Cognitive needs	Sensory gardens are expensive to build because plants of different textures, colors, and scents are expensive, but they also require tactile surfaces and other interactive elements.
Community Garden	Physical, cognitive, social, and moral needs	The cost of constructing a community garden is generally low.

Landscape Element	Volunteer Engagement	Maintenance Plan	Site Scale Requirement
Playgrounds	Designers need to consider the level of participation of the center's volunteers in	The maintenance program is tied to the vision for the center and how luxurious	Playground is not restricted by site size.

	<p>the entire playground project during the playground design process. If volunteers participate in construction, designers need to consider the difficulty of construction. If the center’s maintenance relies mainly on volunteer participation, designers need to consider low-maintenance design options.</p>	<p>the playground is. Landscape designers will need to adjust their design plans and, therefore, their maintenance plans accordingly.</p>	
Nature Play	<p>Volunteers can construct and maintain nature play sites, but please note that the sites must meet national safety standards.</p>	<p>Nature play is considered a low-maintenance scheme and can be maintained by volunteers.</p>	<p>Nature play is not restricted by site size.</p>
Outdoor Learning	<p>Depending on the budget, volunteers or contractors can participate in the</p>	<p>Depending on the budget, outdoor learning maintenance plans vary.</p>	<p>Outdoor learning can be set up in grand natural</p>

	<p>construction of outdoor learning. In addition, the children’s outdoor learning process needs to be led by employees or volunteers.</p>		<p>environments or small pollinator gardens.</p> <p>However, a bigger space means more opportunities to explore the natural world.</p>
<p>Sensory Garden</p>	<p>Although the construction process of the sensory garden is complicated, if volunteers do it, it requires strong volunteer cohesion.</p>	<p>The maintenance of sensory gardens is complex and requires continuous maintenance support, requiring strong volunteer cohesion and manager vision.</p>	<p>Sensory gardens have relatively small site size requirements.</p>
<p>Community Garden</p>	<p>Community gardens rely heavily on the long-term investment of volunteers and require a keen sense of</p>	<p>Community garden maintenance relies heavily on volunteers’ sense of community and the long-</p>	<p>Community gardens have low requirements on site scale.</p>

	volunteer cohesion and community belonging.	term enthusiasm of nonprofit center staff.	
--	------------------------------------------------	-----------------------------------------------	--

CHAPTER 4

INTERVIEW WITH EXPERTS

Summary and Analysis of the Interview

Overview

This chapter offers an in-depth examination of interviews conducted with critical figures in the field, including Sallie Starrett, the Director of Brightpaths, along with Professors Davis, Berglund, and Lee from the Department of Landscape Architecture at the College of Environment + Design and the Department of Educational Theory and Practice at the Mary Frances Early College of Education, University of Georgia, respectively. These discussions centered on the significant role that outdoor space landscape designs play within child development centers. The narrative is enriched by the qualitative research approach adopted, focusing on the insights and experiences shared by the interviewees. This analysis reveals important themes that underscore the multifaceted impact of outdoor spaces on child development. The selection of themes was guided by the author's understanding and intuition of landscape design. This background enabled the author to meticulously sift through the qualitative data, identifying and extracting critical data that accurately reflects the essence of the discussions. Such an approach ensures that the themes resonate with the core objectives of landscape design in child development centers and capture the nuanced perspectives of the experts interviewed. These themes encompass the importance of holistic and integrated development, the need for safety, privacy, and support in outdoor areas, the embrace of inclusive

design, budget considerations for nonprofits, the role of nature play and loose parts, enhancing sensory engagement, optimizing landscape design for developmental milestones, and boosting family resilience through outdoor environments.

Theme words 01: The Significance of Holistic and Integrated Development at Child and family-focused nonprofits

Outdoor spaces encourage holistic development, integrating physical, mental, and social aspects within child development centers. Mrs. Starrett emphasizes the essence of outdoor activities, and she points out that “most kids learn gross motor skills through learning to climb.” She also emphasizes that active outdoor playing is “important not only for their physical health but also for their mental health, which helps their social connections.” In this view, it becomes apparent that creating and designing safe and exciting outdoor spaces is paramount, given the need for both physical skill development and the building of resilient psychosocial development.

According to Professor Lee, the integrated development of children in early education focuses on the “integration of different subject areas.” This approach suggests that outdoor spaces should go beyond simple play areas to become carefully designed environments that encourage a combination of cognitive, physical, and social learning. Outdoor spaces in child development centers can be transformed into colorful environments where children hugely benefit through holistic and integrated development.

Theme words 02: Ensuring Safety, Privacy, and Support in Outdoor Spaces of Child Development Centers

Parts of the equation that were noted repeatedly by interviewees included safety, privacy, and a supportive environment. Describing the problems at the child development center she directs

and her vision for the future, Mrs. Starrett identified safety as an important quality issue and underscored the important nature of the safety issue, noting that families want some form of privacy. While recognizing that families desire a degree of privacy, it is important to consider nature's inherent outdoor safety. Mrs. Starrett said, “We cannot have kids playing on that field. There are fire ants all over the place there.” Reviewing the information from people who have had to deal with these dangerous ants, she added that challenges landscape architects will face in future planning include designing peaceful, safe environments while considering issues related to dangerous fire ants and proximity to noisy, busy streets.

Prof. Lee outlined that protected and well-designed outdoor play areas for young children and toddlers are mandatory. Prof. Lee observes that “often, a teacher just allows children just to walk, not even run around the playground because they do not want children to fall.” Indeed, this salient concern reflects the imperative need for outdoor spaces that are both physically safe and creatively designed to encourage active play while minimizing risks. According to Prof. Lee, sound design, combined with the emphasis on using safe materials, becomes important in fostering an environment where children find it easier and safer to explore, learn, and play. Together, these learnings underscore how important it is to keep the safety, privacy, and supportive design elements the first place in the outdoor spaces of the child development center to create a caring and safe environment, which is imperative for nurturing healthy children.

Theme words 03: Embracing Inclusive Design in Outdoor Spaces of Child Development Centers

Inclusive design is a principle that must be addressed in the design of outdoor spaces to ensure that everyone can use and enjoy these outdoor spaces, regardless of ability or background. The importance of inclusive design was mentioned several times by interviewees during the

interviews. Mrs. Starrett explained their inclusivity effort as shown through multilingual programs offered in the daycare to foster a warmly incorporated atmosphere for people from all ethnicities within the community setting. Her comment, “We do parenting classes or workshops or parenting groups three or four times a week in multiple languages,” illustrates the kind of center with a deep commitment to cultural and linguistic diversity.

Prof. Lee also stated that outdoor spaces should be inclusive, remembering to include children with different abilities in using the play spaces whenever possible. Through inclusive playgrounds and outdoor facilities advocacy, Prof. Lee believes that children with disabilities can use the spaces together with their peers. This philosophy of inclusivity is important to ensure that every child feels accommodated with equal opportunities to gain experience, play, and grow.

Prof. Berglund emphasized landscaping that can be utilized by all children, including physically and mentally challenged ones. His ideas of inclusive design emphasize the deliberate planning and thoughtful considerations that need to go into designing outdoor places that will cater to varied requirements and meet the expectations of myriad people. Implementing such inclusive design principles enables child development centers to develop safe outdoor environments that are stimulating, genuinely supportive, and welcoming to every child and their family, fostering an inclusive community ethos.

Theme words 04: Budget Consideration for Nonprofits and Fundraising Challenges

Budgets have always been an issue that nonprofit organizations need to consider carefully. In the interviews, many interviewees also mentioned concerns about fundraising for nonprofit organizations and offered some solutions.

Outdoor improvements and expansions at Brightpaths are incremental due to budget

constraints. Mrs. Starrett is confident in their fundraising events, including the outdoor concert series and ‘Starry Starry Night’ (silent auction available in person and with live auction and other gala fun). On the other hand, she has seen some major challenges, including inclement weather that has impacted concert attendance; she went on to say, "Due to the rain and the lack of a gazebo on the lawn, we have not been able to perform very well and have not made much money, which has directly impacted our program." Mrs. Starrett's quote illustrates how the success of fundraising efforts has a great deal to do with the operational thinking of subsequent projects and reveals that landscape designers can consider the design of outdoor spaces in terms of how they can support and promote fundraising events.

Prof. Berglund proposed relevant discussions on landscape design, always considering typical financial constraints characteristics of nonprofits. According to Prof. Berglund, direct, resilient, inexpensive materials such as natural features and bare wood are good candidates for engaging yet low budget playscape. His comment underscores the opportunity to modify children’s play experience: “Much nature play stuff does this on a lower budget.”

Moreover, Prof. Davis related experiences on how most nonprofits find it difficult to keep gardens and outdoor spaces alive. He emphasized choosing simple, inexpensive plants that require low care while emphasizing their critical support from community groups and business donating. Doing so will help solve financial challenges, enabling nonprofit organizations to create and maintain vibrant outdoor learning environments.

Theme words 05: Nature Play and Loose Parts: Critical Elements in Child Development Center Outdoor Spaces

Including nature play and loose parts in child development center outdoor spaces is important to fostering independence, creativity, and cognitive building blocks for children. Prof. Berglund

stressed the need to produce play spaces that allow preschool children to interact with items around them personally. Such a design supports the development of their attitude in manipulating and exploring natural materials.

Prof. Davis further described the role loose parts play in nature well by explaining the critical elements such as sticks, sand, and small rocks to enable the children to be more creative and increasingly cognitive. He said, “Loose parts encompass items such as sticks, sand, and small rocks, alongside activities like planting or utilizing water bottles in play.” These open-ended and low-cost resource materials allow children to manipulate, change, put together, and imagine, promoting their learning processes. Prof. Davis provided a further example of nature play when he points out water use in play areas, explaining that children can develop games such as constructing a dam around the sand. Incorporating nature play and loose parts in the design of outdoor landscapes provides lively, stimulating environments for interacting with the outdoors and learning through exploration and adventure for young children in child development centers.

Theme words 06: Enhancing Sensory Engagement in Outdoor Spaces at Child Development Centers

Including sensory landscapes in outdoor spaces would improve the learning experience at child development centers by stimulating the five senses and fostering intuitive and interactive learning experiences for the children.

Prof. Lee highlighted the value of such designs, noting, “If you use, you know, whatever facility you create if it allows students to use their five senses, which will be fantastic.”

Prof. Davis further advocated for setting up sensory gardens in these centers with such an approach that puts forward outdoor spaces that transcend physical activity and encourage sensory exploration and learning. He focuses on careful plant and element selection that appeals to sight,

smell, and touch. He noticed, "Sensory Garden can be successful in different development centers... Plant selection, then it helps you think about... what is going to smell good." Sensory gardens provide a varied and rich environment for the children that broadly enhances their sensory development providing them with a wholesome educational experience as well. Through these principles, providing outdoor environments will result in visually attractive gardens and offer various sensory stimulation. Such set-ups encourage the children to interact more meaningfully with the environment, furthering their overall development and education more integrally.

Theme words 07: Landscape Design Optimization for Developmental Milestones in Child Development Center

In establishing a child development center, tailoring a landscape design with developmental milestones as the underlying goal may dramatically impact a child's physical and mental growth. Using developmental milestones as a framework, we can create environments that enhance and support the typical patterns of child development. Prof. Berglund stated, "Every child, even into adulthood, should reach some developmental milestone." In this way, landscape architects can create sites tailored to children's specific developmental stages and abilities at specific ages.

Professor Berglund also emphasized the importance of age-appropriate activities in these centers. Noting that children's developmental stages and different needs need to be identified through multiple age groups, he said, "When designing activities for children, designers need to be aware of the following: 0 to 1-year-olds have little or no independence from their mothers, while 4 to 5-year-olds are mostly independent."

Theme words 08: Enhancing Family Resilience through Outdoor Spaces in Child Development Centers

The design and planning of outdoor spaces enhance family resilience, ensures more significant opportunities for family connection, promotes holistic child development, and facilitates parent visits to child development centers. Mrs. Starrett emphasized the importance of this environment to family dynamics and resilience. She said, "We are trying to strengthen the whole family." This statement points to the importance of family resilience to child development.

Mrs. Starrett elaborated, "The design of outdoor spaces at child and family-focused nonprofits needs to be strong not only for children but also to draw children and caregivers together in those spaces." This sentence strongly indicates that well-planned outdoor spaces play a critical role in improving family relationships, increasing children's resilience, and providing necessary support for parents.

Therefore, it is important that the design of outdoor spaces considers these initiatives so that quality participation, time together, and educational opportunities can benefit every family member.

Summary

This chapter summarizes interviews with child development and landscape design experts, focusing on the important impact of outdoor spaces on child development centers. Through qualitative research, the author identified critical themes emphasizing the benefits of well-designed outdoor environments. These themes included the promotion of holistic and integrated development, the need for safety, privacy, and support, the value of inclusive design, budgetary considerations for nonprofit organizations, the significance of natural play and loose parts, the

enhancement of sensory engagement, the optimization of landscaping to target developmental milestones, and the role of outdoor spaces in increasing family resilience.

The interviews emphasized the importance of creating outdoor spaces for physical, mental, and social development and ensuring that these areas are safe, inclusive, and supportive. The dialogue highlighted nonprofits' challenges in funding such activities while exploring innovative solutions to these funding constraints. In addition, incorporating natural play and sensory elements into outdoor design can significantly contribute to children's cognitive and creative development. Optimizing landscape design to align with children's developmental milestones can also contribute to achieving targeted development.

A critical aspect revealed in this chapter is the role of outdoor spaces in strengthening family bonds and resilience. Well-designed outdoor environments contribute both to children's personal development and to the well-being of communities and families. This chapter provides a comprehensive overview of the multifaceted impact of landscape design on child development centers, guided by the insights of experts in the field and the author's knowledge and intuition in landscape design.

CHAPTER 5

OUTDOOR SPACE DESIGN GUIDELINES

Introduction

The design guidelines were generated primarily using a cross-referencing approach. The author cross-referenced the results of the literature review and the expert interviews, and based on their own educational and experiential backgrounds, the author identified the areas of agreement, disagreement, and areas that were only mentioned by one party and then elaborated on them separately. The elaborations were then prioritized according to the sequence of design steps in the landscape design, resulting in final design guidelines. The final design guidelines included recognized design information (information mentioned by both existing literature and expert interviews), important design information (information mentioned by both existing literature and one of the expert interviews that the author believes is helpful based on their own experience and educational background), and suggestions for future related research. In addition, in the chapter on design information, the author divided the content into two areas: outdoor space design considerations and potential design elements for outdoor spaces. Outdoor space design considerations are mainly theoretical elements that designers need to be aware of before or during design. In the section on Potential Design Elements for Outdoor Spaces, the author focuses on specific design elements, talking about how the elements contribute to children's development and the challenges and opportunities of applying the elements (cost of constructing the element, cost of subsequent maintenance programs, level of volunteer involvement).

LITERATURE REVIEW

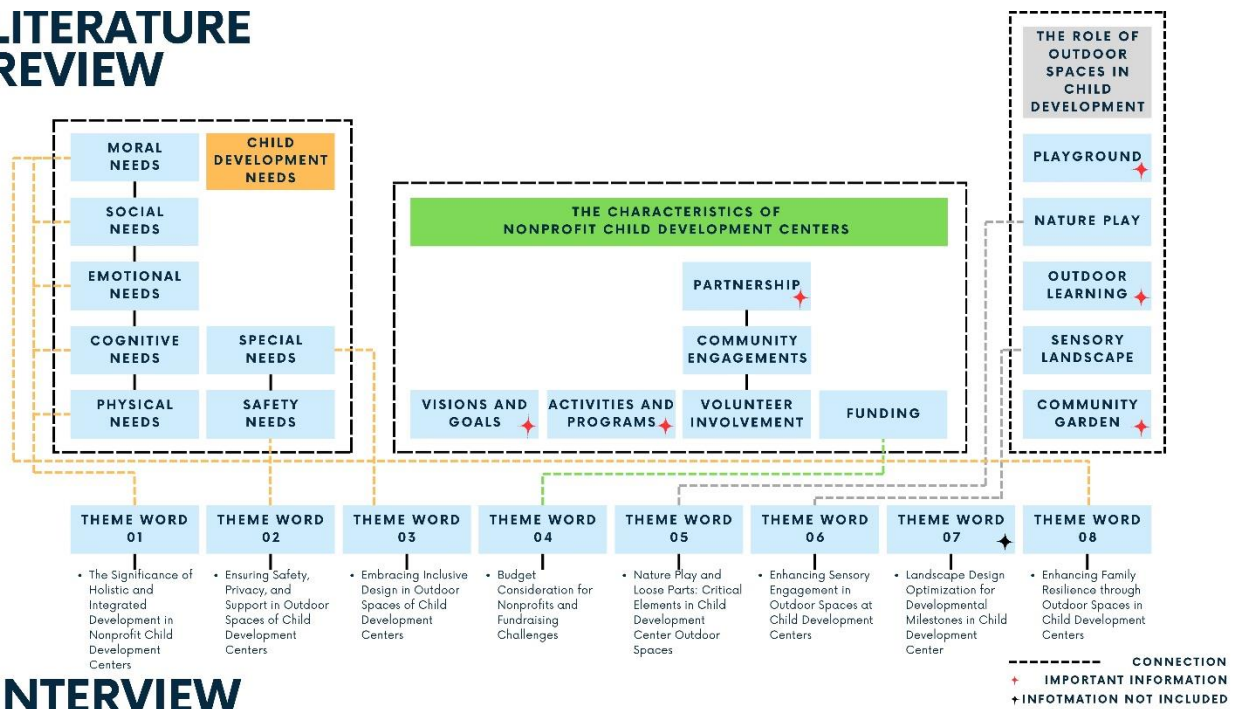


Figure 1: The Guideline Creation Process, Pengling Xia, 2024

Outdoor Space Design Guidelines for Child and family-focused nonprofits

Outdoor Space Design Considerations (Recognized Information)

Design Consideration 1: The Significance of Holistic Development at Child and family-focused nonprofits (both a theme word in the interview summary and brought up in children developmental needs section in the literature review)

In the design of outdoor spaces at child and family-focused nonprofits, designers need to understand the developmental needs of children from multiple perspectives. Designers need to do everything possible to design outdoor spaces that encourage holistic child development and support the physical, cognitive, emotional, moral, social, and safety needs of children's development and the special needs of special children.

Design Consideration 2: Ensuring Safety, Privacy, and Support in Outdoor Spaces of Child Development Centers (both a theme word in the interview summary and brought up in children developmental needs section in the literature review)

Outdoor spaces need to be designed to provide a supportive, private, and safe environment. A supportive environment is reflected in activities that support child development, such as positive interactions between children and caregivers. A private environment is one in which caregivers can communicate and interact privately with developmental center staff. Safe environments are, primarily, environments that meet safety standards while avoiding traffic, noise, and human hazards. In addition, the environment is as challenging as possible for children and supports children's freedom to make their own choices and decisions.

Design Consideration 3: Inclusive Design at Child and family-focused nonprofits' Outdoor Spaces (both a theme word in the interview summary and brought up in children developmental needs section in the literature review)

Inclusive design is a design process in which a product, service, or environment is designed to be usable for as many people as possible (Joyce 2022). So, it is a principle that must be addressed in outdoor spaces to ensure that everyone can use and enjoy these outdoor spaces, regardless of their ability or background; this was emphasized many times by interviewees. It is important to ensure that every child feels an equal opportunity to gain experience, play, and grow in outdoor spaces.

Design Consideration 4: Enhancing Family Resilience through Outdoor Spaces in Child Development Centers (both a theme word in the interview summary and brought up in the child developmental needs section in the literature)

Landscape designers may promote overall family resilience through outdoor space design. The child's developmental needs, especially the child's moral and emotional developmental needs, cannot be separated from the child's contact with their caregivers: the moral and emotional needs of the child as they grow up will be guided and met primarily by their caregiver. Caregivers need to encourage the child's active participation in family interactions and help the child understand and manage emotions such as guilt, shame, and pride. In the outdoor spaces of child and family-focused nonprofits, landscape architects need to think about how outdoor spaces can enhance family members' connections or facilitate interactions between children and caregivers. Additionally, designers can consider designing spaces that provide caregiver-parent support, strengthening the family by promoting parent development and influencing child development.

Design Consideration 5: Budget Considerations for Non-profits and Fundraising Challenges (both a theme word in the interview summary and brought up in the characters of nonprofit organizations section in the literature review)

The landscape designer needed to understand the child and family-focused nonprofit's future maintenance plans and development expectations for the outdoor space and provide budget estimates, construction guidance, and maintenance plans for the design plan. Aspects that landscape designers need to pay special attention to include: whether the development center has

fundraising needs in the outdoor space such as charity dinners, charity sales, and concerts; whether the outdoor space design can promote or satisfy such activities; the level of the center's outdoor space design budget; the cost of the external space and future maintenance plan, such as luxury playground or loose parts playground/nature play and high or low maintenance plan; who will be mainly responsible for the future construction of the center, contractor or volunteer.

Outdoor Potential Design Elements for Outdoor Space Design (Recognized Information)

Potential Design element 1: Nature Play and Loose Parts at Nonprofit Outdoor Space in Child Development (both a theme word in the interview summary and brought up in the role of outdoor space in child development section in the literature review)

Incorporating nature play and loose parts into the outdoor spaces of child development centers can help develop children's independence, creativity, and cognitive skills by providing a lively, stimulating environment for them to interact with the outdoors and learn through exploration and adventure.

Nature play includes the incorporation of natural elements such as trees, shrubs, water, boulders, and sand; these play spaces make play more engaging and encourage unstructured play, which helps develop children's problem-solving and social skills. In addition, incorporating natural elements in outdoor spaces enriches children's sensory experience and fosters their connection to the natural environment.

Loose components include items such as branches, sand, and small rocks and planting or using water bottles in play. These open-ended and low-cost resource materials provide opportunities for children to manipulate, change, combine, and imagine; for example, children can use water and sand to build dams around sand.

It is also worth noting that natural play and loose parts appeal more to less active children than play areas specifically designed to favor sports and activities.

Among the opportunities and challenges for practical application, there are several points that designers should consider. Natural play is considered low-cost, especially if the designer finds that the center has a unique partnership with specific local organizations, such as material dealers and builders (donations of loose materials can be obtained). Nature playgrounds are relatively easy to build and maintain, so volunteers can generally build and maintain them. However, please note that the site must meet national safety standards to ensure children are challenged and safe as they engage in activity. Nature play and loose playgrounds have no limitations on site size.



Figure 2: Nature Play Facility in Sandy Creek Nature Center, Athens, GA, Pengling Xia, 2024

Potential Design Element 2: Sensory Engagement in Outdoor Spaces at Child and family-focused nonprofits (both a theme word in the interview summary and brought up in the section of the literature reviewing addressing outdoor space in child development)

Incorporating a sensory garden into the outdoor space of a child development center can provide space for children to use their five senses in nature, primarily to meet their cognitive needs.

Sensory gardens are carefully designed spaces that stimulate the five basic senses of touch, sight, sound, smell, and taste through various elements and features. The Sensory Garden is planted with various plants of different textures, colors, and scents and features tactile paving, interpretive signage, and interactive elements to create a multi-sensory experience.

It is important to note that sensory gardens have a role to play in providing rich, engaging, and supportive environments to meet the cognitive needs of children, especially those including children with special needs.

Among the opportunities and challenges of practical application are the following points for designers to remember. Building sensory gardens is costly because plants of different textures, colors, and scents are expensive to procure, and tactile surfaces and other interactive elements like lights and speakers need to be introduced. Because building a sensory garden is complex, it requires strong volunteer cohesion if done by volunteers. The maintenance of a sensory garden is also complex and requires ongoing maintenance support, strong volunteer cohesion, and managerial foresight. Sensory gardens are not particularly demanding in terms of site scale.



Figure 3: Paulding County's Children's Sensory Garden, Dallas, GA -Pengling. Xia

Outdoor Space Design Considerations (Important Information)

Design Consideration 1: Alignment of Visions and Goals (Mentioned in Characteristics of the Nonprofit Child Development)

The landscape designer needs to investigate and understand the goals and visions of the non-profit child development center before designing. During the landscape design process, the landscape architect should keep in mind the goals and visions of the development center to ensure that the designed results are consistent with them.

Design Consideration 2: The Program and Activities that happen in the Child and family-focused nonprofits (Mentioned in Characteristics of the Nonprofit Child Development)

The landscape designer needs to engage the stakeholders of the child and family-focused nonprofit and learn about the programs and activities that are happening or are likely to happen at the non-profit child development center, especially for outdoor activities and programs. After understanding the non-profit child development center's development intentions landscape designers can consider supporting or promoting outdoor activities and programs in the design of outdoor spaces during the design process.

Design Consideration 3: Community Engagement, Volunteer Involvement, and Partnership at Child and family-focused nonprofits (Mentioned in Characteristics of the Nonprofit Child Development)

The landscape architect's primary goal is to understand and meet the goals and vision of the child and family-focused nonprofit. However, beyond that, understanding the center's volunteer

involvement and partnerships and the surrounding community's needs and involvement are also worth considering.

During the design process, designers can also incorporate the input and needs of the neighborhood into the design, which will positively impact the subsequent enthusiasm of residents to participate in the center's outdoor spaces, the motivation of volunteer recruitment, and the sense of community pride and belonging.

Designers can be aware of existing or potential partnerships with child and family-focused nonprofits and other organizations or play a role in advising on potential partnerships. Landscape designers should consider these partnerships and collaborations when designing, such as whether the outdoor space will promote the activities of other organizations that work with child and family-focused nonprofit, whether components of the outdoor space are likely to be sponsored by the partnering organization, and whether the space design process will involve and be supported by local artists.

The designer can also consider the needs of volunteers, which can enhance their sense of belonging to the center. In addition, landscape architects should inquire about volunteer participation during the maintenance and construction of outdoor spaces in the later stages of landscape design and use this to adjust the landscape design program.

Outdoor Potential Design Elements for Outdoor Space Design (Important Information)

Potential Design Element 1: Playgrounds in Outdoor Spaces at Child and family-focused nonprofits

Integrating playgrounds into the outdoor spaces of child development centers can promote children's physical, cognitive, and social development needs.

When designing a playground, designers should pay attention to the following points:

- Playgrounds need to support children's desire for spontaneous and creative exploration.
- Introducing loose parts such as water, sand, wood, tires, and spools into the playground can encourage imaginative play and enhance children's creativity.
- Playgrounds need to be safe, welcoming, inspiring, and supportive environments.
- Playgrounds need to provide engaging and diverse facilities to meet the needs of children of different ages.

Among the opportunities and challenges of practical application are the following points for designers to remember.

- Playground design budgets are usually very flexible. Designers must consider the child and family-focused nonprofit's future goals and vision and the center's potential or existing partnerships. For example, if the designer has a lower budget, he or she may consider a loose playground; if the designer has a higher budget, he or she may consider purchasing a complete children's playground set. In addition, designers can consider the possibility of the possibility of the fixtures being donated and provide design options for different budgets.
- Designers also need to consider the level of involvement of center volunteers in the overall playground project. If volunteers participate in construction, designers need to consider the difficulty of construction. If the center's maintenance relies on volunteer participation, designers need to consider low-maintenance design options.

- In addition, the playground maintenance plan is closely related to the center's vision, the level of volunteer participation, and the luxury of the playground. Landscape architects need to adjust their design plans and maintenance schedules accordingly.



Figure 4: "Cheese" Children Playground in Centennial Olympic Park, Atlanta, GA, Pengling Xia, 2024



Figure 5: "Family Meeting" Children Playground in in Sandy Creek Nature Center, Athens, GA, Pengling Xia, 2024

Potential Design Element 2: Outdoor Learning in Outdoor Spaces at Child and family-focused nonprofits

Including climbing structures, circular paths, gardening areas, and natural elements representative of local flora and fauna, the outdoor learning environment is a carefully designed space that extends learning beyond the traditional classroom setting. Integrating outdoor learning into the outdoor space of the child development center can promote children's physical and cognitive development needs.

Regarding practical application challenges, designers need to keep the following points in mind:

- Budgets for outdoor learning can be high or low, linked to the center's vision. It can be a simple sign with information about conserving the area's flora and fauna, a grand circular walk, or an elaborate gardening area.
- Depending on the budget, volunteers or contractors can construct an outdoor learning area. In addition, staff or volunteers guide children's outdoor learning.
- Outdoor learning maintenance plans will vary depending on the size and richness of the outdoor learning area being created and the development goals of the center. The more vegetation in the outdoor learning area and the richer, more refined, and more paved it is, the higher the maintenance cost. Simple and small outdoor learning areas, such as small rain gardens, bird feeders, pollinator gardens, are relatively low maintenance.
- Outdoor learning can occur in a magnificent natural setting or a small pollinator garden. However, more space means more opportunities to explore the natural world.

In summary, outdoor learning areas can be implemented in most cases, but the effectiveness of implementation is closely related to the confidence and goals of the center.



Figure 6: “Bee House and Bird Nest” Outdoor Learning in Sandy Creek Nature Center, Athens, GA, Pengling Xia, 2024

Potential Design Element 3: Community Garden in Outdoor Spaces at Child and family-focused nonprofits

Integrating a community garden into the outdoor space of the child development center can promote children's physical, cognitive, social, and moral development needs.

Community gardens play a significant role in improving interactions between caregivers and children. In addition, community gardens can promote food security and accelerate language development in children.

Regarding challenges to practical application, designers need to keep the following points in mind:

- The cost of creating a community garden is modest. Volunteers and staff can complete the work of building and operating a community garden, including site selection and fence construction, building beds, or climbing frames, improving soil quality, setting up irrigation systems, ongoing garden maintenance, and plant selection.
- The biggest challenge of community gardens is that they rely heavily on the long-term commitment of volunteers, requiring volunteers to have a keen sense of cohesion and community belonging, as well as the long-term motivation and continued belief of non-profit center staff.



Figure 7: Winterville Community Garden, Winterville, GA -Pengling. Xia

Summary

This chapter addresses the thesis question, "How does outdoor space design contribute to the development of child and family-focused nonprofits?" The guidelines highlight the important role of outdoor space in a child's overall development. The synthesized insights from the literature review were tied with expert opinion into a nuanced understanding of how the outdoor environment can be designed strategically to further the multifaceted growth of children, which includes physical, cognitive, emotional, moral, and social development.

The importance of these guidelines is that they succeed in placing the emphasis where it should be on creating outdoor spaces that are safe, inclusive, important, and appropriate for learning and play that reflect a deep understanding of children's developmental needs. For instance, nature play, including sensory gardens, playgrounds, outdoor learning areas, and community gardens, shows how outdoor spaces may be optimized to enrich the developmental experience among children at child and family-focused nonprofits.

The guidelines further state that the design of outdoor spaces should be aligned with the goals and vision of the center so that it not only meets the immediate developmental needs of the children but also aligns with the overall goals of the center. Community engagement puts a focus on volunteers, although they reiterate that both parties should be involved in the development and sustainability of appropriate outdoor spaces and emphasize a sense of community and involvement on the part of the property owner, which is critical to the long-term success and relevance of the outdoor space.

In other words, these guiding principles provide a strong framework for designing outdoor spaces as functional and transformative environments that promote the holistic development of children and actively serve as centers for nonprofit child development. These guiding principles,

including safety inclusivity, developmental appropriateness, and state-of-the-art design elements, set the tone for the development of vibrant, engaging outdoor spaces that maximize support for children's growth and learning.

CHAPTER 6

CONCLUSIONS

Overview

This thesis study answers the research question: “how can outdoor spaces design contribute to child and family-focused nonprofits?” The purpose of this paper is to develop a design guide for a child and family-focused nonprofit that can be used by landscape architects when designing the outdoor spaces of a nonprofit children’s center. The paper gathers theoretical evidence through two methods. The first is to review three categories of literature on the characteristics of nonprofit organizations, children’s development needs, and the role of outdoor space in children’s development and integrate them into a theoretical basis for answering the research question. The second is to interview operators of education and nonprofit organizations and landscape design experts and then qualitatively summarize the interview papers to highlight the critical information. Finally, the author integrates these two theoretical bases into design guidelines through cross-referencing.

Critical Findings

Through the research process, the following critical findings were discovered:

Holistic Development

Research emphasizes that outdoor spaces at child and family-focused nonprofits need to maximize the whole child's development, meeting their physical, cognitive, emotional, social, and moral needs.

Safe, Inclusive and Challenging Outdoor Spaces

Research findings highlight the importance of creating safe, inclusive, and challenging outdoor spaces. These spaces should meet the diverse needs of all children, including those with special needs, ensuring that every child, regardless of ability, has equal access to the space. In addition, a challenging space, and a space for spontaneous exploration that both ensure safety can play a significant role in promoting the growth of children's creativity.

Alignment with the organizations' goals

Alignment of outdoor space design with the vision and goals of the Child Development Center is a prerequisite for all designs.

Family Engagement and Resilience

The design of outdoor spaces can consider creating spaces that enhance interaction between children and caregivers (primarily parents). These spaces that encourage interaction help to strengthen family bonds, improve family resilience, and promote children's moral and emotional development.

Practical Design Considerations

The design guidelines developed in this paper provide practical insights for landscape designers to create effective and sustainable outdoor environments. These guidelines are not only based on multiple screenings of the literature's theoretic basis, expert experience profiles, and the author's education, and experience background but also integrated and analyzed using a holistic assessment. The focus is on the impact of nonprofit organizations' unique characteristics and operational developments on outdoor spaces that promote child development. The author first gives the considerations that landscape designers need to understand when designing. Afterward, the author gives landscape elements that designers can consider when designing. In proposing potential landscape elements, opportunities and challenges within a child and family-focused nonprofit are highlighted, including budget, construction, partnerships, volunteer involvement, and ongoing maintenance.

Limitations and Recommendations for Future Research Directions

Limitations

While this thesis provides guidelines for landscape architects and nonprofit organizers in designing outdoor spaces, particularly for child development centers, it is important to acknowledge its limitations. One constraint is the limited number of interviews conducted, which may not fully represent the diverse perspectives and needs across different child and family-focused nonprofits. This limitation suggests that the findings and guidelines presented are preliminary and may only be universally applicable to some outdoor spaces at child and family-focused nonprofits.

Another notable limitation is the need for more empirical testing of the proposed design guidelines. The guidelines have not been applied in real-world design processes, nor has there been a reflection on their applicability and effectiveness in achieving the intended outcomes. This gap highlights the need for practical validation of the guidelines to ensure they are robust and can effectively guide the design of nonprofit outdoor spaces.

Recommendations for Future Research Directions

To address the limitations identified and to further the study of child and family-focused nonprofits' outdoor spaces., the following future research directions are recommended:

- Expand the scope of interviews: Future research should aim to conduct more extensive interviews with educators, nonprofit organizers, landscape architects, and other stakeholders involved in the design and use of outdoor spaces at child and family-focused nonprofits. The expanded scope will provide a more comprehensive understanding of these spaces' needs, preferences, and challenges, resulting in more robust and universally applicable design guidelines.
- Empirical testing of design guidelines: Research that applies the proposed design guidelines to actual design projects is urgently needed. By implementing these guidelines in real-world scenarios and reflecting on their applicability and effectiveness, researchers can refine and validate them, ensuring they are practical and beneficial to their intended users.
- Explore how landscape can play a role in promoting interaction between children and caregivers: The author mentioned in the article that enhancing the interaction between children and caregivers (especially parents) can better meet the needs of children's

emotional and moral development. However, the author needed help finding actual theoretical evidence for the role of landscape design in promoting this interaction. Future researchers could delve deeper into this area and explore how specific design elements or strategies facilitate or hinder interactions between children and caregivers or, more broadly, between people and between people and nature. This study contributes to a more nuanced understanding of how landscape design supports children's emotional and moral development in nonprofit settings.

Examples of practical application of selected guidelines

In Fall 2023, the author collaborated on the design of outdoor spaces for the Brightpaths Family Resource Center in Athens, GA; Several items from the design project exemplify design guidelines developed in this thesis.

First, for the children's playground design in the outdoor space, the design team not only provided a design budget for all the design options but also proposed two different design options for the play area: Design Option 1 is a loose part playground with a lower budget and maintenance cost, and Design Option 2 is a regular children's playground option with a higher budget and maintenance cost. In both options, play equipment is purchased from the recreation company, and a construction team constructs the play equipment. This initiative gives this organization more flexibility for future outdoor space renewal projects. Firstly, both options can help the organization with fundraising. Secondly, the fundraising efforts are not going too well. In that case, the organization can opt for the loose part playground option, which provides outdoor playgrounds that promote children's growth in a low maintenance and low budget way. If the fundraising efforts

are going well and a large amount of money is raised, the paved and fancy child playground can also be used as a children's outdoor playground space option.

Secondly, throughout the project, the design team maintained constant and positive communication with the project's principal, Brightpaths CEO Sallie Starrett. The team gained a deep understanding of the nonprofit's visions and goals and implemented them throughout the design process.

Thirdly, the design team considered Brightpath's volunteer involvement, community engagement, and possible collaboration with other organizations in the subsequent implementation of the project. Based on Brightpaths' vision of a volunteer-based construction and maintenance program, the design team developed a volunteer maintenance and construction program. The design team also recommended professors from the University of Georgia's College of Fine Arts to Brightpaths' directors, expecting to work together to create a mural representing the organization's identity and promoting community belonging.

In addition, the design team introduced a multi-functional space at the entrance to the nonprofit's outdoor space that meets the nonprofit's vision for the space: an attractive, welcoming landscape that also serves as a place for outdoor learning (referenced in the design guidelines), enhances community engagement with children and caregivers, and promotes physical, emotional, and social engagement with children. It promotes the physical, cognitive, social, and moral development of children in the community.



Figure 8: One of the Rendering for the Entrance Area of Brightpaths, Pengling Xia, 2024

VolunteerDIYPlan - Mural



All Photographs are from:
 Project: Brightpaths Mural
 Project by: Lisa Berkery and students
 Photo Credit: Lisa Berkery
 https://www.courtesy.com/projects

INTRODUCTION

Murals offer significant benefits to organizations, serving as versatile tools for branding, marketing, and community engagement.

The mural on the main entrance wall was part of the client's choice among the various solutions of the entrance area design to highlight the entrance.



Phase 1
Pre-Sketching Your Design

Phase 2
Cleaning and Protecting the Painting Area



Phase 3
Transferring and Finalizing Your Design

Phase 4
Completing and Sealing the Mural



Figure 9: Volunteer DIY Plan for the Mural on the Wall, Pengling Xia, 2024

Conclusion

By creating guidelines for designing outdoor spaces for child and family-focused nonprofits, this paper demonstrates some basic information that landscape designers need to know and landscape design elements that can be considered when designing outdoor spaces. The paper provides facilities and recommendations for future designers of outdoor spaces at child and family-focused nonprofits. The design guidelines have the potential to give designers a fresh look at the outdoor spaces of child and family-focused nonprofits and a fresh look at designers' partnerships with organizers, volunteers, education professionals, and the community. Furthermore, the design guidelines have the potential to equally give organizers some innovative ideas and position themselves when collaborating with designers. In summary, these design guidelines explore the possibilities of making the outdoor space of a child and family-focused nonprofit more conducive to the development of children and the organization.

Hopefully, these design guidelines will contribute to the knowledge base of outdoor space design for child and family-focused nonprofits. The methods and processes used in this study will have a potential role in the design of outdoor spaces for all child and family-focused nonprofits and, indeed, for other nonprofit organizations. This information may benefit the Southeastern United States region but also has the potential to contribute to the knowledge base of similar scenarios throughout the United States and around the world. These guidelines can serve as an introduction to stimulate a few studies on the outdoor space design of nonprofit organizations on the market and make a modest contribution to the outdoor space environment of nonprofit organizations.

REFERENCE

- America, ChildCare Aware of. 2022. "Catalyzing Growth: Using Data to Change Child Care."
<https://www.childcareaware.org/catalyzing-growth-using-data-to-change-child-care-2022/#:~:text=in%20recent%20years,-,Child%20Care%20Centers,had%20data%20for%20each%20year.>
- Brussoni, M., L. L. Olsen, I. Pike, and D. A. Sleet. 2012. "Risky play and children's safety: balancing priorities for optimal child development." *Int J Environ Res Public Health* 9 (9): 3134-48. <https://doi.org/10.3390/ijerph9093134>.
<https://www.ncbi.nlm.nih.gov/pubmed/23202675>.
- Bryson, John M. 2018. *Strategic planning for public and nonprofit organizations : a guide to strengthening and sustaining organizational achievement*. Fifth edition. ed. Bryson on strategic planning. Hoboken, New Jersey: Wiley.
- Burdette, Hillary L., and Robert C. Whitaker. 2005. "Resurrecting Free Play in Young Children: Looking Beyond Fitness and Fatness to Attention, Affiliation, and Affect." *Archives of Pediatrics & Adolescent Medicine* 159 (1): 46-50. <https://doi.org/10.1001/archpedi.159.1.46>.
<https://doi.org/10.1001/archpedi.159.1.46>.
- Cooper, Allen. 2015. "Nature and the Outdoor Learning Environment: The Forgotten Resource in Early Childhood Education." *International Journal of Early Childhood Environmental Education* 3 (1): 85-97.

- Crutchfield, Leslie R., and Heather McLeod Grant. 2012. *Forces for good : the six practices of high-impact nonprofits*. Revised and updated ed. San Francisco, CA: Jossey-Bass.
- Dankiw, Kylie A, Margarita D Tsiros, Katherine L Baldock, and Saravana Kumar. 2020. "The impacts of unstructured nature play on health in early childhood development: A systematic review." *Plos one* 15 (2): e0229006.
- Deb, Sibnath. 2022. *Child safety, welfare and well-being: Issues and challenges*. Springer.
- Deming, M Elen, and Simon Swaffield. 2011. *Landscape architectural research: Inquiry, strategy, design*. John Wiley & Sons.
- Dubowitz, H. 2014. "The Safe Environment for Every Kid model: promotion of children's health, development, and safety, and prevention of child neglect." *Pediatr Ann* 43 (11): e271-7.
<https://doi.org/10.3928/00904481-20141022-11>.
<https://www.ncbi.nlm.nih.gov/pubmed/25369580>.
- Eime, Rochelle M, Janet A Young, Jack T Harvey, Melanie J Charity, and Warren R Payne. 2013. "A systematic review of the psychological and social benefits of participation in sport for children and adolescents: informing development of a conceptual model of health through sport." *International journal of behavioral nutrition and physical activity* 10 (1): 1-21.
- Frost, Joe L. 1997. "Child Development and Playgrounds." *Report No Pub Date Note Availbale From*:11.
- González-Fernández, Doris, Ana Sofia Mazzini Salom, Fermina Herrera Bendezu, Sonia Huamán, Bertha Rojas Hernández, Illène Pevec, Eliana Mariana Galarza Izquierdo, Nicoletta Armstrong, Virginia Thomas, and Sonia Vela Gonzáles. 2020. "A multi-sectoral approach improves early child development in a disadvantaged community in Peru: Role of

- community gardens, nutrition workshops and enhanced caregiver-child interaction: Project “Wawa Illari”.” *Frontiers in Public Health* 8: 567900.
- Henderson-Wilson, Claire, Amy Shaw, and Rona Weerasuriya. 2022. "Perceived benefits of accessing a children’s sensory garden in a healthcare setting." *Australian Health Review* 46 (5): 573-576.
- Herrington, S., and M. Brussoni. 2015. "Beyond Physical Activity: The Importance of Play and Nature-Based Play Spaces for Children's Health and Development." *Curr Obes Rep* 4 (4): 477-83. <https://doi.org/10.1007/s13679-015-0179-2>.
<https://www.ncbi.nlm.nih.gov/pubmed/26399254>.
- Heyman, Darian Rodriguez, and Laila Brenner. 2019. *Nonprofit management 101 : a complete and practical guide for leaders and professionals*. Second Edition. ed. Hoboken, NJ: Wiley.
- Hutton, Stan, and Frances Phillips. 2010. *Nonprofit kit for dummies*. 3rd ed.--*For dummies*. Hoboken, NJ: Wiley Pub., Inc.
- Joyce, Alita. 2022. "Inclusive Design." Last Modified January 30, 2022.
<https://www.nngroup.com/articles/inclusive-design/>.
- Killen, Melanie, and Judith G. Smetana. 2014. *Handbook of moral development*. Second Edition. ed. New York: Psychology Press.
- Marks, Judy. 2017. "Child Development Centers." Last Modified 03-24-2017.
<https://www.wbdg.org/building-types/education-facilities/child-development-centers>.
- Moore, Robin C, Susan M Goltsman, and Daniel S Iacofano. 1997. *Play for all guidelines: Planning, design and management of outdoor play settings for all children*. ERIC.
- Nikraves, Reihane, and Seyedeh Marziah Tabaeian. 2016. "Sensory Garden Design Solutions in Child Friendly Environments (Case Study: The Children of the City Of Isfahan, North West-

District# 12, in Pre-Elementary and Elementary Schools." *Journal of Design and Built Environment*.

- Paschall, Katherine. 2019. "Nearly 30 percent of infants and toddlers attend home-based child care as their primary arrangement." <https://www.childtrends.org/publications/nearly-30-percent-of-infants-and-toddlers-attend-home-based-child-care-as-their-primary-arrangement>.
- Piaget, Jean. 1964. "Cognitive development in children." *Journal of research in science teaching* 2 (2): 176-186.
- Powell, Walter W., and Patricia Bromley. 2020. *The nonprofit sector : a research handbook*. Third edition. ed. Stanford, California: Stanford University Press.
- Prominski, Martin. 2016. "Design guidelines." In *Research in landscape architecture*, 194-208. Routledge.
- Saarni, Carolyn. 1999. *The development of emotional competence. Guilford series on social and emotional development*. New York: Guilford Press.
- Sharken Simon, Judith, and J. Terence Donovan. 2001. *The five life stages of nonprofit organizations : where you are, where you're going, and what to expect when you get there*. Saint Paul, MN: Amherst H. Wilder Foundation.
- Solomon, Susan G. 2014. *The science of play: How to build playgrounds that enhance children's development*. University Press of New England.
- Team, SEEK Leadership. 2023a. "About SEEK." Last Modified August 12, 2023. <https://seekwellbeing.org/about-seek-2/>
- Team, Wex Definition. 2006. "child development center." <https://www.law.cornell.edu/uscode/text/10/2871#2>.

- Team, Wex Definitions. 2023b. "non-profit organizations." Last Modified July of 2023.
https://www.law.cornell.edu/wex/non-profit_organizations.
- Tilstone, Christina, and Lyn Layton. 2004. *Child development and teaching pupils with special educational needs*. Psychology Press.
- Vygotskij, Lev Semenovič forme avant, and Vera John-Steiner. 1979. *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Walker, S. P., T. D. Wachs, S. Grantham-McGregor, M. M. Black, C. A. Nelson, S. L. Huffman, H. Baker-Henningham, S. M. Chang, J. D. Hamadani, B. Lozoff, J. M. Gardner, C. A. Powell, A. Rahman, and L. Richter. 2011. "Inequality in early childhood: risk and protective factors for early child development." *Lancet* 378 (9799): 1325-38.
[https://doi.org/10.1016/S0140-6736\(11\)60555-2](https://doi.org/10.1016/S0140-6736(11)60555-2).
<https://www.ncbi.nlm.nih.gov/pubmed/21944375>.
- Yıldırım, Günseli, and Güzin Özyılmaz Akamca. 2017. "The effect of outdoor learning activities on the development of preschool children." *South African journal of education* 37 (2).

APPENDIX A

INTERVIEW SUMMARY WITH THEME WORDS AND ORIGINAL TEXT

Interview with the Director (Sallie Starrett) of BrightPaths

Theme Word	Description	Original Text
Outdoor Activities and Facilities	The interview highlights the need for improvement in outdoor spaces, including addressing safety concerns like noise and traffic, and enhancing facilities like playgrounds for developmental benefits.	<p>“The childcare is happening outdoor while the parents are inside... a lot of times the kids are outdoor.”</p> <p>“We also do events like we did a fall festival here; we do a spring fling here where we'll have bounce houses and face painting and just different activities.”</p>
Fundraising and Financial Challenges	As a non-profit organization, Brightpaths faces financial constraints, which impact their ability to improve facilities and expand programs.	<p>“We also do fundraise outdoor. So, we have an outdoor concert series.”</p> <p>“Because the rain, without a pavilion on the lawn, we ended up, it just wasn't a very good turnout, and we didn't make a lot of money, which directly impacts our program.”</p>
Safety and Privacy	Concerns about the physical safety of children in outdoor spaces and the privacy of families attending the center are significant.	<p>“We can't put kids down on that field, there's fire ants everywhere.”</p> <p>“We are close to a very busy road... it's noisy, which can be tough...”</p> <p>“We're right on the bus line and so we moved out here intentionally so</p>

		that it would be easy for families to get to us. But it is loud. There is a fire station and a police station right up here.”
Holistic Child Development	Emphasis is placed on overall child development, including physical, mental, and social aspects, through activities like play and interaction.	<p>“A lot of kids learn gross motor skills by learning to climb... they can build resilience by...”</p> <p>“A lot of our families, some of our families... live in an area where there's not a really safe place to play for their kids to go outdoors.”</p> <p>“Kids being outdoor and being active is important not only for their physical health, but it’s also important for their mental health, which helps their social connections.”</p>
Inclusivity and Multilingual Support	The center offers programs in multiple languages and aims to create a welcoming environment for all community members.	“We do parenting classes or workshops or parenting groups three or four times a week in multiple languages...”
Family Support and Resilience	Programs are geared towards strengthening family bonds, building resilience in children, and providing parents with support and education.	<p>“We're trying to strengthen the whole family.”</p> <p>“So, all these things seem like they're just pretty or they're just fun, but they really make a big difference in terms of a child's and a family's development.”</p>

Interview with Prof. Lee in Department of Educational Theory and Practice of Mary Frances
Early College of Education, University of Georgia

Theme Word	Description	Original Text
Holistic/Integrated Development	Early childhood education focuses on the integrated development of the whole person, blending various disciplines in a cohesive learning experience.	“Particularly in early years... developing the whole person is very much emphasized... integration of different subject areas is very much important.”
Importance of Outdoor Play	Outdoor play is important for children's development, particularly in early years, fostering social skills and overall well-being.	“Many scholars have emphasized the importance of recess, particularly for young children... free play in outdoor classroom is especially important to their development... recess is quite different from PE classes because PE classes are usually organized... But at recess time, children can freely play.”
Safety in Outdoor Spaces	The need for safe, well-designed outdoor play areas, especially for young children and toddlers.	“Many times, a teacher will just allow children to just walk even not run around the playground because they don't want children to fall down.” “The materials in that kind of outdoor space should be really safe... it's very important for us to think about the art in this design.”
Relationship Between Nature	There is a potential link between lack of exposure to nature and the rise in ADHD diagnoses in children.	“The increasing numbers of children with ADHD might be the indication of children's deficit in their exposure to nature.”

and ADHD		
Inclusive Design	Outdoor spaces should be accessible to children of all abilities and backgrounds, reflecting a diverse range of cultures and needs.	“The playground should be really, or outdoor space should be really inclusive, meaning that children with different disabilities can also enjoy...How can we make those playgrounds accessible to those children so that they can enjoy the outdoor space in the same manner?”
Importance of Five Senses in Child Development	Outdoor spaces should engage all five senses, offering intuitive and interactive experiences for children.	“If you use, you know, whatever facility you create, if it allows students to use their five senses, which will be really fantastic.”
Participatory Design	Emphasis on involving children, families, and educators in the design process to create meaningful and personalized outdoor spaces.	“Each maybe in an outdoor space at a particular child development center should be unique to the composition of the group... taking children's opinions and perspective seriously.” “I hope that the designer will interview the director and also teachers, and very importantly children and their families.”

Interview with Prof. Berglund in Department of Landscape Designers of College of Environment
+ Design, University of Georgia

Theme Words	Description	Original Statement
Loose Part, Natural Play, and Perceived Independence	Focus on creating play areas that encourage independence and manipulation of elements, particularly for preschool-aged children.	<p>“Some of the things my kid like best is if there is water or if there are things that they can move, even if it is just dirt, sticks, water and soil, anything. But the ability to manipulate and to change is really powerful, and my kids will spend a lot of time doing that.”</p> <p>“So, it is fenced off so they cannot end up like falling in the river, but they can feel like they are in the woods, and they have a little bit of independence. But then there's things to manipulate. There are sticks, there's areas that they can build and explore and try things.”</p> <p>“Perceived. One is perceived independence. So, the kid thinks they can do whatever they want, but they are still in a safe environment.”</p>
Developmental Milestones in Design	Using developmental milestones as a guideline for creating landscapes that cater to children's physical and mental development needs.	<p>“Every kiddo. Right. Even up to adulthood, there are developmental milestones that they should be reaching.”</p> <p>“You could look at these established developmental milestones and then you could try to see how landscape</p>

		designers and play design could help meet those.” .
Accessibility and Inclusiveness	Designing landscapes that are accessible to all children, including those with physical or mental disabilities.	“The playground should be really, or outdoor space should be inclusive, meaning that children with different disabilities... How can we make those playgrounds accessible to those children so that they can enjoy the outdoor space in the same manner?”
Budget Considerations for Non-profits	Exploring ways to design impactful landscapes within the budget constraints typical of non-profit organizations, using simple, durable, or inexpensive materials.	“A lot of nature plays stuff does this on a lower budget. Right? Right. With nature play, providing natural things... They could be sticks. They could be sticks... quite simple wood that is not expensive.” “Simple, durable, or not durable, but cheap. Right. But inexpensive.” “Extra special people are nonprofit. But they have a genuinely nice playground, but they also raised a lot of money to do it.”
Importance of Age-Appropriate Spaces	Emphasizing the need for age-appropriate spaces and activities in children's landscapes.	“Designing for kiddos... for zero to one, there's very little or no independence from mom... versus four to five years, your kids... mostly independent.”

Interview with Prof. Davis in Department of Landscape Designers of College of Environment + Design, University of Georgia

Theme Words	Description	Original Text
Loose Parts in Nature Play	Importance of elements like sticks, sand, and small rocks that children can manipulate, building creativity and forming mental pathways.	<p>“You know what comes to mind for me is just thinking about the concept of loose parts. If you look up the concept of nature play, nature play in natural playgrounds, you come back to this concept of loose parts a lot.”</p> <p>“Loose parts are things like sticks and sand and small rocks and even like being able to plant small plants or harvest maybe just water bottles.”</p> <p>“It is parts that children can manipulate and build and dream and imagine. And that is an important, I think, building block of learning, of building that child.”</p> <p>“From reading, it's forming some of their mental pathways so that they learn more later in life.”</p>
Incorporating Water in Play Areas	The role of water in enhancing children's sensory experiences, encouraging creative play.	“Well, it could be like that, or it could be even simpler. I have seen gardens where it really is just kind of like water is allowed to pour into a sand trap.”

		<p>“So, children are able to play in the sand and the rocks and experiment with what happens with water.”</p> <p>“Build their own little dams, just kind of play in that way that can be messy.”</p>
Sensory Gardens in Child Development	The success of sensory gardens in child development centers, utilizing various plant selections to engage different senses like sight, smell, and touch.	“Sensory garden can be successful in different development center... Plant selection, then it helps you think about... what's going to smell good.”
Challenges and Solutions for Non-profits	Addressing funding and volunteer challenges in nonprofit gardens, emphasizing the importance of simple, low-cost, and low-maintenance plant choices.	“Nonprofits have funding challenges... gardens for children... it doesn't have to be incredibly expensive... community groups or businesses in the area to donate.”
Guidelines for Planting Design	The idea of creating a planting design chapter in the design guidelines, offering plant combination suggestions, maintenance considerations, and ideas for creating memorable experiences for children.	<p>“A management plan... what's the ten-year plan, the 20-year plan for how to maintain this that long.”</p> <p>“Lists of plants or combinations of plants... different habitat plantings... Sun versus shade. Flowering.”</p>