**IMPACT OF COMMUNITY-BASED PLAYGROUND RESEARCH ON ADOLESCENTS' SELF-CONCEPTS**


A Research Paper submitted to the Department of Engineering and Society
In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Systems Engineering


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March 25, 2021

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Community playgrounds have the potential to provide socialization opportunities that positively guide childhood development. Those with disabilities, however, do not get to realize the full extent of the benefits and values that playgrounds offer compared to those without disabilities. These unequal opportunities play a role in adolescents' self-concepts, which are images that individuals hold of themselves that are shaped by environmental contexts and social interactions. Exclusionary playground environments can negatively influence adolescents' self-concepts and harm their "social, emotional, cognitive, and physical development" (Hogg, 2016, p. 5; Dietze, 2013, p. 15). Existing technical guidelines and regulations for accessible playgrounds such as the Americans with Disabilities Act, however, fail to address the diverse social and emotional needs of children (Burke, 2013, p. 91). These technicalities simply address the bare minimum needed to create access to the playground structures. Since adolescents are especially vulnerable to their environment, it is imperative that playgrounds be designed to go beyond accessibility with these technical guidelines and incorporate inclusivity in meeting the physical, emotional, and social needs of all guests, including those with disabilities (Burke, 2013, p. 91).

The technical and STS research projects will therefore address the core issue of underrepresentation of adolescents, specifically those with disabilities, in the playground design process. The technical project involves a partnership with Bennett's Village, a Charlottesville-based organization, in supporting the design of an all-abilities, multigenerational playground through user research and materials recommendations for playground surfacing. The STS research project explores how community-based playground research might affect adolescents' self-concepts. The technical and STS projects are tightly coupled and must be conducted in

tandem to understand and push for change in a space that has significant influence on children's lives.

The goal of the STS research, written in the form of a scholarly article, is to push for community-based research with and greater involvement of adolescents with disabilities in the playground design process using Actor Network Theory. The paper will begin by addressing adolescents' general lack of autonomy and voice in order to highlight this underrepresented age group and lack of knowledge of their experiences in the playground space. The paper then explains self-concepts and the impact playgrounds may have on these self-concepts at this stage in adolescents' lives. Finally, the paper will introduce community-based research as a negotiation space, i.e., an open and conversational environment between adolescent users and playground designers and planners that can be used to address the knowledge gap issue, before detailing how community-based research will ultimately impact adolescents' self-concepts.

## IMPLEMENTING COMMUNITY-BASED RESEARCH IN THE PLAYGROUND SPACE FOR POSITIVE SELF-CONCEPTS

### FOCUSING IN ON ADOLESCENTS

Actor Network Theory (ANT) considers the technical artifact, in this case the playground, within the context of a network of sociopolitical actors. This framework was developed by Latour (1991), Callon (1986), and Law (1986). When examining the technical project involving Bennett's Village, there are many actors in the playground network, such as Bennett's Village, the organization that is driving the initiative for inclusive features, and the Charlottesville City Council, the local government body that has to approve future funding for maintenance. Instead of focusing on actors that are more involved in the design and planning

phases of playground development, this STS research paper will be giving a voice to the actors that serve as users of the playground. The relevant social groups include but are not limited to youth, adolescents, babysitters or caregivers, siblings, grandparents, parents or primary guardians, and teachers. Of these groups and their intersections, the most underrepresented are adolescents with disabilities.

Adolescents are not typically given agency or power in decisions that concern them, and this lack of voice is intensified for adolescents with disabilities (Kembhavi & Wirz, 2009, p. 288). Adolescents with disabilities bear a negative social stigma that can prolong their transition period into adulthood due to the social model of disability, "a socially constructed phenomenon that is the result of people with impairments being put in a position of disadvantage because they must overcome barriers that are not impediments to people without impairments" (Burke, 2013, p. 84). While adolescence marks a transition between childhood and adulthood, adolescents with disabilities are forced to acclimate to a society that does not accommodate them. Because of this lack of accommodation, adolescents, who understandably can not meet the same expectations and milestones as their peers without disabilities because of these societal burdens, are stuck in a "perpetual 'childhood'" (Kembhavi & Wirz, 2009, p. 287) where they are not given or viewed as having adult privileges or autonomy. Instead, their decisions are made by their parents or caregivers (Kembhavi & Wirz, 2009, p. 288). Adolescents' unfiltered viewpoints are therefore not represented in research, which leads to the issue of an information gap in the playground design space. This group can then be further studied in terms of their self-perceived identities and how their identities may be impacted by their environment.

**LOOKING AT THE IMPACT OF A PLAYGROUND THROUGH A SOCIAL LENS**

There are two components that make up an individual's self-concept: how they view themselves and how they believe others view them (Sebastian, Burnett, & Blakemore, 2008, p. 441). The latter is also known as one's social self-concept (Sebastian, Burnett, & Blakemore, 2008, p. 441). As children enter adolescence, their social self-concept starts to play a more influential role in forming their general self-concepts (Sebastian, Burnett, & Blakemore, 2008, p. 441). Social and environmental actors that can influence this social self-concept, such as those in the playground space, therefore hold great significance in adolescents' lives. These actors can serve as protective factors by increasing the chances of an individual overcoming adversity or as risk factors by harming these same chances. Individuals with positive self-concepts are better equipped to face life challenges that are presented at this stage of their life as well as later stages, so it is important to pay attention to these social and environmental factors and curate them as protective factors or positive experiences to facilitate healthy development (Corcoran & Nichols-Casebolt, 2004, p. 215).

There are many gaps that exist in terms of access to and experiences with functional and playful opportunities in the playground setting for adolescents with disabilities, which can harm their self-concepts. These gaps include lack of sense of belonging, independent play, risk-taking opportunities, socialization opportunities, and playful experiences (Prellwitz & Skär, 2007, p. 153). Figure 1 on page 5 shows the relationships between adolescents with disabilities and these problems. For example, if a child is consistently denied access to playground structures that facilitate fantasy play and creative development, they may not view themselves as an explorative and creative individual (Woolley & Lowe, 2013, pp. 61-62). If a child is not supported in their social development, they may not feel included in their community (Dietze, 2013, pp. 15-16).

These are both examples of how exclusion due to the social model of disability can lead to

negative self-concepts. Further, when play structures are not created with the intention of being

inclusive, adolescents with disabilities carry the burden of adapting to their exclusionary

surroundings. Unequal play experiences are then adding to the stigmatization of those with

disabilities, so the gaps in Figure 1 fuel and are fueled by the social model of disability. Figure 2

on page 6 shows how this social phenomenon plays a direct role in negatively shaping the social

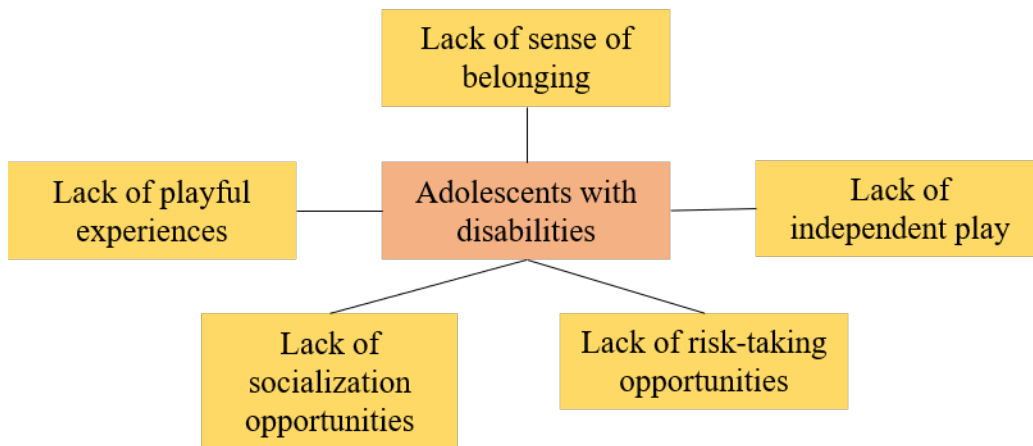self-concepts of adolescents with disabilities.



Figure 1: Relationship Between Adolescents with Disabilities and Perceived
Problems. Adolescents with disabilities are centered as an actor in ANT with
their perceived problems, which impact their self-concepts, surrounding them
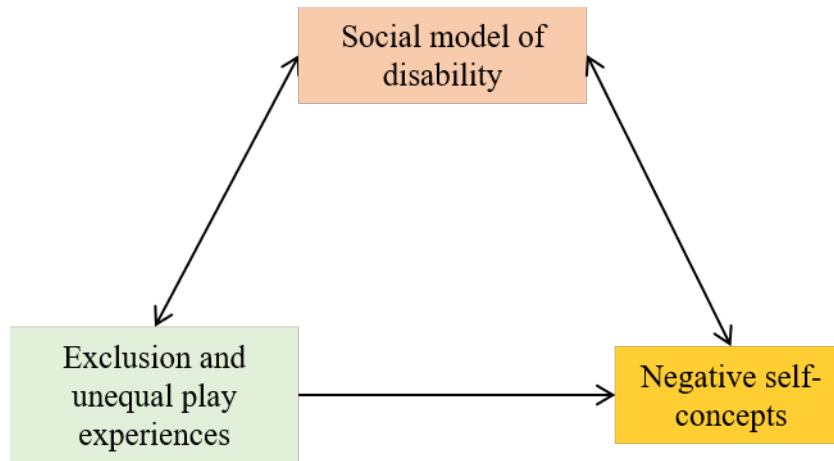(Luong, 2021).

Figure 2: Current Issue of Social Model of Disability and Exclusion Affecting Self-Concepts. The social model of disability influences and is influenced by experiences of exclusion and unequal play opportunities by adolescents with disabilities. This reciprocol relationship is seen with adolescents' self-concepts as well. (Luong, 2021).

## INTRODUCING ADOLESCENT INVOLVEMENT THROUGH COMMUNITY-BASED RESEARCH

One solution to minimizing environmental barriers and negative effects on adolescents' self-concepts is by solving the knowledge gap issue in the outdoor play space domain. With increased knowledge about diverse experiences, outdoor spaces could be created to accommodate more of the community, which may minimize the effects of the social model of disability. Woolley (2012) states that there are two main approaches to this solution: direct involvement of individuals with disabilities in the design process and increased knowledge of the needs of individuals with disabilities by planners and designers (p. 452). These approaches reflect views found in the new paradigm for the sociology of children (Prout & James, 1997, p. 11). This paradigm is typically used to promote the rights of the general child population, but it can also be used in the new context of advocacy for adolescents with disabilities by pushing for their involvement in the playground design process, a method that was mentioned and recommended by Woolley. The paradigm states that children are not simply passive recipients of

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their environment and should be seen as active players in the social construction of their lives (Prout & James, 1997, p. 9). This active role can be manifested through playground research representation so that their own experiences shape and influence their future play spaces.

One way of incorporating this involvement in the design process is through community-based research. Community-based research is focused on "democratizing the process of knowledge production" (Caine & Mill, 2016, p. 14) with the goal of serving community interests. Advocates for this type of research are challenging traditional power dynamics by recognizing and allowing adolescents with disabilities to collaborate with those typically in power, like playground planners and designers (Caine & Mill, 2016, p. 15). Community-based research is especially relevant to the adolescent age group because they have to overcome the adult-child power dynamic since their lives are largely shaped by the adults in their lives, e.g. parents and caregivers (Kembhavi & Wirz, 2009, p. 290). Because this type of research is more of a collaborative approach than it is a prescriptive methodology, there are no set steps or rules to follow. Instead, there is simply an emphasis on the goal of democratization and changemaking.

**CREATING A FEEDBACK LOOP FOR POSITIVE SELF-CONCEPTS**

Direct involvement of adolescents with disabilities through community-based research creates a negotiation space, one of the crucial components of ANT. In order for an artifact to become a stable technology, it must be supported by social factors and vice versa. A negotiation space is an environment where the actors in a given network are able to communicate with each other in order to create that stability. This space is therefore required in order to go beyond technological determinism and account for the entire sociotechnical network to reach widespread acceptance by the community. In the context of playgrounds as the technological artifact, social factors such as exclusion must be accounted for in the design process in order to avoid the

ostracization of those with disabilities. Negotiation spaces can offer a safe environment for the facilitation of conversations needed to prevent harmful social and environmental factors from being incorporated intentionally or unintentionally into the playground design. These conversations, which would take place between adolescents with disabilities and playground designers or planners, would provide a positive effect on the individual level by empowering adolescents that are not otherwise given a voice in the design process. This sharing of vulnerable experiences, however, is contingent on the playground researchers creating a space in which adolescents feel comfortable sharing their stories since they have historically not been given a voice (Kembhavi & Wirz, 2009, p. 290). If successful, community-based research can empower adolescents with disabilities in that they feel acknowledged and seen, leading to confidence and positive internal self-concepts (Kembhavi & Wirz, 2009, p. 289).

On the other side of the network, those involved in playground design would be taking greater responsibility in understanding social factors in adolescents' lives, which would broaden available knowledge to be used in the planning of future playgrounds and expand usage of the playground to members of the community that are typically ostracized (Derr & Tarantini, 2016, p. 1535). With a stable playground established through the negotiation space of community-based research, there would be a fundamental shift in this localized sphere where the environment would be shaped around the needs of its users, including those with disabilities, instead of forcing those with disabilities to adjust to a setting that excludes them (Woolley, 2012, p. 450).

Once adolescents with disabilities are provided with playground structures that allow them to reap the emotional and functional benefits of outdoor play that are not usually given to them, they may feel a greater sense of belonging in the community. They may then be even more

open and compelled to share their experiences to add to the knowledge pool to be applied to other community structures. The resulting inclusive community structures would continue to add to adolescents' greater sense of inclusion and belonging, creating a positive feedback loop shown in Figure 3.
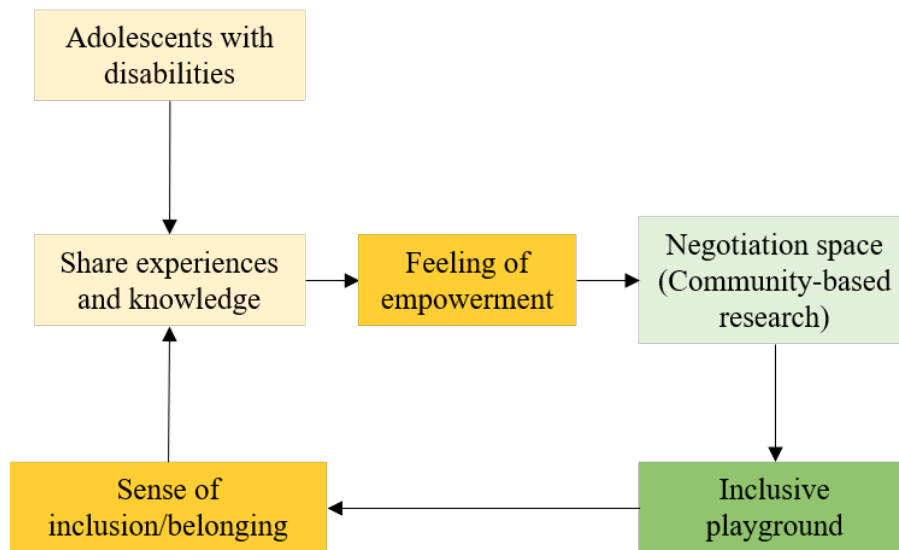


Figure 3: Visual Representation of Positive Feedback Loop for Adolescents' Self-Concepts. The negotiation space creates an opportunity for adolescents to feel empowered, and the resulting inclusive space further boosts their self-concepts, which motivates them to further share their experiences and continue to contribute to the negotiation space. (Luong, 2021).

## EXAMINING WIDER, LONG-TERM CHANGE

Within the context of underrepresentation of adolescents in the playground space, this STS research paper examined and motivated the benefits of community-based research on the self-concepts of adolescents with disabilities. This approach to research amplifies the voices of those that are underrepresented, leading to positive internal self-concepts. This participation also lends itself to the creation of inclusive outdoor spaces, which impacts the environmental factor that leads to positive social self-concepts. Community-based research therefore leads to positive

overall self-concepts in adolescents with disabilities, which aids their development into adulthood.

While the benefits of community-based research have been laid out, the application of this approach and its effects are localized to specific communities. This approach to creating equal play opportunities is therefore not enough to create a broad, large-scale shift, especially because of the pervasiveness of the social model of disability. Regardless, community-based research leads to a feedback loop that creates a positive impact on the self-concepts of adolescents with disabilities. Future work may include examining other methods of involving adolescents with disabilities in the playground design process and examining them to see which method is more suitable for specific contexts.

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